

Massachusetts Maternal, Infant, and Early Childhood Home Visiting (MA MIECHV) 2020 Needs Assessment

Prepared by Tufts Interdisciplinary Evaluation Research (TIER)
for the Massachusetts Department of Public Health

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Section I. Introduction

In early 2019, TIER^a was contracted by MDPH to assist with the Title V needs assessment and to conduct the MA MIECHV needs assessment. The goals of the MA MIECHV needs assessment as stated by HRSA are to: (1) Identify communities with concentrations of risk^b; (2) Identify the quality and capacity of existing programs or initiatives for early childhood home visiting in the state; (3) Discuss the state’s capacity for providing substance use treatment and counseling services to individuals and families in need of such treatment or services; and (4) Coordinate with and take into account requirements of the Title V, CAPTA, and Head Start needs assessments.

While ensuring that we satisfied these goals, our broader aims were to generate a comprehensive understanding of the needs of families with young children across Massachusetts within the context of racial inequities, to determine whether existing family support programs and services are sufficient to both meet families’ needs and effect change at a structural level, and to identify strategies to strengthen the state’s early childhood systems of care. Our mixed methods needs assessment comprised the following activities:^c

- Needs assessment review synthesizing findings from 26 community and government assessments conducted in Massachusetts between 2015 and 2019
- Analysis of extant state-, county-, and town-level indicators to identify those communities in Massachusetts that are experiencing the greatest public health challenges across multiple domains
- Survey of home visiting programs across Massachusetts to understand scope of home visiting, service gaps, and potential opportunities to enhance home visiting at the state and local levels
- Focus groups and meetings with families, providers, and other key home visiting stakeholders (some of this qualitative data collection was done as part of the Title V needs assessment; this is explained later in the report)
- Mapping of available treatment services in Massachusetts for families experiencing SUD-related challenges
- Review of MA MIECHV site visit reports to describe SUD-related challenges within home visiting programs
- Case studies of two innovative home visiting approaches for parents in SUD recovery

We also draw upon relevant findings from past evaluations examining the quality and capacity of the MA MIECHV programs throughout this assessment.

Section II. Methods

In this section we describe the methods used for each of the needs assessment activities listed in the introduction.

II.A. State Needs Assessment Review

The purpose of this review was to ensure that our work built upon and was informed by needs assessments that had already been conducted—both across the state and within particular communities—by other community and government organizations in Massachusetts. Our review focused on synthesizing information on the following: (1) the existing health-related needs and barriers experienced by Massachusetts residents; (2) how racial and ethnic, regional, and socioeconomic inequities are differentially linked to health-related

^aA list of acronyms and a glossary of terms used throughout this report can be found in Appendices I.1 and I.2, respectively.

^bIn this needs assessment, we avoid, when possible, using the phrase “risk.” We consider this term to be coded language that implies individual responsibility for the inequities that exist in public health outcomes. Instead, we see the challenges experienced by these communities as the direct result of policies and systems that are rooted in racism and perpetrated by structural inequities. Throughout this needs assessment, we refer to communities experiencing the greatest public health challenges in Massachusetts as MIECHV communities.

^cMost data collection activities were completed by the spring of 2020, just before the COVID-19-related shutdowns in Massachusetts began.

outcomes for the population generally, and for mothers and children (including CYSHCN), specifically; and (3) the strengths and resources of communities and healthcare across the Commonwealth.

We conducted a Google search using keywords and Boolean operators for existing needs assessments from community and government agencies, coalitions, and organizations that serve families and children across Massachusetts. We searched for assessments that were conducted within the past 5 years (2015 to 2019) to focus this summary on the most recent information available. Initially, we found and screened 38 documents, keeping those that were most relevant to women and children (including CYSHCN). We extracted and summarized information from 26 documents. See Appendix II.1 for the full state needs assessment review.

II.B. Analysis of Data Indicators

As approved by HRSA on July 25, 2019, we used an independent method to carry out a detailed analysis of data indicators across nine domains including SES, housing, populations of special interest, SUD, crime, child unintentional injuries, child maltreatment, adverse perinatal outcomes, and child development and health and school outcomes. Our analysis of 42 indicators available for each of Massachusetts' 351 cities and towns was used to identify the 17^d towns with the greatest public health challenges in Massachusetts, which would be prioritized for MA MIECHV funding. The methodology used for the analysis of data indicators is: 1) aligned with HRSA guidance as outlined in the Supplemental Information Request as an *Independent Method*; 2) informed by findings from our State Needs Assessment Review; and 3) builds on the methods and findings from the 2010¹ and 2016² MA MIECHV needs assessments.

II.B.1. Unit of Analysis

An analysis of data indicators at the county-level in Massachusetts, as suggested in the HRSA needs assessment guidance, would not yield the necessary level of detail needed to make programming decisions. Massachusetts comprises 14 counties, each covering large and/or populous geographic areas. Because counties are quite large, they are not typically used to describe communities in Massachusetts, nor are they the geographic unit upon which most programming and services are based, including MA MIECHV programming. We thus designated the 351 Massachusetts cities and towns as the unit of analysis for this community-level assessment.

II.B.2. Domains and Indicators

We retrieved data on state- and city/town-level indicators from nine domains, comprising 46 sub-domains related to family and child health and well-being, including: (1) SES; (2) housing; (3) populations of special interest; (4) SUD; (5) crime; (6) child unintentional injuries; (7) child maltreatment; (8) adverse perinatal outcomes; and (9) child development and health and school outcomes. See Appendix II.2 for table of the domains and sub-domains. For these domains, we retrieved data on 87 indicators available at the state level and a subset of 42 indicators at the level of Massachusetts' 351 cities and towns.^e See Appendix II.3 for the crosswalk of all data indicators retrieved at the state- and city/town-levels for the nine domains.

II.B.3. Data Analysis

Data were retrieved primarily from DESE, MDPH, and the U.S. Census Bureau. See Attachment 1 for a full list of data sources. For both state- and city/town-level indicators, the data retrieved were the most recent available at the time of retrieval (spring and summer of 2019). Our primary analysis describes the 17 communities in Massachusetts with the greatest public health challenges to be prioritized for MA MIECHV funding. Our approach to standardizing and ranking the 42 indicators available at the city/town-level was based on the method used in the 2010 MA MIECHV needs assessment and a community risk ranking of 59 community districts in New York City.³ We outline our approach below:

^dBased on findings from the 2010 Needs Assessment and available resources, MDPH initially identified 17 communities in which to focus MA MIECHV programming efforts.

^eWe did not have matching state- and city/town-level data for 5 indicators; see the crosswalk in Appendix II.3 for details.

- For all indicators, higher values are indicative of greater challenges (e.g., higher poverty rates). Three indicators—children’s ELA and math achievement test scores and residential stability—were reverse-coded.
- We calculated the range for each indicator and divided the range by 100 to create 100 equal increments for each indicator: $(\text{maximum indicator value} - \text{minimum indicator value}) / 100$
 - *Example:* The range for poverty (percent of individuals living below the federal poverty level in the past 12 months from 2013 and 2017) was 32.70 (minimum = 0.50, maximum = 33.20). Dividing the range by 100, the 100 equal increments are 0.327.
- Cities/towns with the maximum values in the range for each indicator received a score of 100 (indicative of the greatest challenge), and cities/towns with the minimum values in the range received a score of one. All other cities/towns received ranking scores (whole numbers between 1 and 100) aligned with their relative ranking in the indicator range.
 - *Example:* The city/town with a poverty rate of 0.50 was given a ranking of one; the city/town with a poverty rate of 32.70 was given a ranking of 100. The city/town with a poverty rate of 20.50 (Boston) was given a ranking of 62. This was determined by the following formula: if poverty rate > (increment * rank₁₋₁₀₀ - 1) + minimum & poverty rate ≤ (increment * rank₁₋₁₀₀) + minimum, then rank = rank₁₋₁₀₀. Looping from possible rank 1 to 100, the rank for Boston is 62 out of 100: 20.50 > (0.327*61) + 0.50 & 20.50 ≤ (0.327*62) + 0.50.
- Once each indicator value was standardized on the 1 to 100 scale, we computed the sum of standardized scores for each city/town. We computed a weighted sum to account for any missing indicator values.^f The weighting adjusted for the fact that summed values with fewer than 42 standardized indicators will likely be lower than summed values that include all 42 standardized indicators.
- We sorted the summed values in descending order to select the 17 cities/towns with the highest summed values across the 42 standardized indicators.

We conducted sensitivity analyses by ranking z-scores for each indicator and received comparable results. Using the z-scores, we also used the method recommended by HRSA, whereby we calculated an indicator variable for each domain flagging whether the city/town had z-scores of one or greater for at least 50% of the indicators in that domain.^g HRSA recommended selecting communities where at least two domains had z-scores of one or greater for at least 50% of the indicators in that domain. The HRSA criterion resulted in 61 cities/towns meeting the criteria. The 17 cities/towns from our primary method were embedded within the 61. Within our 17 selected cities/towns, each had at least four domains with z-scores of one or greater for at least 50% of the indicators in that domain (the HRSA criteria was two domains), and 16 of the 17 had 6 domains or more. These sensitivity analyses validated our methods, which elucidated the 17 communities experiencing the most significant public health challenges and inequities in Massachusetts. Detailed data tables are included in the MA MIECHV Needs Assessment Data Summary document.

In Section III.A.2, we focus on the 17 MA MIECHV communities^h identified using our primary method of summing the values of the standardized indicators. We also mention several cities/towns that were not within the highest-ranked 17 communities but experienced challenges within specific domains or across several indicators.

Prior to the in-depth analysis of the 17 MA MIECHV communities, we provide a state snapshot in Section III.A.1 using the state-level indicators within each domain. We also provide a list of the cities/towns with the highest summed standardized indicator scores within each domain (based on the method described above). In some

^fMissing values were typically due to suppression rules for small sample sizes. Only three indicators were missing values for more than six cities/towns: violent crime rate, children’s asthma hospitalization rate, and school-age children’s overweight and obesity rate.

^gFor the three domains with just one representative indicator, cities/towns that had z-scores greater than one on that indicator were flagged.

^hThese are the 17 MA communities experiencing the greatest number of public health challenges across the nine domains.

cases, the cities/towns experiencing the most challenges within a domain are distinct from the 17 cities/towns with the highest overall summed standardized indicator scores. The within domain cities/towns provide information to inform support and programming, particularly for cities/towns that are not already receiving MA MIECHV funding.

II.C. Home Visiting Capacity Survey

TIER collaborated with MDPH on a survey of home visiting programs currently operating in Massachusetts. Our aim was to understand the scope of home visiting services across the state, service gaps, and potential opportunities to enhance home visiting at the state and local levels. The survey included questions about: (1) program's models and services (e.g., eligibility criteria, visit frequency, screenings); (2) populations served (e.g., total families served, capacity, demographics, challenges); (3) staffing and supervision; (4) co-location and collaboration with other providers in the surrounding community systems of care; and (5) suggested changes/enhancements to existing home visiting programs.

We created separate versions of the survey for distribution to three different respondent samples: 1) MA MIECHV home visiting program coordinators; 2) MA MIECHV home visitors; and 3) non-MIECHV-funded home visiting program coordinators. The main difference in these versions was in the sections pertaining to program services and populations served; because we had much of these data for MA MIECHV programs (total families, demographics, service models, screenings, etc.), we only needed to ask these questions of the non-MIECHV programs. See Appendix II.4 for the survey, with questions highlighted to indicate sample type. The MA MIECHV versions took 15–20 minutes to complete, while the non-MIECHV surveys took 20–25 minutes. Participant incentives for all versions included a \$5 gift card upon survey completion and an opportunity to enter a raffle for three \$100 gift cards.

II.C.1. Distribution

MDPH compiled a list of MA MIECHV-funded and non-MIECHV-funded home visiting programs in Massachusetts, including any early childhood programs that use home visiting as a primary intervention strategy for providing services to pregnant and parenting families with children birth to five years old. The final list included 226 home visiting programs (i.e., LIAs, sites), representing 29 models (e.g., HFA, PAT, EHS, Parent Child+). While our aim was to create an exhaustive list, we cannot be certain that every home visiting program in Massachusetts was included, given how many different homegrown models exist in the state, and the lack of any kind of central clearinghouse or registry for home visiting programs.

We used Qualtrics to administer the survey, providing an anonymous link in an email to one contact person per program. We administered the surveys in two waves, first to the MA MIECHV programs in late 2019, and then to the non-MIECHV programs in early 2020. For the MA MIECHV coordinator and non-MIECHV coordinator surveys, our stated aim was to have one response per program. For the MA MIECHV home visitor survey, our aim was to have as many home visitors as possible complete the survey, so we used a snowball sampling approach, asking MA MIECHV coordinators to forward the home visitor survey link to their staff.

Although survey links were anonymous, we did ask respondents to provide their program name. The MA MIECHV coordinator and home visitor versions were available online until the end of December 2020, and the survey to non-MIECHV programs was available until the end of August 2020. To bolster the survey sample, we sent follow-up emails to non-respondents and announced the survey at MA MIECHV and other stakeholder meetings (e.g., the MA MIECHV Advisory Committee). We recognize that there are other smaller homegrown home visiting programs that may have been missed in our recruitment and outreach strategies. Based on TIER's and MDPH's collective knowledge of home visiting programs across Massachusetts, email bounce-backs, and word of mouth, our educated estimate is that the survey reached around 85%–90% of the home visiting programs that currently exist in the state.

II.C.2. Respondent Samples

A total of 169 individuals completed the survey, as follows: 29 MA MIECHV coordinators, 48 MA MIECHV home visitors, and 92 non-MIECHV coordinators. These respondents represented 40% ($n = 92$) of the home visiting programs we surveyed, and 63% ($n = 19$) of program models (see Appendix II.5 for list of programs and models, by response). There was a higher response rate (79%, $n = 19$) among the 24 MA MIECHV programs in the state. The range of respondents per program was 1–15.

II.C.3. Data Coding and Analysis

All qualitative responses (i.e., desired changes to programs, organizations with which programs are co-located, benefits and challenges of co-location, organizations with which programs collaborate) were coded into indicator variables. Because we did not have responses from each program, we supplemented the survey data when possible with data from programs' management information systems (MIS; i.e., Participant Data System, used by HFM and the MA MIECHV EHS program; Penelope, used by PAT programs; Efforts to Outcomes [ETO], used by the HFA program and one PAT program; and the Welcome Family and EI data systems, both managed by MDPH), follow-up conversations with program coordinators, and internet searches. As MIS data are more objective than survey responses, we prioritized information from MIS for certain items (i.e., number of families served, race and ethnicity, number of families using MassHealth [the Massachusetts Medicaid agency]).

We ran descriptive analyses (e.g., frequencies, means, and crosstabulations) for most survey items. Depending on the item, we used different units of analysis. For questions that drew on home visiting providers' personal feelings or assessments (e.g., participants' greatest challenges, desired changes to programs, relationships with other service providers) we used the *respondent sample*. In those cases, some programs were over-represented since there were programs with multiple respondents. For questions we wanted to assess at the program level (e.g., focus of programs, co-location) we used the *program sample*. The program database was aggregated from the full respondent sample so we had one respondent per program (depending on the variable, we aggregated data based on means, frequencies, and/or most common answer). Samples are noted throughout. We examined differences in selected indicators (e.g., program foci, screens, staff retention, collaborations) by both program type and region (described below) using bivariate statistics (i.e., chi-squares, ANOVAs, and t tests).

Program Type. We grouped programs into four categories:

- **MIECHV** programs are those evidence-based models funded through MA MIECHV. The models funded in Massachusetts are HFM, PAT, HFA, and EHS: specifically, 14 HFM programs, eight PAT programs, one HFA program, and one EHS program. For the purpose of this needs assessment, however, *we include all 24 HFM programs in the MIECHV EBHV sample*. HFM is a robust state home visiting system, with consistent policies, trainings, practices, and accountability procedures across its 24 sites, regardless of funding source. Exceptions to this categorization (i.e., maps) are footnoted when applicable.
- **National Home Visiting Models (NHVM)** do not receive MA MIECHV funding in Massachusetts but are either considered through HomVEE's systemic review to be evidence-based (i.e., EHS), or on the cusp of being evidence-based (i.e., Parent Child+).⁴
- **Homegrown** programs are local or statewide programs. This category includes Welcome Family, a model funded through MA MIECHV but not considered EBHV.
- **Early Intervention (EI)** programs, because they did not fit neatly into the other three groupings, comprise their own category. Early Intervention in Massachusetts is a robust statewide, integrated, developmental service available to families of eligible children from birth to three years of age. The EI system comprises community-based programs certified as EI providers by MDPH.

Regions. Based on LIA address, we assigned each program to one of six geographic regions, as determined by the Massachusetts EOHHS—1) **Boston**; 2) **Central**; 3) **Metro West**; 4) **Northeast**; 5) **Southeast**; and 6) **Western**. See Appendix 11.6, map one, for regions.

II.D. Focus Groups

We conducted a series of focus groups for the Title V and MA MIECHV needs assessments with a diverse representation of community members from regions across Massachusetts. The goals for these focus groups were as follows: understand the needs and social determinants of health of unique populations across the state, assess whether existing family support programs and services are being equitably offered and distributed, identify gaps in the system of care, and (for MA MIECHV focus groups only), learn about the place of home visiting within systems of care and how home visiting can be optimized for distinct populations. While this report primarily draws on findings from the MA MIECHV focus groups, we integrate findings from the Title V focus groups wherever relevant. To generate an authentic, grassroots understanding of the service needs of families and children, we used a CBPR approach to inform our design, whereby TIER researchers trained, mentored, and learned from a cohort of community evaluators, representative of some of the key populations and communities MA MIECHV and Title V aimed to support.

II.D.1. Community Evaluator Model

With the goal of creating an opportunity for members of communities most impacted by public health inequities to contribute to the development and implementation of MDPH's Title V and MA MIECHV needs assessments, as well as broader programming planning, community evaluators partnered with TIER to lead focus groups with families across Massachusetts. The community evaluator approach is grounded in CBPR models that require equitable involvement by all partners in the research process. CBPR emphasizes the importance of: 1) placing knowledge production in the hands of those most directly affected by the issues being studied; 2) forming academic-community partnerships that are genuinely based on a commitment to co-learning; 3) building evaluation capacity in communities (training community members in research); and 4) proposing program and policy solutions that represent communities' goals and aspirations.⁵ To ensure the needs assessment was grounded in the perspective of community members, we worked closely with a cohort of community evaluators on protocol development, data collection, and analysis.

A recruitment call was distributed to MDPH and TIER staff and leaders at community-based organizations inviting applicants who live and work in Massachusetts, had experiences working with or being a member the MA MIECHV focus populations, were currently engaged with those populations, and were interested in working on behalf of children, youth and families. No professional or academic training was required to be selected as a community evaluator. Of more than 140 applicants, 12 were invited to work with TIER. Community evaluators attended a full-day in-person summit in September 2019 focusing on the foundations of research, evaluation and CBPR, the MDPH Title V and MA MIECHV needs assessments, focus group methodology, and roles and responsibilities of community evaluators. Community evaluators completed two virtual training modules focused on focus group facilitation, research ethics, and notetaking during focus groups and received one-on-one coaching from a TIER research associate throughout the research process; they were each paid a stipend for their time and expertise.

II.D.2. Identification of Focus Group Populations, Recruitment, and Procedures

In alignment with the MA MIECHV focus populations, community evaluators each selected a population with whom they felt comfortable and confident leading a focus group. Focus group participants were recruited primarily through community networks, agencies, and organizations. In some cases, the researchers and/or MDPH identified an informal recruitment liaison at a community organization, who was able to identify and share a recruitment flier to potential participants who met the criteria (aged 18 years or older and fit the population requirements of the specific focus group). Community evaluators took the lead on recruitment for the focus groups they led, and TIER staff (in partnership with MDPH staff) were principally responsible for recruitment for other focus groups.

Community evaluators created their own interview protocols for the focus groups they led, based on their community expertise and interest, and were also asked to align some of their questions with the following goals: (1) identify service needs and gaps in communities; (2) identify strengths and assets in communities; (3)

understand *how* and *why* families access services, resources, and information; (4) understand families' experiences with health and social services; (5) understand barriers and inequities experienced by families based on their identities (e.g. race, age, sex, sexual orientation, country of origin, etc.) and various lived experiences; (6) understand how home visiting programs can help address service needs and gaps in communities; (7) understand the role of home visiting in the network of supports for families; and (8) dissect how home visiting could address families' needs within a system of care.

Between two and twelve individuals participated in each of the focus groups, which were held at various community locations, including public libraries, meeting rooms within community organizations, and a community college. At the beginning of each focus group, participants were asked to complete a brief demographic survey; the survey was anonymous and included open-ended questions about participant's age and gender, as well as forced choice questions about ethnicity, race, primary language and secondary language. Most focus group discussions were approximately 90 minutes. All focus group participants received incentives for their participation.

II.D.3. Samples

Across the Title V and MA MIECHV needs assessments, we conducted 23 focus groups, of which community evaluators had primary responsibility for 12. See Appendix II.7 for the populations, community, language, and sample size for each focus group.

II.D.4. Coding and Analysis

Focus groups were not audio-recorded; rather, two note-takers documented participants' responses. Immediately after each focus group, data were cleaned and synthesized based on a protocol developed by TIER, which proceeded through the following steps: (1) *individual processing*, during which each notetaker went through their notes to check for completeness and clarity, and both facilitators and notetakers generated a list of key takeaways from the group; (2) *group data debrief*, during which researchers who were present at each focus group discussed reactions, observations, key takeaways, and recommendations/implications; and (3) *focus group summary and notes synthesis*, during which one notetaker merged the two notes documents into a single document, and then a team member summarized key findings based on the group and the debriefing discussions. We then conducted a thematic analysis of the major categories of discussions across focus group notes and summaries, looking for categories of information that informed the goals of the MA MIECHV needs assessment. In this report, we highlight those findings that are most relevant to home visiting and early childhood systems of care.

II.E. Substance Use Sub-Study

In addition to information gleaned from the data indicator analysis and home visiting capacity survey, we conducted several additional activities to deepen our understanding of the SUD treatment landscape in Massachusetts. Quantitative analyses included mapping of available SUD service centers and review of eligibility requirements for a homegrown home visiting program serving families with OUD. Qualitative data were drawn from interviews with the staff of a recovery coach pilot overlay, focus groups with parents who experienced OUD, and MA MIECHV site visit reports. Each is described below.

II.E.1. SUD Services Data Mapping

Since 2003, CAPTA mandates that each state's Governor provide assurance for policies and procedures to address the needs of substance-exposed infants, including the development of POSC for infants affected by substance use and their families. The primary components of a POSC are a comprehensive assessment of the health and SUD treatment needs of the infant and affected caregiver or family, and the provision and documentation of referrals and service delivery by a POSC coordinator. POSC coordinators are any providers (i.e., recovery coaches, case managers, home visitors, doulas, early intervention staff, treatment providers, medical providers, etc.) who work with perinatal clients to create and maintain a plan for identifying and accessing desired resources.⁶

To facilitate the work of POSC coordinators, MDPH has supported the development of a statewide resource repository through IHR. To provide a visual perspective on the spatial distribution of SUD and available supports in Massachusetts, we created maps of the locations of available SUD service centers (i.e., treatment, recovery, and wrap-around) included in the repository alongside city/town-level data on four SUD-related indicators, including the average annual rate of enrollment in BSAS/MDPH-funded substance addiction services for all residents, the average annual rate of opioid overdose death occurrences among residents, and focusing on pregnant women, the average annual rate of enrollment in BSAS/MDPH-funded substance addiction services among pregnant women and the rate of infants born with NAS.ⁱ

II.E.2. FIRST Steps Together Exceptions Summary

MDPH's BFHN, in partnership with BSAS, developed FIRST Steps Together to enhance services and access to treatment and recovery supports for pregnant and parenting families (with at least one child under the age of 5) impacted by OUD. FIRST Steps Together services include integrated home-based peer recovery support, evidence-based individual and group parenting interventions, care coordination, and clinical support. As of March 2020, FIRST Steps Together had served more than 300 families since its inception in 2018. The implementing agencies are permitted to request exceptions to the FIRST Steps Together eligibility requirements to serve families with recovery support needs who may have children older than five years of age or are affected by a SUD other than an OUD. We examined the exceptions list ($n = 37$)^j to better understand which populations are being missed by this OUD-focused home visiting program.

II.E.3. SUD-Focused Interviews and Focus Groups

Interviews. MA MIECHV is currently piloting an overlay of EBHV and recovery coaching in one LIA implementing PAT to recruit and train home visitors with lived experience in recovery to partner with parents navigating recovery while pregnant or parenting. A home visitor with lived experience with substance use and recovery was hired in September 2018 and received training in recovery coaching and the PAT curriculum in Fall 2018. To understand the initial implementation of the PAT recovery coach overlay, we conducted a joint key informant interview with the home visitor and her supervisor. The semi-structured interview focused on providing home visiting to families in recovery, community system of care for families in recovery, and experiences with the pilot.

Focus groups. Here, we draw upon findings from our two focus groups conducted with mothers with OUD, as well as our focus groups with foster parents and grandparents raising grandchildren, both populations that have been indirectly impacted by OUD. All of the participants in the two focus groups with mothers with OUD had experience with both home visiting and DCF, offering unique perspectives around how OUD had affected their parenting, as well as their interactions with other community services.

II.E.4. Summary of MA MIECHV Site Visit Reports FYs 2016 to 2018

We conducted a rapid review of 61 site visit reports completed for LIAs across 17 MA MIECHV communities between FYs 2016–2018. The focus of the rapid review was to extract information pertaining to the substance use-related challenges of home visiting programs across the state, home visitors' experiences screening and supporting families with SUD, and gaps in training and services for programs and home visitors. It is notable that the reports contained such rich information related to SUD, given that there is no specific question about the topic in the site visit protocol. The rapid review was structured by MA MIECHV community; in each site visit report, we highlighted all SUD-relevant information and completed a community summary with themes that spanned across EBHV models. The community summaries were then reviewed by the project team to generate key themes. Finally, we compared key themes across MA MIECHV communities noting commonalities

ⁱThe first two indicators are included in the SUD domain, and the latter two are included in the *adverse perinatal outcomes* domain given their focus on pregnant women and infants.

^jThis sample provides context on unmet needs, but does not account for the full universe of unmet needs, as some sites more readily submit exception requests than others, or programs may not submit requests if they know the family will not qualify for an exception.

and differences. The key themes generated from our review include: (1) substance use among families in home visiting, (2) screening for substance use, (3) challenges related to SUD, and (4) services and supports for SUD.

II.F. Cause and Effect “Fishbone” Diagram with the Addition of Cards (CEDAC) Exercise with MA MIECHV Grantees

In November of 2019, TIER led a discussion at the MA MIECHV All Grantees Meeting (MA MIECHV AGM) among more than 50 coordinators, supervisors, and home visitors spanning 24 EBHV programs and four Welcome Family programs. The discussion was organized using a CEDAC, a Lean Six Sigma technique aimed at identifying the root causes and different facets of a particular problem, and then generating solutions for each of the root causes. In this exercise, both causes and solutions were organized along a fishbone shape into seven “buckets”: interpersonal/personal, place/environment, policy/procedures/process, culture, power, equity, and other (for causes and solutions that do not neatly fit into any of the above). In small groups of eight to ten, grantees identified the problem they wanted to focus on and then used colored (yellow for cause, blue for solution) post-it notes to fill the fishbone diagram in with causes and solutions. We used this exercise as an opportunity to delve into some of the findings from the home visiting capacity survey; four of the small groups chose to focus on collaborations with DCF, two on collaborations with public schools, and two on staff retention. We coded and synthesized causes and solutions across sets of diagrams pertaining to each topic area. Given the larger sample of DCF diagrams, as well as the emergent themes around DCF collaborations from our other data collection activities, we only present findings from this set of four in this report.

II.G. Coordination with the Head Start, Title V, and CAPTA Needs Assessments

The needs assessment was undertaken through careful coordination with other state programs, both within and outside MDPH. We worked collaboratively with MDPH on developing the methods for the needs assessment and ensuring we had access to a broad range of data to provide a nuanced examination of Massachusetts. Our mixed methods approach allowed us to triangulate findings across methods, and our strong relationships in the state enabled us to speak to diverse populations and garner views from different perspectives. We also were able to obtain feedback on methods and emergent findings through participation in regular meetings with other MDPH staff and bureaus and MA MIECHV stakeholders and grantees across the state, including the MA MIECHV Advisory Committee, which comprises representatives from several state agencies, including MassHealth, DCF, the Children’s Trust of Massachusetts (the CAPTA designee), Office of Head Start, and EEC. This advisory committee provided planning and oversight of the MA MIECHV needs assessment process through meetings and ad hoc consultation.

While coordination with Head Start and CAPTA largely took the form of the stakeholder engagement and feedback described above, coordination with the Title V needs assessment was a central component of our process. From the beginning of the project the Title V and MA MIECHV teams at MDPH collaborated with TIER to ensure the two needs assessments were aligned conceptually, practically, and strategically. Conceptually, both needs assessments were informed by an overarching focus on racial and health equity, social determinants of health, structural racism, and systems coordination. In terms of logistics, the two projects shared qualitative data collection methods and populations; while the Title V focus groups had a greater emphasis on health and the MA MIECHV groups on home visiting, all groups comprised populations relevant to both programs, and illuminated from multiple perspectives the ways in which both programs fit into larger systems of care. As another practical consideration, the MDPH leadership teams for Title V and MA MIECHV (the same personnel) and a subset of the TIER evaluation team worked on both needs assessments. Finally, the projects are aligned strategically; as MDPH uses findings from this needs assessment for program planning purposes, a key aim is to leverage MA MIECHV as a tool for implementing Title V priorities. In the final section of this report, we note recommendations that map onto Title V priorities. The Title V, Head Start, and CAPTA representatives on the MA MIECHV Advisory Committee will work to ensure that findings and data from their respective needs assessments will be shared on an ongoing basis and used to inform program and policy decisions.

II.H. Methods Summary

See Table II.1 for an overview of data collection activities mapped onto HRSA needs assessment goal areas.

Table II.1. Data Collection Activities and Needs Assessment Area

Evaluation Activity	Description	Needs Assessment Goal		
		Identify Communities Experiencing the Greatest Public Health Challenges	Assess Home Visiting Capacity	Discuss State Capacity for SUD Treatment
Needs Assessment review	Synthesized findings from 26 community and government assessments conducted in MA 2015 and 2019	X		
Data indicator analysis	Used data from DESE, MDPH, and U.S. Census Bureau to determine which communities in MA experience most challenges	X		
Family focus groups	Conducted 22 focus groups with families, 12 of which were facilitated by TIER-trained community evaluators		X	X
Home Visiting Capacity Survey	Surveyed 226 home visiting programs to understand scope of home visiting, service gaps, and potential opportunities to enhance home visiting at the state and local levels		X	X
Substance Use Sub-study	<ul style="list-style-type: none"> Used data from statewide resource repository to map available services for families experiencing SUD Examined exception requests for OUD-focused home visiting program Synthesized data from SUD-focused interviews and focus groups Conducted review of 61 MA MIECHV site visit reports to describe SUD-related challenges of home visiting programs 			X
CEDAC Exercise	Facilitated focused discussion at the MA MIECHV AGM aimed at identifying root causes of, and generating solutions for, a particular problem		X	

Section III. Results

The findings presented in this section are drawn from the evaluation activities described above and organized by MA MIECHV needs assessment requirements. It is important to note that in this section we present quantitative data related to selected indicators without an analysis of the root causes for the inequities described therein. Unfavorable outcomes are not attributed to individual behavior, but rather understood as being the manifestations of structures and systems (e.g., redlining, incarcerations, disenfranchisement) that have historically marginalized and oppressed certain populations and communities. A more nuanced discussion and interpretation of the findings can be found in Section IV. Conclusions and Recommendations.

III.A. Identifying Communities with the Greatest Public Health Challenges^k

Despite Massachusetts standing as the U.S. leader in K–12 education and health insurance coverage for children, many families living in the Commonwealth face significant racial and ethnic, regional, socioeconomic, and health-related inequities.⁷ This section of the report provides an overview of Massachusetts, highlighting the populations and communities facing the most challenges. We begin with a detailed state-level description of Massachusetts based on the needs assessment review and information from 87 data indicators we analyzed, noting racial/ethnic inequities as relevant. For each domain, we provide a map of the ten cities and towns in Massachusetts that ranked highest for challenges associated with that domain. See Appendix III.1 for state-level data for each indicator. We then focus on the 17 communities and towns identified by our detailed data indicator analysis as most in need of MA MIECHV funding. We conclude by turning our attention to the additional cities and towns—outside of the top 17—that also experience significant challenges to children’s and families’ well-being. In the section below, we provide a state-level synopsis by domain and sub-domain.

III.A.1. State-Level Findings

Massachusetts is the third most densely populated U.S. state. With 6.9 million residents, it ranks fifteenth in population size,⁸ and its population includes a higher percentage of White alone residents than the U.S. overall (71.0% vs. 60.2%, respectively);^{9,10} about 12% of Massachusetts residents are Hispanic or Latino of any race, 7% are African American or Black alone, 7% are Asian alone, and fewer than 1% are American Indian or Alaska Native alone, with remaining residents identifying as either multi-racial or some other race or ethnicity.⁹

The Massachusetts birthrate is 52 per 1,000 women aged 15 to 44 years, amounting to slightly more than 71,000 live births per year.¹¹ A fifth of the Massachusetts population is under 18 years of age, with 5% under five years.¹² Relative to the Massachusetts population overall, a higher proportion of Massachusetts children identify as BIPOC: 60% are White non-Hispanic, 19% Hispanic or Latino, nearly 10% are African American or Black, 7% are Asian, 0.3% are American Indian or Alaska Native, and 6% are another race/ethnicity.¹³

III.A.1.a. SES

About 11% of the Massachusetts population lives below the FPL (approximately \$25,000 a year for a family of four). Residents of color are inequitably impacted by poverty, whereby 8% of White residents live in poverty versus a quarter of Hispanic or Latino residents, about a fifth of American Indian and Alaskan Native residents, and about 18% Black or African American residents.¹⁴ Although Massachusetts’ poverty rate is lower than the national average, there is a sizable income gap between residents with greater versus lower income as indicated by average Gini coefficient of 0.48.^{15,1} Poverty disproportionately affects young children, as nearly 15% of Massachusetts children under the age of five live below the FPL.¹⁶ Stark racial and ethnic inequities are apparent here as well; while just 11% of White young children live in poverty,¹⁷ 16% of Asian children,¹⁸ 25% of Black or African American children,¹⁹ and 32% of Hispanic or Latino children²⁰ live in poverty. Across Massachusetts, just over 30% of students are deemed to experience economic disadvantage,²¹ and nearly a third of children 18 years of age and under reside in single parent-headed households.²²

Since 2006, the Commonwealth has provided access to affordable health insurance to its residents through MassHealth.²³ In 2018, the Commonwealth had the lowest rate of uninsured individuals in the nation (3%).²⁴ Just under 40% of women who recently gave birth receive MassHealth, ranging from about a quarter of White women, just under 30% of Asian women, nearly 65% of Black women, and just under three quarters of Hispanic women.¹¹ Nearly 61% of children less than 17 years of age have a medical home, down to just under 52% for children with special healthcare needs.²⁵

^kAs described in footnote b in Section II.B, we have reworded this from the stated HRSA goal of “identifying communities with concentrations of risk.”

^lThe Gini Index is a measure of income inequality, which summarizes the dispersion of income across the entire income distribution, ranging from 0, which indicates perfect equality (everyone receives an equal share) to 1, which indicates perfect inequality (only 1 recipient or group of recipients receives all income).

Fewer than 5% of Massachusetts residents 16 years of age and older are unemployed, ranging from about 4% of White and Asian residents, respectively, to 8% of African American or Black residents.²⁶ Despite relatively strong labor force participation, many Massachusetts residents work in low-paying jobs.⁸ Just under 9% of Massachusetts families receive cash assistance from TAFDC.²⁷ About 9% of adults aged 25 years and older in Massachusetts do not have a high school diploma (or equivalent),²⁸ with Hispanic or Latino adults having the highest percentage (28%).²⁹ Nearly 11% of 18- to 24-year-olds living in Massachusetts did not graduate high school (or equivalent).³⁰ Three percent of 16- to 19-year-olds are neither enrolled in school nor are high school graduates,³¹ and just 2% of high school students did not graduate, with Hispanic, Black, and Native American youth having higher rates (5%, 3%, and 3%, respectively).³² See Appendix III.2 for state-level SES data by race and ethnicity. Figure III.1 displays the Massachusetts cities and towns with the highest rankings in the SES domain,^m using the methods described in Section II.B.2, indicative of the most SES-related challenges across the state.

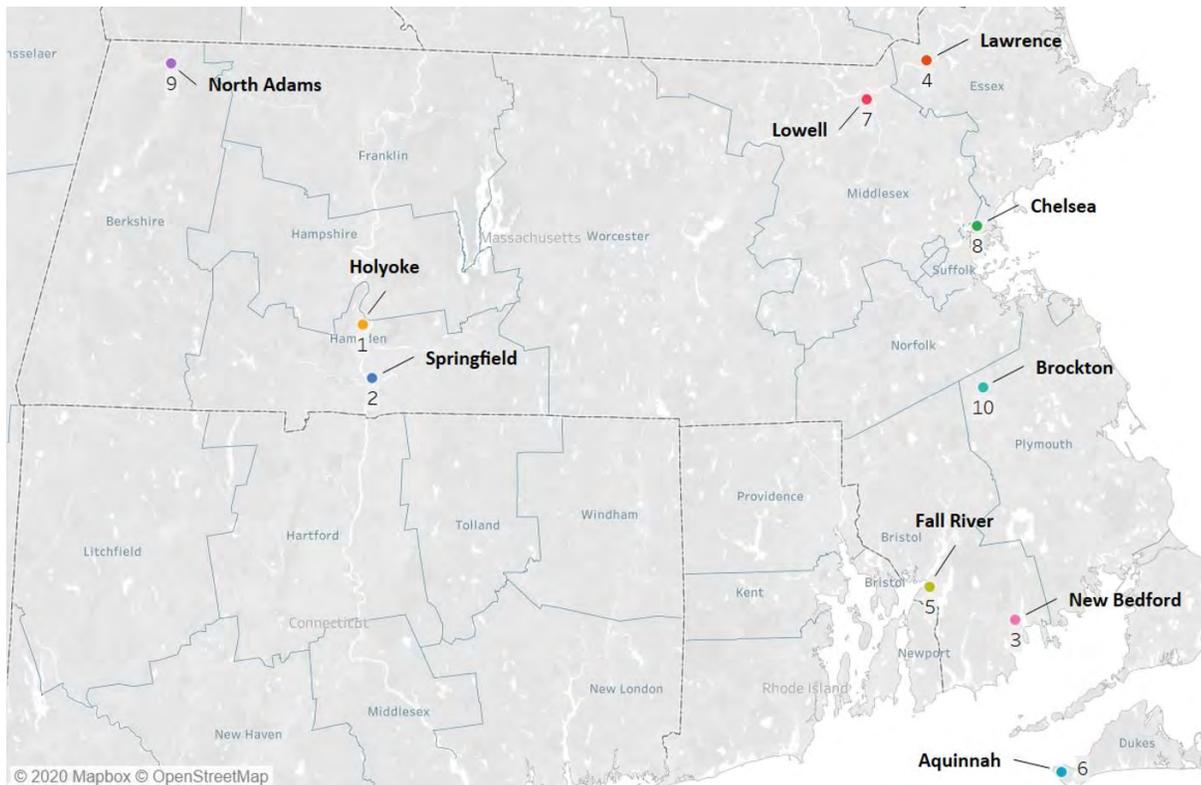


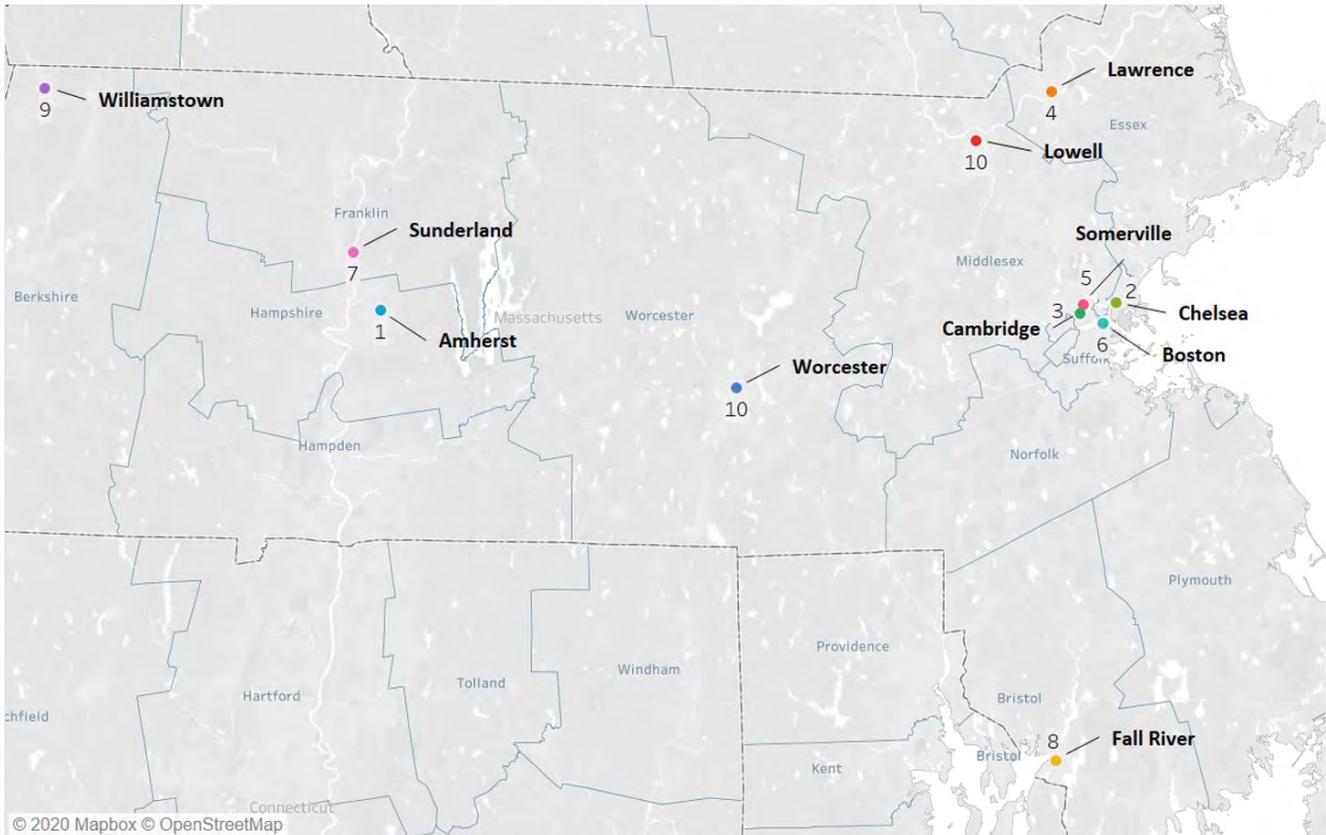
Figure III.1. Massachusetts Cities and Towns with the Highest Rankings in the SES Domain

III.A.1.b. Housing

Most of Massachusetts residents experience residential stability, with only 12% moving at least once within the past year.³³ Nearly 40% of housing units in Massachusetts are renter-occupied vs. owner-occupied, a ratio of 0.60 renter-occupied residences for each owner-occupied residence,³⁴ with ratios considerably higher for Hispanic or Latino,³⁵ Black or African American,³⁶ and American Indian and Alaska Native³⁷ residents upwards of two to three. Unaffordable housing is a prevalent issue across Massachusetts; 38% of homeowners and 50% of renters are cost-burdened,³⁸ paying more than 30% of income on housing costs. Massachusetts ranks among the top 10 states with the largest gap between average wages and rental costs for a two-bedroom apartment in a fair market.²

^mFor all maps presented in Section III, the numbers reflect state ranking, where one is the city/town with the highest score.

According to data from HUD, Massachusetts has the seventh highest rate of homelessness in the U.S. as nearly 18,500 residents experience homelessness, and one-fifth are families.³⁹ In 2018, a little more than 7,300 families applied for emergency housing assistance, and nearly 4,000 families entered homeless shelters and hotels.⁴⁰ Based on recent school records, more than 24,000 homeless children are enrolled in public schools,⁴¹ and 12% of children under the age of six experiencing homelessness are served by Head Start or EHS.⁴² According to the housing department, about 100 children are homeless and unaccompanied in Massachusetts.⁴⁰ See Appendix III.3 for state-level housing data by race and ethnicity. Figure III.2 displays the Massachusetts cities and towns with the highest rankings in the housing domain.



III.A.1.c. Populations of Special Interest

Nearly 17% of Massachusetts residents are foreign-born,⁴³ defined as anyone who is not a U.S. citizen at birth, with 69% of Asian residents,⁴⁴ 36% of Black or African American residents,⁴⁵ and 30% of Hispanic or Latino⁴⁶ being foreign-born. Among mothers, specifically, about 30% are born outside of the U.S., with about half of Hispanic mothers who gave birth in 2016 born outside of the U.S., nearly 60% of Black women, and 83% of Asian women.¹¹ Massachusetts also has the eighth highest percentage of immigrant or refugee residents in the U.S., the majority of whom come from near East and South Asia, Africa, Latin America, and the Caribbean^{8,38} with slightly fewer than 2,000 refugees living in Massachusetts.⁴⁷

Massachusetts has a relatively low teen birth rate. About 3% of mothers who give birth are less than 20 years of age, a rate of 8.5 per 1,000 women, with rates being highest among Hispanic mothers, followed by American Indian mothers; Asian mothers had the lowest teen birth rate.¹¹

In terms of other special population categories, 4% of children in Massachusetts have a parent who has spent time in jail⁴⁸ and just under 6% of adults in Massachusetts are veterans,⁴⁹ with the highest percentages being among White residents⁵⁰ and the lowest among Asian residents.⁵¹ See Appendix III.4 for state-level data on populations of special interest by race and ethnicity. Figure III.3 displays the Massachusetts cities and towns with the highest rankings in the populations of special interest domain.

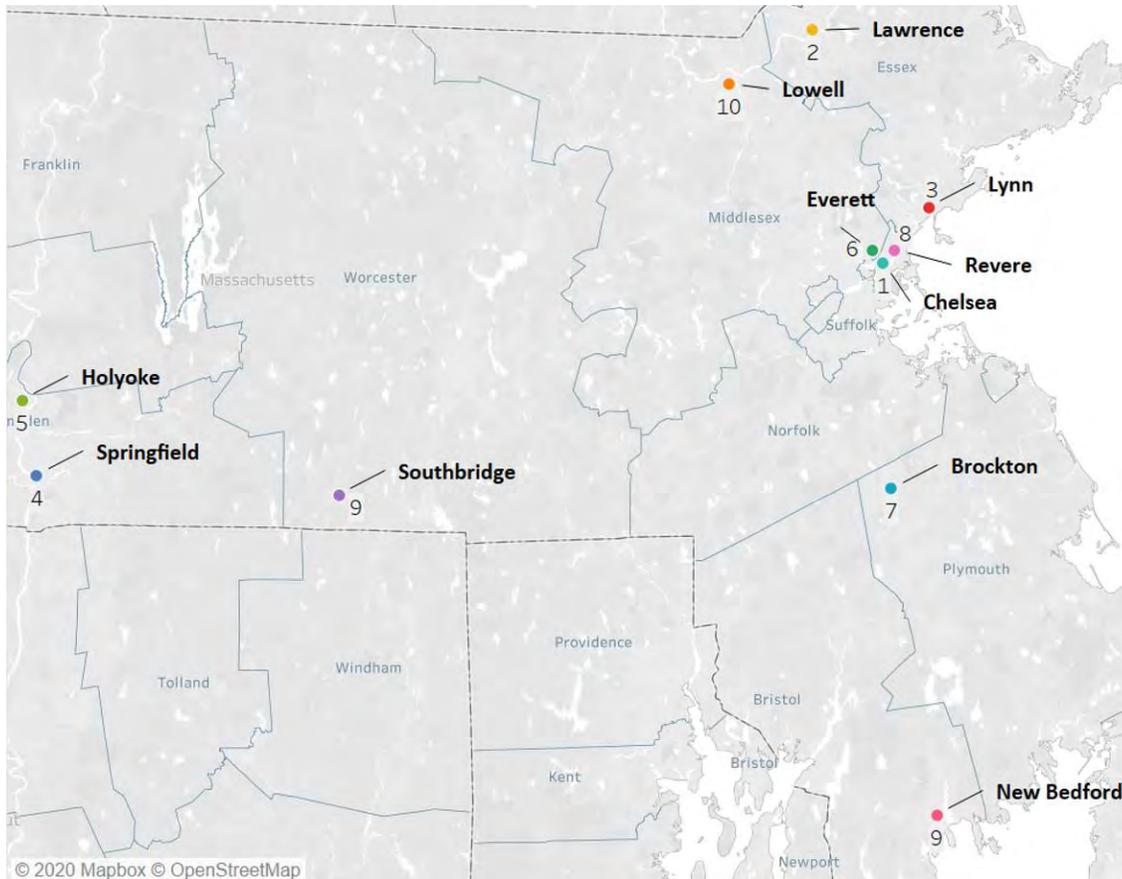


Figure III.3. Massachusetts Cities and Towns with the Highest Rankings in the Populations of Special Interest Domain

III.A.1.d. SUD

About 7% of Massachusetts residents aged 12 years and older experienced alcohol use disorder in the past year, 13% used marijuana in the past month, about 3% used cocaine in the past year, fewer than 1% reported heroin use in the past year, and nearly 4% reported misusing pain relievers.⁵² The prevalence of OUD and deaths due to overdoses in Massachusetts is among the highest in the nation.⁵³ On average, nearly 24 per 100,000 residents die from opioid overdose annually⁵⁴ and nearly 1,600 per 100,000 residents enroll in BSAS/MDPH-funded or licensed substance addiction service programs.^{55,n} Figure III.4 displays the Massachusetts cities and towns with the highest rankings in the SUD domain.

ⁿData not available by race and ethnicity.

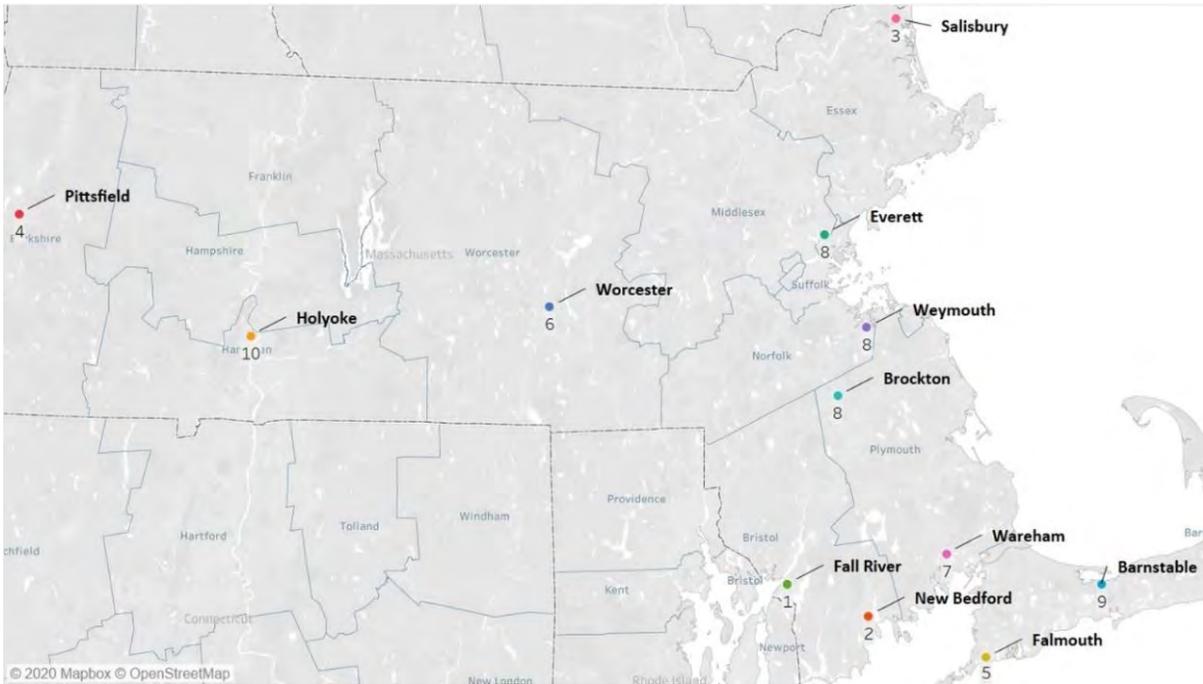


Figure III.4. Massachusetts Cities and Towns with the Highest Rankings in the SUD Domain

III.A.1.e. Crime

The violent crime rate in Massachusetts, including rape, robbery, assault, and murder is 358 per 100,000 residents.^{56,0} Figure III.5 displays the Massachusetts cities and towns with the highest rankings in violent crime.



Figure III.5. Massachusetts Cities and Towns with the Highest Rankings in the Crime Domain

⁰Data not available by race and ethnicity.

III.A.1.f. Child Unintentional Injuries

About 54 infants per 100,000 experience SUID,⁵⁷ and nearly 10,000 per 100,000 children less than 10 years visit a hospital emergency department for an unintentional injury,⁵⁸ with a rate for children under 3-years-old of about 11,600 per 100,000 children.^{59,p} Figure III.6 displays the Massachusetts cities and towns with the highest rankings in the child unintentional injuries domain.



Figure III.6. Massachusetts Cities and Towns with the Highest Rankings in the Unintentional Injuries Domain

III.A.1.g. Child Maltreatment

On average, 22 per 1,000 children aged birth to 17 years of age experience a substantiated child maltreatment report.^{60,q} Figure III.7 displays the Massachusetts cities and towns with the highest rankings in the child maltreatment domain.

^pData not available for race and ethnicity.

^qData not available for race and ethnicity.

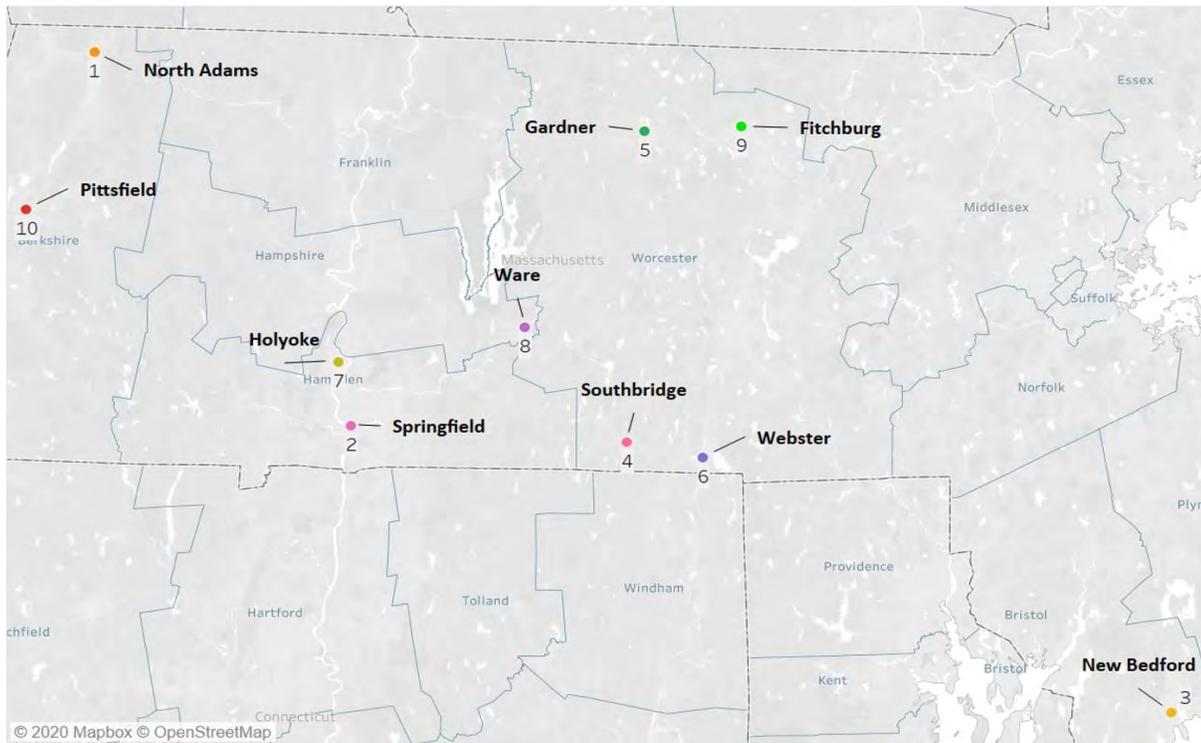


Figure III.7. Massachusetts Cities and Towns with the Highest Rankings in the Child Maltreatment Domain

III.A.1.h. Adverse Perinatal Outcomes

Across Massachusetts, nearly 18% of women receive less than adequate prenatal care, ranging from 14% of White women, 17% of Asian women, about a fifth each of Hispanic and American Indian women, and just under a third of Black women.¹¹ About 40 per 100,000 women die while pregnant or within one year of termination of pregnancy,⁶¹ and acute or chronic substance use contributes directly to 41% of pregnancy-associated deaths. Nearly two-thirds of substance use-related pregnancy-associated deaths are attributed to opioids and almost all of them occur in the postpartum period.⁶² Just under half of women across Massachusetts are overweight or obese prior to pregnancy in 2018, closer to 60% for Black and Hispanic women.⁶³

Ten percent of women experience postpartum depressive symptoms, ranging from about 8% of White women, 11% of Hispanic women, 14% of Asian women, and nearly a fifth of Black women. About 5% of women reportedly smoke or vape during pregnancy, with higher rates reported among White women than Black, Hispanic, or Asian women. Two-thirds of women drink alcohol in the months prior to their pregnancy, going upwards of 85% for White women, with much lower rates reported among other racial/ethnic groups. Notably, about a fifth of White women reported binge drinking in the three months prior to pregnancy.⁶³ Most pregnant women who are enrolled in the BSAS treatment system reportedly use heroin (71%), other opioids (20%), crack/cocaine (44%), marijuana (37%), and alcohol (35%).⁸ In Massachusetts, 14 babies per 1,000 live births have NAS.⁶⁴

Nearly 9% of infants are born preterm, before 37 weeks gestation, and about 8% are low birth weight, weighing less than 2,500 grams at birth. Among Black babies, 11% are preterm and low birth weight, respectively, higher than the state average. The percentage of preterm births is nearly 10% for Hispanic or Latino babies.¹¹ Nearly four per 1,000 infants die before their first birthday, with infants of color having disproportionately higher rates; non-Hispanic White infants have death rate of 2.91, whereas Non-Hispanic Black infants have a rate of 6.82, and Hispanic infants have a rate of 5.22.⁶⁵

Almost 40% of young mothers less than 20 years of age become pregnant again within 12 months (vs. 16% of 20- to 34-year-olds and 11% of women older than 34 years).⁶⁶ After giving birth, most women (86%) breastfed their infants during their hospital stay.¹¹ See Appendix III.5 for state-level data on adverse perinatal outcomes by race and ethnicity. Figure III.8 displays the Massachusetts cities and towns with the highest rankings in the adverse perinatal outcomes domain.

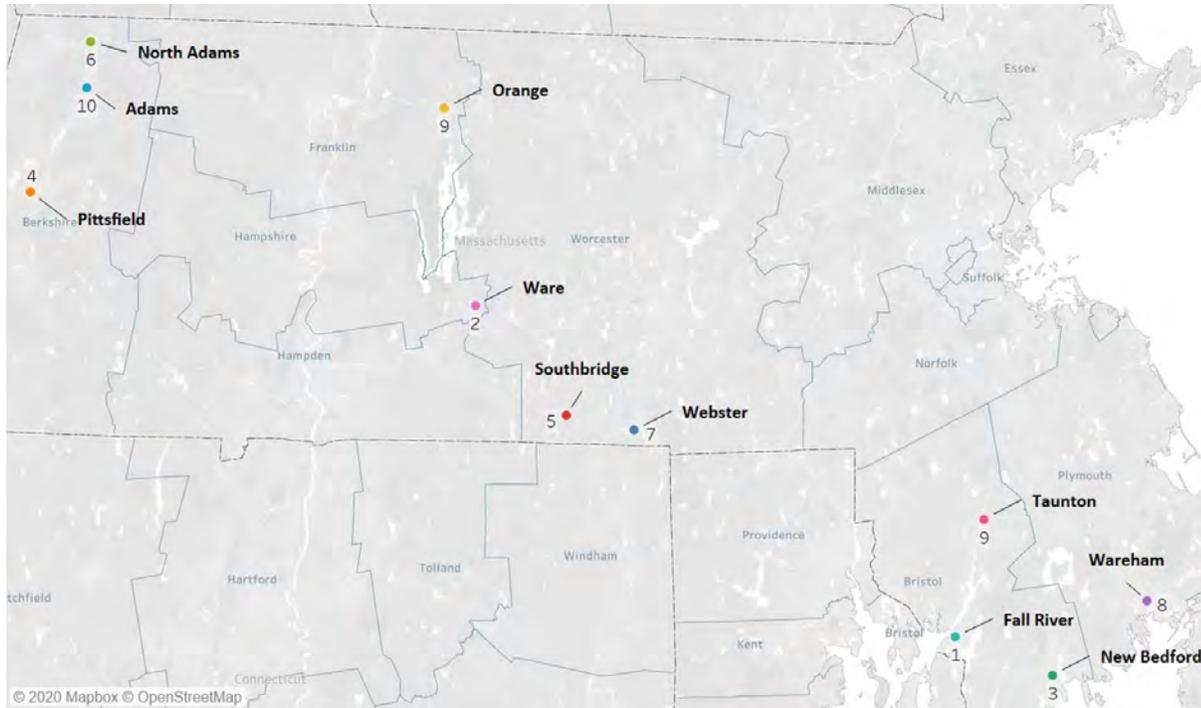


Figure III.8. Massachusetts Cities and Towns with the Highest Rankings in the Adverse Perinatal Outcomes Domain

III.A.1.i. Child Development and Health and School Outcomes

In Massachusetts, nearly one-fifth of children (18.5%) less than three years of age enroll in EI services.⁶⁷ Nearly two-thirds of early education and care programs are at the QRIS level one in 2018, indicating most programs have the basic foundation in curriculum and learning, safety, workforce qualifications and professional development, family and community engagement, and leadership and administration to build upon to reach higher levels. A further 29% reach level two, 4% level three, and fewer than 1% level four.⁶⁸ Most Massachusetts children are enrolled in full-day kindergarten.⁶⁹

Focusing on school-age children, nearly half of students are considered “high needs,” which includes students with disabilities, ELs and former ELs students, and low-income students. Nearly 11% of school-age children are ELs, with a language other than English being the first language for more than a fifth of students. About 18% of students experience a disability, with higher rates observed among Native American, Native Hawaiian or Pacific Islander, Hispanic, and Black students; only 9% of Asian students experience a disability.²¹ Nearly 13% of students experience chronic absenteeism,⁷⁰ indicating that they were absent for 10% or more school days, and just under 17% are truant, with more than nine unexcused absences.⁷¹ Chronic absenteeism and truancy are highest among Hispanic or Latinos students, followed by American Indians or Alaskan Natives, Blacks or African Americans, and Native Hawaiians or Pacific Islanders.^{70,71} On average, third graders in Massachusetts score 504 on the ELA MCAS and 499 on the math.^{72,r} Based on aggregated MCAS scores, absenteeism rates, English

^rThe possible range for the MCAS assessments is 440–560. Scores < 470 indicate a child is not meeting grade-level expectations in the relevant subject.

proficiency among ELs, and advanced coursework in grades 11 and 12, about 5% of Massachusetts’ school districts require assistance or intervention with the respect to improving student performance.⁷³

Nearly half of EPSDT and PPHSD service claims for infants less than six months and three-quarters for children aged six months to 12 years include a behavioral health screen.⁷⁴ Slightly more than 8% of children less than six years old experience two or more ACEs, about 17% of six- to 11-year-olds, and 21% of 12- to 17-year-olds.⁷⁵ On average, nearly 691,000 children are insured through MassHealth with 6% of these children being disabled.⁷⁶

Among students in kindergarten to eighth grade, 12% are affected by asthma,⁷⁷ and about 164 per 100,000 children less than 20 years are hospitalized due to an asthma-related issue.⁷⁸ About 15 per 1,000 young children (aged nine months to three years) experience EBLLs, and three per 1,000 children experience lead poisoning.⁷⁹ Nearly 30% of young children less than five years of age participating in the WIC program are overweight or obese,⁸⁰ increasing slightly to 31% for school-age children.⁸¹ Obesity rates for young children were highest among Hispanic children.⁸⁰ See Appendix III.6 for state-level data on child development and health, and school outcomes by race and ethnicity. Figure III.9 displays the Massachusetts cities and towns with the highest rankings in the child development and health and school outcomes domain.

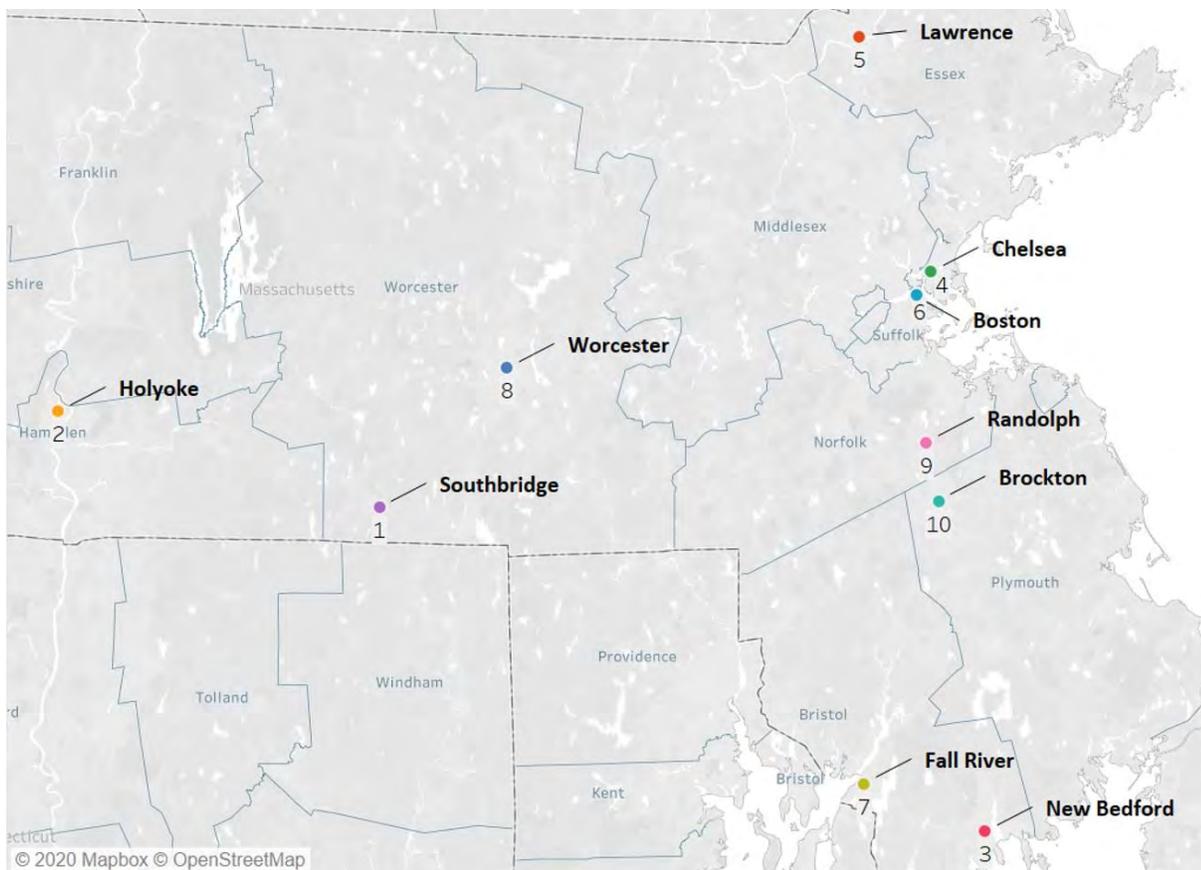


Figure III.9. Massachusetts Cities and Towns with the Highest Rankings in the Child Development and Health and School Outcomes Domain

III.A.2. City/Town-Level Findings

In this section, we provide profiles of the 17 highest-ranked communities across the nine domains, organized by EOHS region,⁸² highlighting notable challenges in each community.⁵ The 17 communities are located within

⁵Within each city/town, we highlight indicators that were ranked within the top 10 across the state.

five of the six Massachusetts’ regions and dispersed across eight of the 14 Massachusetts’ counties (see Table III.1 and Figure III.10).

Table III.1. Region, County, and Ranking by Public Health Challenges Across the Nine Domains for the 17 Communities

Region	County	Community	Ranking
Western	Berkshire	North Adams	9
		Pittsfield	15
	Hampden	Holyoke	1
		Springfield	5
Central	Worcester	Southbridge	2
		Worcester	8
		Fitchburg	11
		Webster*	16
Northeast	Essex	Lawrence	6
		Lynn	13
	Middlesex	Lowell	12
		Everett	17
Boston	Suffolk	Chelsea	7
		Boston	14
Southeast	Plymouth	Brockton	10
	Bristol	New Bedford	3
		Fall River	4

Note. *Webster was not included in the 17 MIECHV Communities in the MA MIECHV 2010 needs assessment.

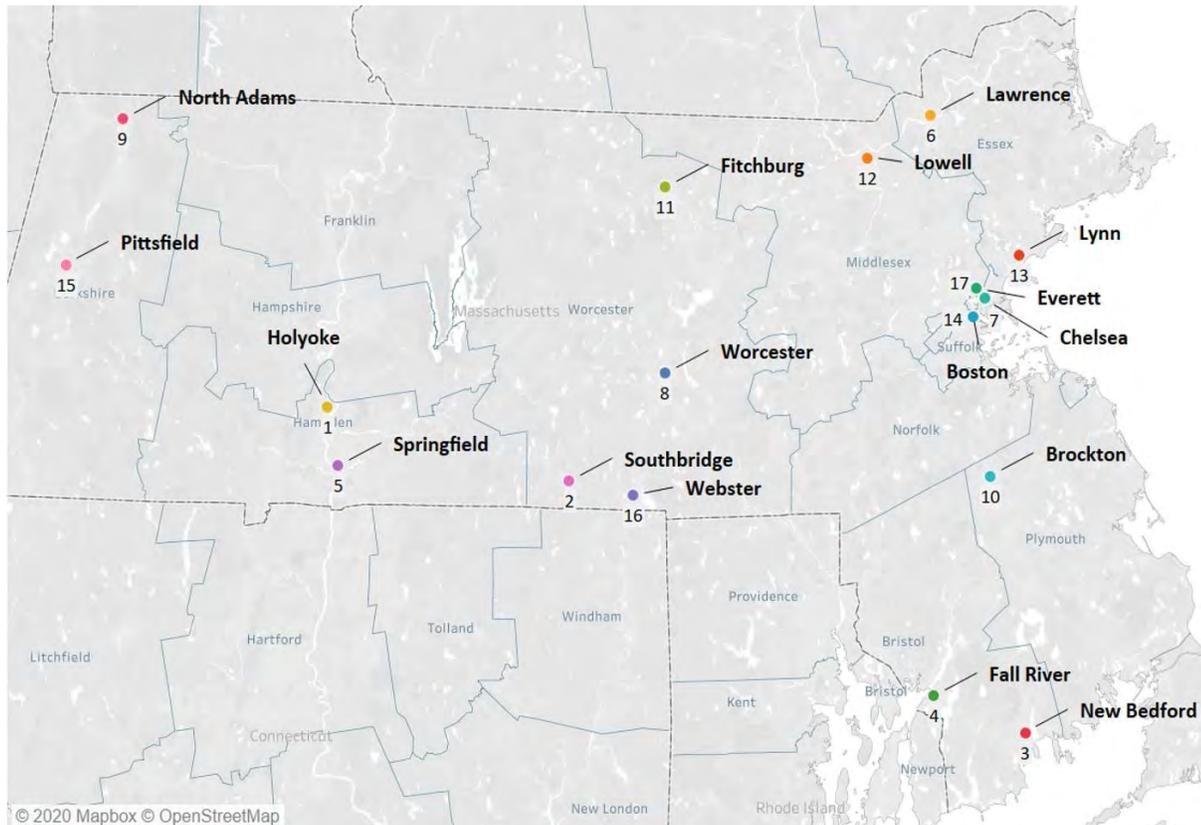


Figure III.10. Ranking by Public Health Challenges Across the Nine Domains for the 17 Communities

For a detailed description of each of the 17 highest-ranked communities across the nine domains and the 42 city/town-level indicators, see Appendix III.7.

At the end of this section, we discuss cities and towns that did not rank among the top 17 communities across all nine domains, but experienced challenges within specific domains or across several indicators.

III.A.2.a. Western Massachusetts: Holyoke, Springfield, North Adams, and Pittsfield

In the Western Massachusetts region, four communities in Berkshire and Hampden counties—Holyoke, Springfield, North Adams, and Pittsfield—were ranked within the top 17 cities/towns. Although these four communities each experience unique challenges, residents across the communities have high rates of enrollment in substance addiction service programs, violent crime, and maltreatment among children and youth. Three of the four cities—Holyoke, Springfield, and North Adams—have high rates of unemployment, single parent-headed households, and teen births.

In Holyoke (rank one) and Springfield (rank five), both in Hampden County, residents have high rates of poverty and family receipt of TAFDC cash assistance. Sizable proportions of mothers in both communities received publicly financed prenatal care, did not complete high school, and are BIPOC. Holyoke has a high ratio of renter- vs. owner-occupied residences, and its students have high rates of asthma, truancy, chronic absenteeism, and disabilities. Holyoke has low third grade MCAS scores in both ELA and math, and its school district requires assistance or intervention concerning student performance improvement. Springfield students have a high rate of overweight and obesity.

In North Adams (rank nine) and Pittsfield (rank 15), both in Berkshire County, pregnant women have high rates of smoking and enrollment in substance addiction service programs. North Adams struggles with high rates of infant NAS, emergency department visits due to unintentional injuries among children, and EBLLs among young children; also, many students have disabilities. Pittsfield has high rates of infant mortality and chronic student absenteeism.

III.A.2.b. Central Massachusetts: Southbridge, Worcester, Fitchburg, and Webster

In the Central Massachusetts region, four communities in Worcester County—Southbridge, Worcester, Fitchburg, and Webster—ranked within the top 17 cities/towns. Three of the four—Southbridge, Fitchburg, and Webster—have high rates of child and youth maltreatment.

Southbridge (rank two) and Fitchburg (rank 11) have high rates of teen births, infant mortality, and chronic student absenteeism. Southbridge has high rates of poverty among young children, family receipt of TAFDC cash assistance, children's emergency department visits due to unintentional injuries, children's and youth's hospitalization due to asthma-related issues, and student asthma and truancy. Southbridge has low third-grade MCAS scores in both ELA and math, and its school district requires assistance or intervention concerning student performance improvement.

In Southbridge and Worcester (rank eight), many students are ELs and categorized as having high needs. Worcester residents have high rates of poverty and enrollment in substance addiction service programs and are more likely to be renters than owners. Worcester and Fitchburg students have high rates of overweight and obesity. Fitchburg has high rates of unemployment and violent crime. Worcester and Webster (rank 16) has low third-grade MCAS scores in math. In Webster, pregnant women have a high rate of smoking, and its school district requires assistance or intervention concerning student performance improvement.

III.A.2.c. Northeast Massachusetts: Lawrence, Lowell, Lynn, and Everett

In the Northeast region, four cities or towns in Essex (Lawrence and Lynn) and Middlesex counties (Everett and Lowell), ranked within the top 17 cities/towns. All four communities have high proportions of BIPOC mothers and students who are ELs. Lawrence, Lowell, and Everett have high ratios of renter- vs. owner-occupied residences, and mothers in Lawrence, Lynn, and Everett have high proportions of low educational attainment

and residents who are non-US-born. Children and youth in Lawrence, Lowell, and Lynn have high rates of asthma-related hospitalizations.

In Lawrence (rank six; Essex County) and Lowell (rank 12; Middlesex County), residents have high rates of poverty. In Lawrence, there are high rates of unemployment, receipt of TAFDC cash assistance among families, and teen births. Children and youth have high rates of single parent-headed households and asthma, and students have a high rate of chronic absenteeism and low ELA MCAS scores; Lawrence's school district requires assistance or intervention concerning student performance improvement. Mothers in Lowell have a low intention to breastfeed postdelivery.

In Lawrence and Lynn (rank 13; Essex County), mothers are likely to have received publicly financed prenatal care, and students are likely to be categorized as having high needs. In Lynn, young children have a high rate of EBLLs.

In Everett (rank 17; Middlesex County), residents have a high rate of opioid overdose deaths, and students have high rates of overweight and obesity, as well as truancy.

III.A.2.d. Boston: Chelsea and Boston

In the Boston region, two communities in Suffolk County ranked within the top 17 cities/towns. Overall, Chelsea (rank seven) and Boston (rank 14) experience unique challenges but share some similarities. Both communities have a high ratio of renter- vs. owner-occupied residences, as well as high rates of asthma-related hospitalizations among children, and students who are ELs and categorized as having high needs.

Mothers in Chelsea have high rates of having received publicly financed prenatal care, teen births, low educational attainment, and overweight and obesity during pregnancy; families have high rates of receipt of TAFDC cash assistance. Many mothers are BIPOC and non-US-born. Chelsea also struggles with high rates of violent crime and student truancy, and its school district requires assistance or intervention concerning student performance improvement. Boston struggles with high rates of poverty and student chronic absenteeism.

III.A.2.e. Southeast Massachusetts: New Bedford, Fall River, and Brockton

In the Southeast Massachusetts region, three communities in Bristol and Plymouth counties ranked within the top 17 cities/towns experiencing the greatest challenges in Massachusetts across the nine domains. Although these communities experience unique challenges, all three communities have high rates of opioid overdose deaths, and a sizable portion of mothers who received publicly financed prenatal care and did not complete high school.

In New Bedford (rank three) and Fall River (rank four), both in Bristol County, residents have high rates of poverty and enrollment in substance addiction service programs and are more likely to be renters than owners. Pregnant women have high rates of enrollment in substance addiction service programs, and infants have high rates of NAS. Families have high rates of TAFDC cash assistance receipt, and mothers have high rates of teen births and low intentions to breastfeed postdelivery. Students have high rates of truancy, chronic absenteeism, and being categorized as having high needs. New Bedford children and youth have high rates of single parent-headed households, maltreatment, being overweight and obese, and being ELs; its school district also requires assistance or intervention concerning student performance improvement. In Fall River, children have a high rate of emergency department visits due to unintentional injuries, and students have a high rate of asthma.

In New Bedford and Brockton (rank ten; Plymouth County), children and youth have high rates of being hospitalized due to asthma-related issues and young children have high rates of EBLLs. Both communities of Fall River and Brockton have high rates of unemployment and violent crime. Many mothers in Brockton are BIPOC and third graders have low MCAS scores in both ELA and math.

III.A.3. Additional Communities Experiencing Challenges Related to Specific Indicators

Based on our analysis, several other cities and towns located within specific regions faced significant challenges in several indicators, despite not falling into the top 17 rankings (see Table III.2). We briefly mention these communities here for consideration for current and future programming. One of these communities—Revere—is a current MIECHV community, and two others—Adams and Wareham—are within an extant MA MIECHV catchment area.

Table III.2. Region and County for Additional Communities

Region	County	Community
Western	Berkshire	Adams
	Franklin	Orange
	Hampden	Ware
	Worcester	Athol
Boston	Suffolk	Revere
Southeast	Plymouth	Wareham
	Barnstable	Barnstable
		Falmouth
		Provincetown
	Dukes	Aquinnah
		Edgartown
		Tisbury
	Nantucket	Nantucket

III.A.3.a. Western region

In Adams (Berkshire County) on the far-Western side of Massachusetts, challenges are concentrated among children and youth, including high rates of: NAS among infants, emergency department visits due to unintentional injuries among children, student disabilities, and overweight and obesity.

In Orange (Franklin County) and Athol (Worcester County), two bordering towns but in separate counties, challenges are widespread across populations, including high rates of: unemployment (Athol and Orange); smoking among pregnant women (Athol and Orange); teen births (Orange); emergency department visits due to unintentional injuries among children (Athol); and student asthma, disabilities, and chronic absenteeism (Athol). Additionally, third graders in Orange have low MCAS scores in both ELA and math, and at least one school district serving Orange requires assistance or intervention with respect to improving student performance.

In Ware (Hampden County), although challenges are widespread across populations, there is also concentration of challenges among children, including high rates of: opioid overdose deaths among residents; smoking among pregnant women; infant mortality and NAS; child and youth maltreatment; EBLLs among young children; and student overweight and obesity.

III.A.3.b. Boston region

In Revere of Suffolk county, which was identified as a MA MIECHV community in the 2010 needs assessment, a large proportion of mothers are non-US-born, and students have a high rate of overweight and obesity.

III.A.3.c. Southeast region

Eight communities in Southeast Massachusetts experience significant challenges; one is Wareham (outside of Cape Cod), three are on Cape Cod (Barnstable, Falmouth, and Provincetown), three are on Martha’s Vineyard (Aquinnah, Edgartown, and Tisbury), and the other is Nantucket.

In Wareham (Plymouth County) and on the Southwestern to Mid-Cape Cod areas (Barnstable County), challenges are widespread across populations, with a concentration of SUD-related challenges, including high rates of: (1) opioid overdose deaths (Wareham only); (2) enrollment in substance addition services among

residents (Falmouth) and pregnant women (Wareham and Barnstable); (3) infant NAS (Barnstable only); and (4) student disabilities (Wareham only).

On the peninsula region of Cape Cod, Provincetown's (Barnstable County) challenges are widespread across populations, with a concentration of SES-related challenges, including high rates of: (1) single parent-headed households; (2) publicly financed prenatal care among mothers; and (3) violent crime.

On Martha's Vineyard (Dukes County), in Edgartown and Tisbury, children have high rates of emergency department visits due to unintentional injuries. In Aquinnah, challenges are widespread across populations, with a concentration of SES-related challenges, including a sizable income gap between residents with greater versus lower income, as well as high rates of: (1) poverty among all residents and young children; and (2) youth who are not currently enrolled in school or high school graduates. On Nantucket (Nantucket County), a large proportion of mothers are non-US-born, and children have a high rate of emergency department visits due to unintentional injuries.

III.B. Identify the Quality and Capacity of Existing Programs or Initiatives for Early Childhood Home Visiting in the State.

As previously mentioned in Section II.B, county-level analyses are not useful for assessing population needs and gaps in Massachusetts home visiting services. To supplement the capacity data required for Table 7 in the MA MIECHV Needs Assessment Data Summary Document, we assessed home visiting capacity using a variety of other methods. In this section we present findings from the home visiting capacity survey, integrating focus group findings, as well as findings from past MA MIECHV evaluations, whenever appropriate. When reporting survey data, we note any differences between program type or region that meet standard criteria for statistical significance ($p < .05$).

We begin with a general description of the home visiting landscape in Massachusetts, including basic program characteristics, the populations served by home visiting, staffing, and budget. The next section focuses on highlighting some of the most pressing challenges experienced by families. This is followed by findings related to how home visiting programs appear to respond to families' needs, and areas that could be improved upon. Finally, we discuss findings related to the early childhood system of care, using survey and focus group data to describe the many systems with which families interface, and the extent to which home visiting is able to coordinate and collaborate with these systems.

III.B.1. Massachusetts Home Visiting Landscape: Programs and Populations

The following paragraphs provide basic descriptive information about Massachusetts home visiting programs, including estimates of the scope of home visiting across Massachusetts and characteristics of programs, staff, and families served.

III.B.1.a. Massachusetts Home Visiting Programs

Of the program sample ($n = 226$) 11% of programs were MA MIECHV-funded, 30% of programs NHVM, 33% of programs were Homegrown, and 27% were EI. See Appendix III.8, map one, for distribution of program types across the state. Programs are concentrated in the Boston and Metro West regions, as well as the Springfield/Holyoke area in the Western region of the state. See Appendix III.8, map two, for the catchment areas for MA MIECHV-funded programs only.

Prevention Continuum and Dosage

Using the Institute of Medicine's health planning framework⁸³ as a guide, we grouped home visiting models according to where they fall on the "prevention continuum." *Universal* programs are available to all families, with no eligibility criteria;[†] *selective* programs are targeted toward subgroups (e.g., teen parents, families

[†]Note that the majority of programs characterized as universal *theoretically* are available to all families but in reality do not have the capacity to enroll all families.

experiencing poverty) that are potentially more vulnerable to negative outcomes; and *indicated* programs are targeted toward individuals (children with special needs, families involved in child protective services) who are vulnerable to negative outcomes. The majority of the 226 programs in our sample (47%) are indicated, more than a third (38%) are selective, and only 13% offer services universally.

Using a combination of expected visit frequency and maximum program duration, we categorized programs as *low dosage*: duration 6 months or less/visit frequency weekly or less; *medium dosage*: (1) duration three to six months/visit frequency twice weekly; (2) duration seven to 12 months/any visit frequency; and (3) duration greater than six months/visit frequency monthly; or *high dosage*: duration more than 12 months/visit frequency at least biweekly. Most programs (73%) were high dosage, with 18% medium dosage, and 9% low dosage. Figure III.11 shows the distribution of low, medium, and high dosage programs by prevention continuum. Programs that are low dosage appear more likely to be universally available, medium dosage programs are more likely to be indicated, and high dosage programs are more likely to be selective or indicated ($\chi^2(4) = 89.67, p < .001$).

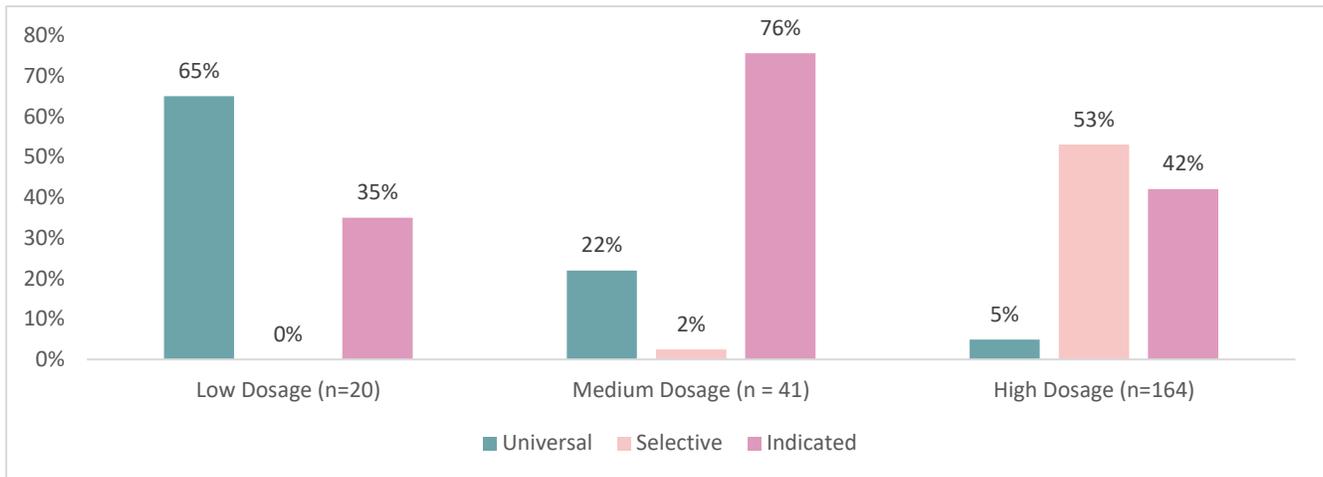


Figure III.11. Program Dosage by Prevention Continuum (program sample, n = 225)

Staff Retention

We asked respondents how much of a problem their program had with retention on a four-point scale, from “no problem at all” to “a huge problem.” Of those who responded (n = 145), 61% reported that staff retention was not much of a problem or no problem at all, 27% said it was somewhat of a problem, and only 12% reported it being a huge problem. Of the program types, respondents from MIECHV and EI were more likely to indicate problems with retention than those from the NHVM and the Homegrown programs ($\chi^2(9) = 19.36, p < .05$).

See Figure III.12 for the most common reasons staff leave, according to respondents. Low pay was by far the most common answer; the median home visitor salary ranges from \$32,909 to \$41,430, according to respondents (program sample, n = 70). For MIECHV programs only (n = 34), the median salary ranges from \$32,700 to \$34,850. There were overall differences in program type for pay ($\chi^2(3) = 28.18, p < .001$) and burnout ($\chi^2(3) = 10.67, p < .05$). Homegrown programs were less likely to indicate pay as a reason for leaving and MIECHV and NHVM less likely to indicate burnout.

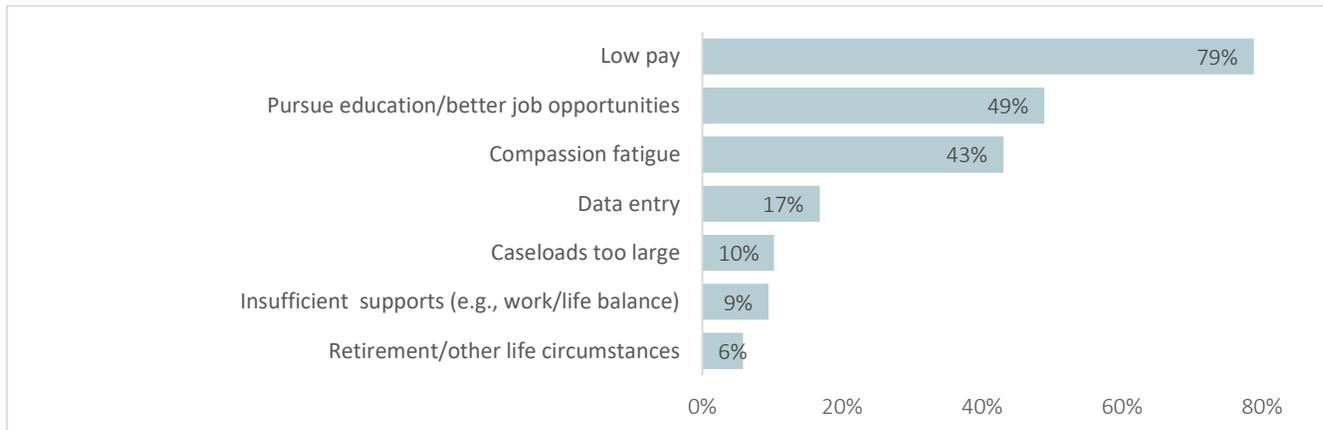


Figure III.12. Most Common Reasons Staff Leave Home Visiting Programs (respondent sample, n = 136)

Funding

We asked respondents about their program’s distribution of funding sources (e.g., federal, state, third party billing). Excluding EI programs for this analysis (the only program type that indicated they use third party billing), distribution of funding sources for the remaining sample (n = 139) is as follows: 68% state funding, 28% federal funding, 2% municipal funding, and 2% foundation funding. We also asked how confident respondents felt that they would have at least level funding over the next three years; 38% of the respondent sample (n = 103) said they were very confident and 54% somewhat confident. The Homegrown programs were the least confident in future funding ($\chi^2 (9) = 20.00, p < .05$).

III.B.1.b. Home Visiting Populations

Of the programs for which we had enrollment data (n = 142), the average number of active participants was 369.8, (Range = 3–1,936; SD = 412.8). Excluding the EI programs, the number is much lower at 118.0 (n = 82; Range = 3–1,000; SD = 159.1).

With the exception of EI programs, which by policy accommodate any families seeking services, (32%) of programs (n = 71) indicated that they had to turn families away due to insufficient capacity during FY20. Slightly less than half of programs (46%) indicated that they generally are able to refer families to another home visiting program in the area when they cannot serve those families themselves (the specific programs most commonly mentioned were HFM, EI, EHS, and PAT). It should be noted that we do not know what proportion of these referrals resulted in a successful connection to services.

Participant Demographics

Table III.3 shows the average percent of families served by programs in FY20 by their identified race, ethnicity, and primary language.

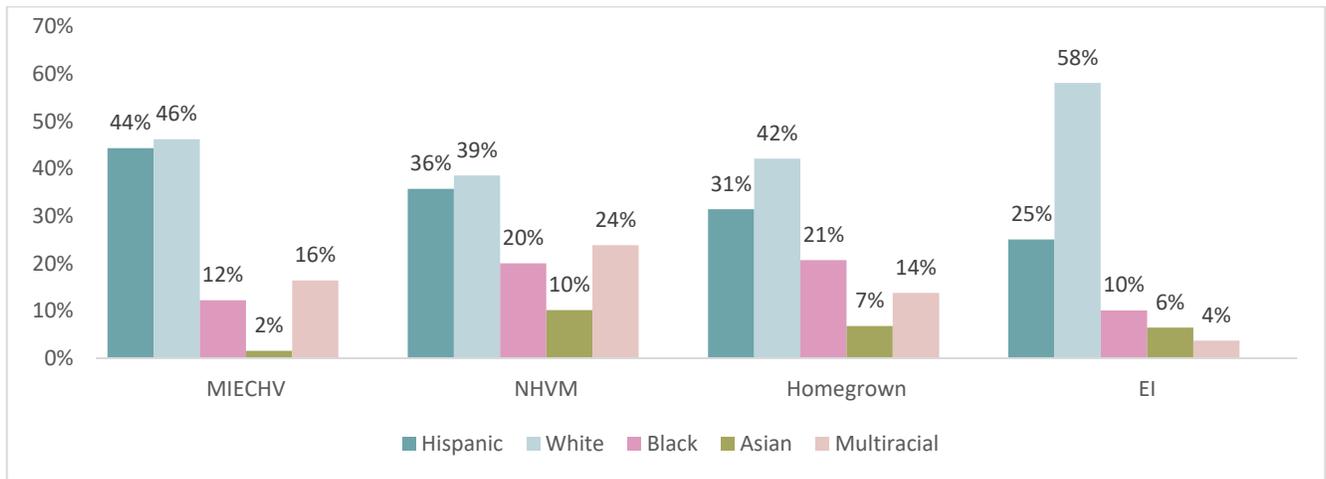
Table III.3. Families served, by Percent Ethnicity, Race, and Language Across Programs

	Race or Ethnicity	n	M	SD	Range
Ethnicity	Hispanic all races	138	.33	.24	.1–1.0
Race	White	135	.50	.26	.2–1.0
	Black	132	.14	.18	.0–.95
	Asian	130	.06	.09	.0–.71
	Multiracial	129	.11	.13	.0–.68
Language	Primary language not English	140	.34	.25	.0–.89

Note. These categories are not mutually exclusive. “Other” and “unknown” excluded from table.

Differences by program type: In comparison to EI programs: MIECHV programs had a higher proportion of Hispanic families ($F (3, 134) = 5.453, p < .01$) and a lower proportion of White families ($F (3, 131) = 4.452, p < .05$); Homegrown programs had a slightly higher proportion of Black families ($F (3, 128) = 3.185, p < .05$); and

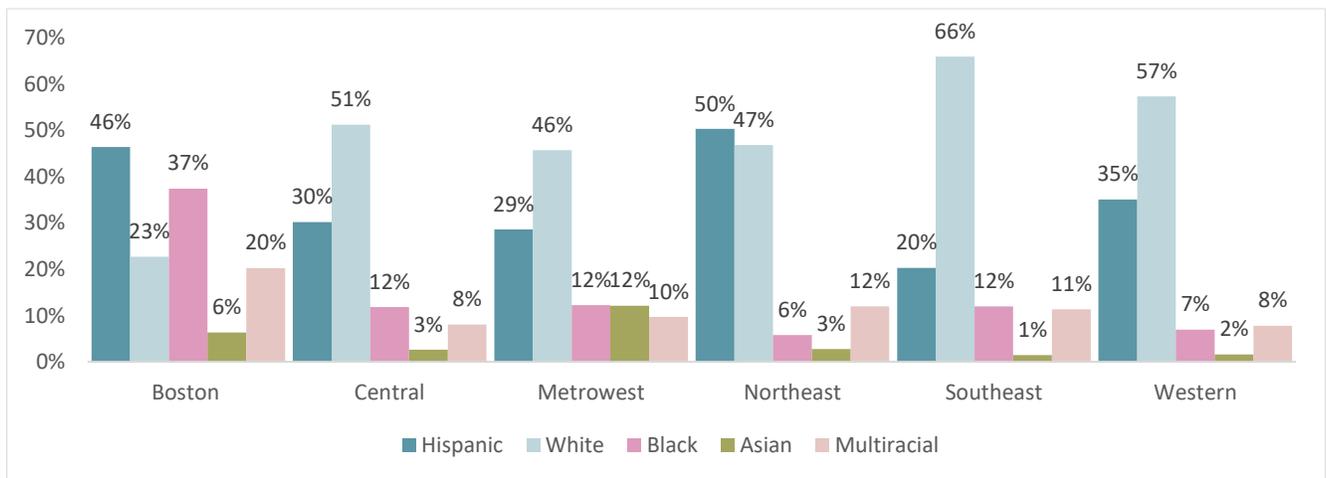
MIECHV and NHVM programs had a higher proportion of Multiracial families ($F(3, 125) = 17.477, p < .001$). In comparison to MIECHV programs, both EI and NHVM programs had a higher proportion of Asian families ($F(3, 126) = 4.306, p < .05$; see Figure III.13). Finally, in comparison to EI programs, MIECHV and NHVM programs had a higher proportion of families whose primary language is not English ($F(3, 136) = 10.183, p < .001$).



Note. These categories are not mutually exclusive. “Other” and “unknown” excluded from analyses.

Figure III.13. Differences in Race and Ethnicity, by Program Type

Differences by region: Programs in the Boston and Northeast regions had a higher proportion of Hispanic families than programs in the Metro West and Southeast regions ($F(5, 132) = 5.171, p < .001$). Programs in the Central, Southeast, and Western regions had a higher proportion of White families than those in the Boston region ($F(5, 129) = 8.009, p < .001$). Programs in the Boston region had the highest proportion of Black families ($F(5, 126) = 10.792, p < .001$) and programs in the Metro West region had the highest proportion of Asian families ($F(5, 124) = 9.552, p < .001$; see Figure III.14).



Note. These categories are not mutually exclusive. “Other” and “unknown” excluded from analyses.

Figure III.14. Differences in Race and Ethnicity, by Region

Of the 57 program sample respondents who indicated whether they had staff who could provide services in families’ preferred languages, 61% answered in the affirmative.

MassHealth receipt and DCF involvement

As shown in Table III.4, home visiting programs reported that the majority (69%) of families used MassHealth, and more than a quarter of families (25.7%) are involved with DCF.

Table III.4. MassHealth Use and DCF Involvement (program sample, n = 132)

	<i>n</i>	<i>M</i>	<i>SD</i>	Range
MassHealth	132	.69	.23	.1–1.0
DCF	132	.26	.23	.0–.88

Differences by program type: MIECHV and Homegrown programs had a higher proportion of DCF-Involved families than NHVM and EI programs ($F(3, 128) = 18.774, p < .001$). MIECHV programs had a higher proportion of families enrolled in MassHealth when compared to EI programs ($F(3, 128) = 26.403, p < .001$; see Figure III.15).

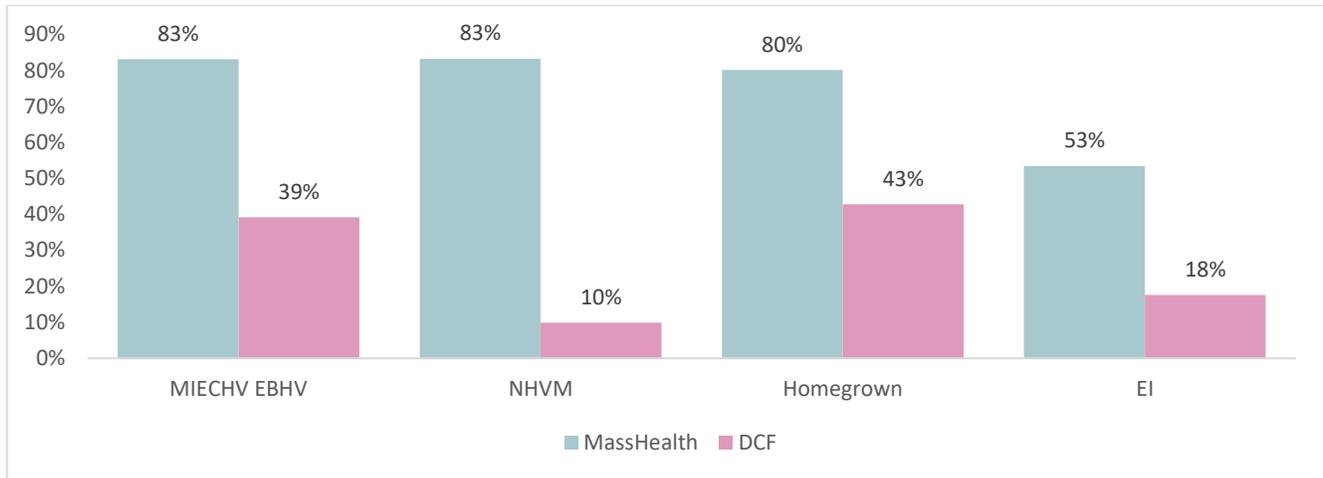


Figure III.15. MassHealth Receipt and DCF Involvement, by Program Type (program sample, n = 132)

Differences by region: Programs in the Western region had the highest proportion of DCF-Involved families ($F(5, 126) = 4.098, p < .001$). There were no differences in MassHealth enrollment by region.

Most Pressing Challenges Facing Families

When asked to select the top five most pressing challenges their participants face, respondents ($n = 153$) identified housing, behavioral health, poverty, and childcare (see Figure III.16).

Differences by program type: There were overall differences among program types in the following focus areas: behavioral health ($\chi^2(3) = 20.71, p < .001$), intimate partner violence ($\chi^2(3) = 17.60, p < .001$), poverty ($\chi^2(3) = 14.15, p < .001$), employment ($\chi^2(3) = 14.15, p < .001$), immigration ($\chi^2(3) = 27.04, p < .001$). MIECHV programs were more likely to identify all of these as the most pressing challenges.

Difference by region: Substance use was more likely to be identified as a challenge by programs located in Western Massachusetts than in other regions of the state ($\chi^2(3) = 11.96, p < .05$), Boston programs were more likely to identify immigration as a major challenge facing families ($\chi^2(3) = 12.92, p < .05$), and transportation emerged as a top issue in the Central and Southeast regions of the state ($\chi^2(3) = 16.85, p < .001$).

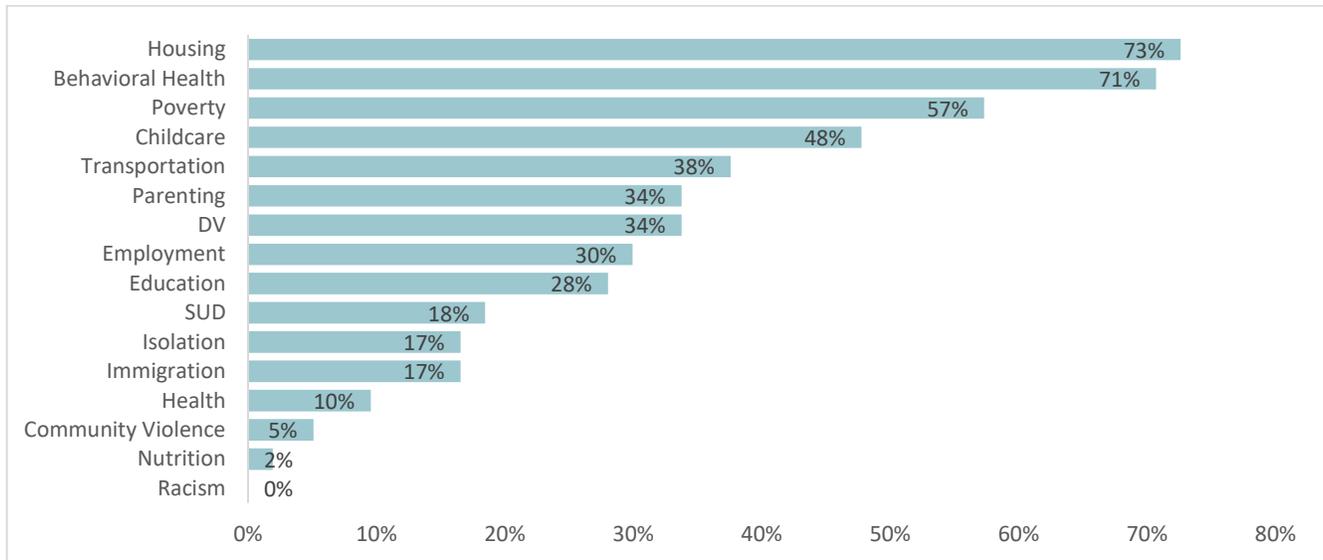


Figure III.16. Most Pressing Challenges Facing Participants (respondent sample, n = 153)

III.B.2. Meeting the Needs of Massachusetts Families Through Home Visiting

This section focuses on the more specific range of supports provided by home visiting programs across Massachusetts. We describe screenings and key program foci as way to understand the diversity of home visiting service delivery. The section concludes with survey and focus group findings about gaps in home visiting services, and obstacles to accessing services.

III.B.2.a. Focus of home visiting services

We asked programs what types of formal screens and assessments they administered to families to identify families' needs. We also inquired about the primary issues and topics they focused on with families.

Screenings

See Figure III.17 for the distribution of screenings conducted by home visiting programs across the state. Parent-child interaction and child development screenings are most common, followed by safe sleep.

Differences by Program Type. MIECHV programs screen for the widest range of issues among the four home visiting program types, and are more likely than the other programs to screen for alcohol ($\chi^2(3) = 120.89, p < .001$), safe sleep ($\chi^2(3) = 101.72, p < .001$), medical home ($\chi^2(3) = 82.23, p < .001$), depression ($\chi^2(3) = 76.28, p < .001$), and smoking ($\chi^2(3) = 124.12, p < .001$).

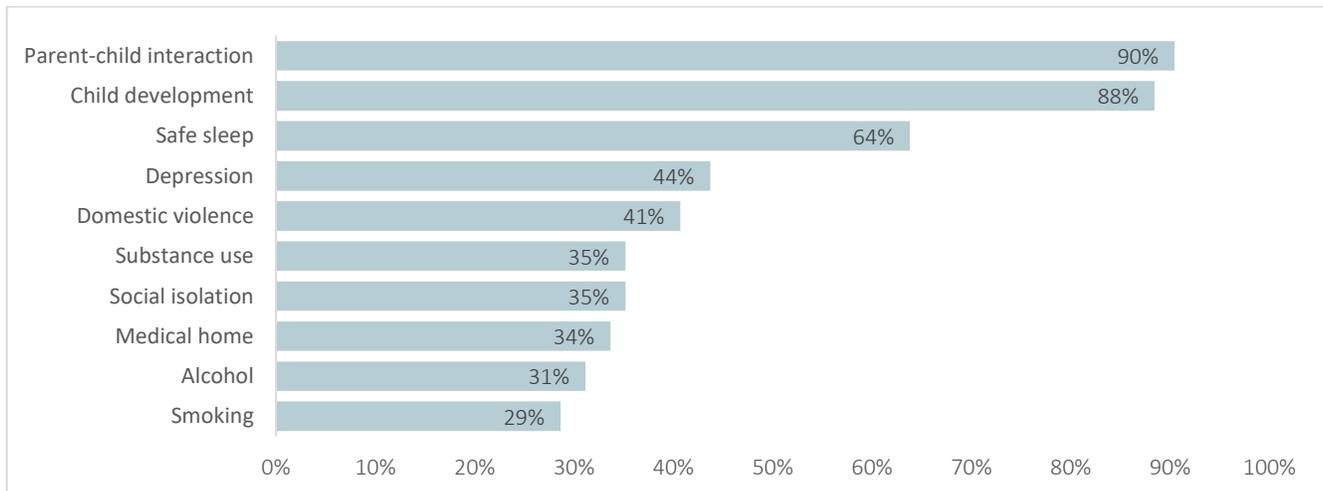


Figure III.17. Program Screens (program sample, n = 199)

Home Visiting Program Focus Areas

As seen in Figure III.18, *referrals and care coordination* and *parenting* were the most frequently reported focus areas of home visiting programs.

Differences by program type. As with screens, MIECHV programs had the most wide-ranging program foci when compared to the other program types. MIECHV programs were more likely to include a focus on breastfeeding ($\chi^2 (3) = 12.19, p < .05$), crisis management ($\chi^2 (3) = 27.79, p < .001$), economic stability ($\chi^2 (3) = 27.79, p < .001$), education ($\chi^2 (3) = 19.78, p < .001$), and, along with the NHVM programs, material assistance ($\chi^2 (3) = 9.01, p < .05$).

Differences by region. Programs in Boston and the Western region were more likely to indicate a focus on substance use ($\chi^2 (5) = 11.41, p < 0.05$).

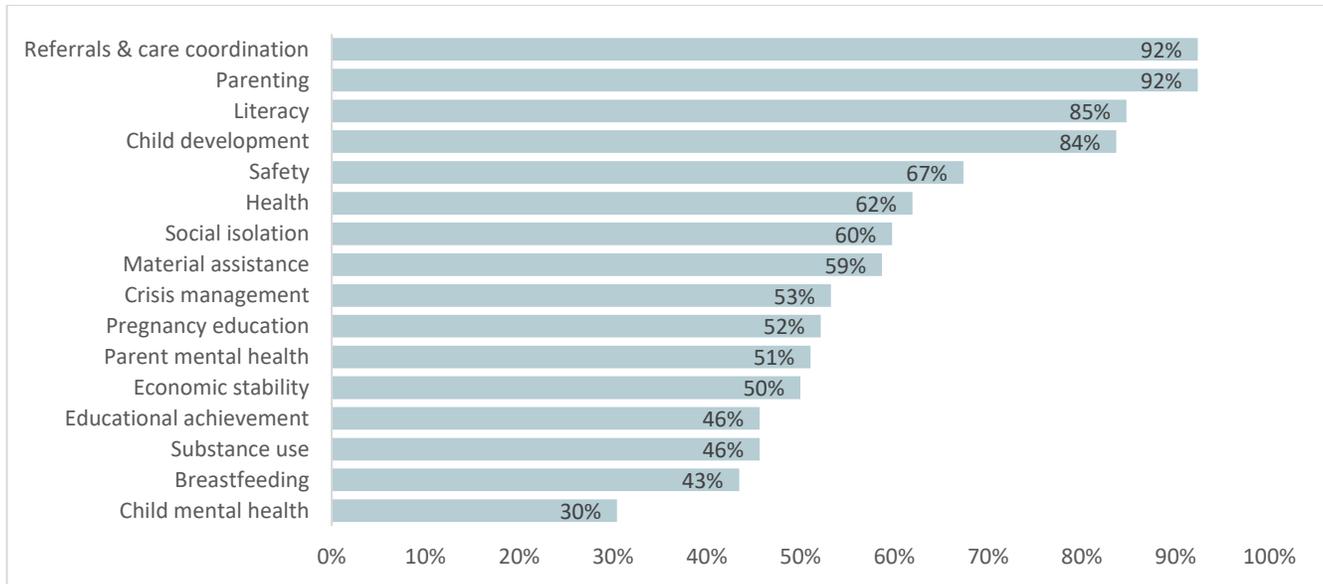


Figure III.18. Program Foci (program sample, n = 92)

III.B.2.b. Obstacles to Receiving Home Visiting Services

In general, focus group participants enrolled in a MA MIECHV home visiting program were very positive about their experiences with home visiting. Across focus groups, however, families (including those who have not received home visiting) articulated two key obstacles to participating in home visiting services— language/cultural barriers and fear of judgement/experience with bias. These insights shed light on why some families may not be accessing home visiting in Massachusetts.

Language and Cultural Barriers

A limited number of Spanish-speaking participants described challenges with accessing healthcare and other services due to lack of bilingual providers, but most agreed that they could usually find either Spanish-speaking providers or an interpreter when needed. For the Laotian, Cambodian, and Vietnamese populations in the state, however, language continues to be an acute obstacle to receiving services. Participants observed that there is a decided lack of resources for Southeast Asian groups, preventing focused outreach and other efforts to address service gaps. One Vietnamese mother stated, *“For me it’s a language barrier. I’m afraid to ask because I don’t understand what they said fully. So I can’t always know what questions to ask [next]. ...I wish there was a place I could go where they translated for me...It would help me create bridge across all the different teams, to coordinate services.”* Particularly among BIPOC participants, there was a preference for having people of similar backgrounds to theirs engage in outreach, recruitment, and service-provision. A father stated, *“It’s one thing to have someone come translate, but another to have someone visit who speaks your language and understands your culture. That might be where programs are lacking. You can’t just ignore the*

needs of the population because of the cost of doing that. We need someone who can help us understand what services are." Among BIPOC participants, very few recalled ever having been offered home visiting at all.

Fear of Judgment and Experience with Bias

For many participants across focus groups, fear of home visitors scrutinizing their parenting practices and contextual factors in their homes (e.g., the physical conditions of the home or behaviors of others who live there), and thereby becoming at risk for child maltreatment reports and loss of custody, was a disincentive to participate in home visiting services. One mother said that people are *"fearful that you're coming in and something might happen and then you'll take my kid away. It's the unknown. I'll come to you; my house is my house."* This perception was especially pronounced among BIPOC participants, and participants experiencing OUD. Many participants had negative experiences with other in-home services in the past (for example, DCF, EI), and were skeptical of whether a MA MIECHV home visiting program would be different. Across focus groups with participants who had been offered home visiting, there was a sense that home visiting services are not always presented as optional. A number of participants were introduced to home visiting services in the context of a DCF report (e.g., related to IPV or OUD) or other concerns about the baby's well-being (e.g., participants felt like they were assumed to be incompetent parents based solely on their youth or disability) as reported to DCF by hospital personnel. Some participants reported that they were not always certain what services they would be receiving, why the services were being offered to them, why the services were important for them or their child, or how the services could help their families. These factors led parents to perceive that services were compulsory without the option to decline services. When parents enrolled under these circumstances, their initial feelings about their home visitors were marred by distrust and resentment, compromising the ability of the home visitor-parent dyad to form a positive connection. One participant stated, *"I didn't have a choice... They didn't ask, they just said here's what's going to happen....[the home visitor] felt very invasive, the way they came into my space."*

Many participants felt like what should be perceived as typical parenting challenges were often viewed by providers through a different lens, based on parents' race or unique circumstances. Many had encountered professionals who doubted their competence as parents, and some parents feared that their circumstances would raise doubt about their parenting fitness and put custody of their children at risk. Mothers who experienced OUD felt that postpartum adjustment difficulties they had experienced were inaccurately assumed to be a sign of a relapse by providers who did not view them through a strengths-based lens. One participant noted, *"That feeling of being believed is hard to find. It is more that a person in a position of authority is coming in; I am here to help because there is something you don't know or can't do. Power dynamics is a tricky piece."*

III.B.2.c. Gaps in the Home Visiting Continuum of Care

Many families expressed frustration and disappointment about the transition out of home visiting programs when services ended due to changes in eligibility. There was a range of reasons behind these feelings, such as emotional attachment to the home visitor and concerns about an interruption in services that successfully scaffolded their children's development. Parents of children with disabilities said that when EI services ended, they experienced a gap in critical services for their children. Across many of the focus groups, parents expressed concern about the lack of availability in services for certain age groups of children—particularly those who are three to five years. In relation to her HFM services ending, one mother said *"I think it is unfair; you spent three years with one family, they love you and are comfortable with you. ...There's no way I'm letting you go."*

To objectively examine gaps in the continuum of care based on child's age, we designated programs' upper age limits for children (i.e., the age at which children "graduate" from or "age out" of the program): *1–3 years old*,

4–5 years old, and >5 years.^u Sixty-one percent of programs do not serve children older than three years old, 21% do not serve children older than five, and 19% of programs serve children past their fifth birthdays. See Appendix III.9, map one, which shows the cities and towns in Massachusetts, shaded by how many programs serve children over age three in that city or town.^v Appendix III.9, map two is shaded by programs serving children over age five.

Programs available to children who age out between four and five years old are more likely to be selective, and those available to children older than five are primarily indicated (see Figure III.19; $\chi^2(4) = 59.36, p < 0.01$). serve only young parents; $\chi^2(3) = 26.43, p < .001$); ease requirements related to re-engagement and visit frequency ($\chi^2(3) = 14.72, p < .001$); and allow visits without children present to “count” toward model fidelity (attributable to PAT programs, which historically has not counted visits without children;^w $\chi^2(3) = 12.56, p < .05$).

III.B.3. Early Childhood Systems of Care: Coordination and Collaboration

A universal theme across the focus groups was the intersection of participants’ identities and experiences with various state systems with which they interacted. Foster parents, grandparents, mothers with OUD, and survivors of IPV, for example, are regularly interfacing with DCF, and juvenile or probate court. A number of fathers from both the Title V and MIECHV fathers focus groups also discussed the involvement of DCF in theirs and their children’s lives. Other focus group participants discussed their criminal histories and their personal interactions with the criminal justice system. Some undocumented immigrants described their concerns over immigration enforcement. Parents of CYSHCN were vocal about challenges of interfacing with the school and healthcare systems in which their children were being served. Some participants also discussed their families’ ongoing reliance on social safety net programs, such as food stamps or WIC. In this section we present findings on participants’ and home visitors’ perceptions of the systems of care.

III.B.3.a. Family Perspectives on Community Systems of Care

Families spoke about many local and state services and systems, but the most often mentioned were transportation, mental health, and housing, with more general discussion about the inadequacies of crisis support systems, and how difficult it is to learn about available resources.

Transportation Needs

Across many communities, transportation was raised repeatedly as an obstacle to accessing available services, attending to healthcare needs, and even participating in family recreational activities. Families—particularly those living in the more rural areas of the state, such as the Western, Central, and Southeast regions—talked about how hard it was for them to get around given the absence of reliable and convenient (or, in some cases, any) public transportation. This creates significant obstacles to applying for and receiving services, a problem that is compounded when participants have no available alternatives due to financial insecurity that prevents them from obtaining a driver’s license and a car.

Mental Health Needs

The effect of various forms of trauma and oppression on participants—including racism, disability discrimination, immigrant status discrimination, economic oppression, and interpersonal and societal violence—was a nearly universal theme across the focus groups. Many of the participants had experienced

^uIt is important to note that these are not the age groups programs serve; that is, a child upper age limit of four to five does not mean that the program only serves children between four and five-years-old. Instead, it means that the program stops providing services either when the child turns four-years-old, or when the child turns five-years-old.

^vThe shading does not represent the location of the home visiting program *per se* but whether that town is included in the program’s catchment area. Catchment area is defined as the cities and towns that each LIA serves.

^wAlthough PAT has historically defined visits as visits with parents and children, in 2019 PAT released a technical assistance brief introducing the flexibility to “count” parent-only visits when parents are experiencing child custody disruptions. In Fall 2020, TIER will begin an evaluation, funded by PAT National, on the use of parent-only visits within MA MIECHV PAT programs to inform formal implementation guidance and policy change.

homelessness, poverty, and a lack of access to services and supports. Each population described challenges related to these issues, often with significant mental health consequences for participants. Trauma often engenders or exacerbates significant mental health challenges experienced by the populations of focus here. For example, participants who had experienced IPV and unhealthy relationships indicated that the abuse they endured, their court involvement, and the stress of single parenting have led to sleep problems, anxiety and depression. Lack of access to mental health care was an especially frequent theme among families who lived in the Western region of the state, who described a shortage of providers and/or long waitlists to access services. These barriers were particularly pronounced when parents discussed seeking services for children. In this case, an additional challenge was a high turnover of clinicians, which impeded continuity of care. In addition to a lack of access, participants across the focus groups expressed cultural and contextual reasons for unmet mental health needs, including stigma and fear. Some parents described a cultural norm against seeking mental health care in their communities as a disincentive for seeking therapy. Some participants also voiced concern that professionals would not be able to help them, fearing potential bias or lack of clinician aptitude, sometimes based on previous negative experiences. Lastly, some participants simply voiced feeling overwhelmed about how to meet their needs and not knowing where or how to access resources that could be helpful.

Lack of Affordable Housing

Shortage of safe, affordable housing was highlighted as an especially critical concern across almost all of the focus groups. A number of participants noted that the state suffers from limited housing options for families experiencing poverty in the absence of extreme circumstances, forcing families to submit to alternatives, including seeking housing out of state, entering the shelter system and residing there long-term, remaining in housing situations that are unsafe or unhealthy for themselves and their children, or being homeless. Participants also observed that existing programs for families who experiencing poverty, such as Section 8 and HomeBASE, are laden with barriers, such as excessively long waiting lists and arduous documentation requirements for establishing eligibility. When families experience drastic circumstances and have an urgent need for emergency housing, the eligibility criteria are stringent, and proving eligibility can be very difficult. The families who needed emergency housing described being unfamiliar with how the system worked, and most had no advocates to guide them through the process. One participant said, *...“my housing experience has been a rollercoaster. If I’m asking for services, no one tells me what’s available, or refusing to give me applications. Going to different housing authorities, and they don’t want to speak to me or they don’t want to give me applications.”*

Inadequacy of Crisis Supports

Families also highlighted the fact that it often requires a crisis before they can qualify for services and voiced a wish for services that prevent a crisis from occurring. Crisis services can sometimes perpetuate unstable and dangerous circumstances for families, who find themselves only qualifying for support when situations are dire. For example, related to the above housing findings, parents who experienced housing insecurity and threats to theirs and their children’s safety faced an onerous process of proving that they qualified for assistance at a time when they are critically in need and without resources nor advocates to support them. When families sought services to avoid homelessness or physical harm, they were turned away for not proving those conditions. Without intermediate options for crisis prevention, families are forced to endure circumstances that can endanger themselves and their children. One participant who had experienced IPV said, *“I think anyone who went through what I went through should not have to dig the way I do. Those services should have been readily available.”* Several of the groups reported a reluctance to access the emergency supports that are available to them due to the threat of abuse or violence (from the police) or the fear of losing custody of their children. This was especially the case among BIPOC participants, mothers who had experienced IPV, and parents with OUD.

Limited Knowledge About Community Services

In almost all focus groups, participants indicated having limited information about the services and supports that were available to them. Most were not participating in community services that could be helpful to them, primarily because they did not know about them. Parents living in shelters with young children, for example, reported not knowing where to seek information about support services. Participants voiced a desire to have easier access to information that would help them learn about and access the resources and services that could improve their quality of life. Of those participants who were involved with some community supports, most indicated learning about them through peers and social networks. Indeed, many focus groups themselves became resource and referral sources, as participants shared this information in the moment.

III.B.3.b. Home Visiting and Local Community Systems of Care

To better understand the extent to which home visiting programs are embedded in their local systems of care, we asked survey respondents about their co-locations and collaboration with other community providers. We report findings for these questions below, followed by results from the CEDAC exercise we led at the MA MIECHV AGM.

Program Co-location with Other Community Services

Co-location represents one method of promoting a more seamless system of care for families, particularly in terms of access to services. Sixty-eight percent of the 85 programs that responded to the question of whether they were co-located with any other programs indicated that they were. Figure III.21 shows the distribution of the types of organizations with which programs indicated sharing physical space. EI programs were less likely to be co-located than the other three program types ($\chi^2 (3) = 17.15, p < .01$). There were no meaningful differences in the types of services programs were co-located with, either by program type or region.

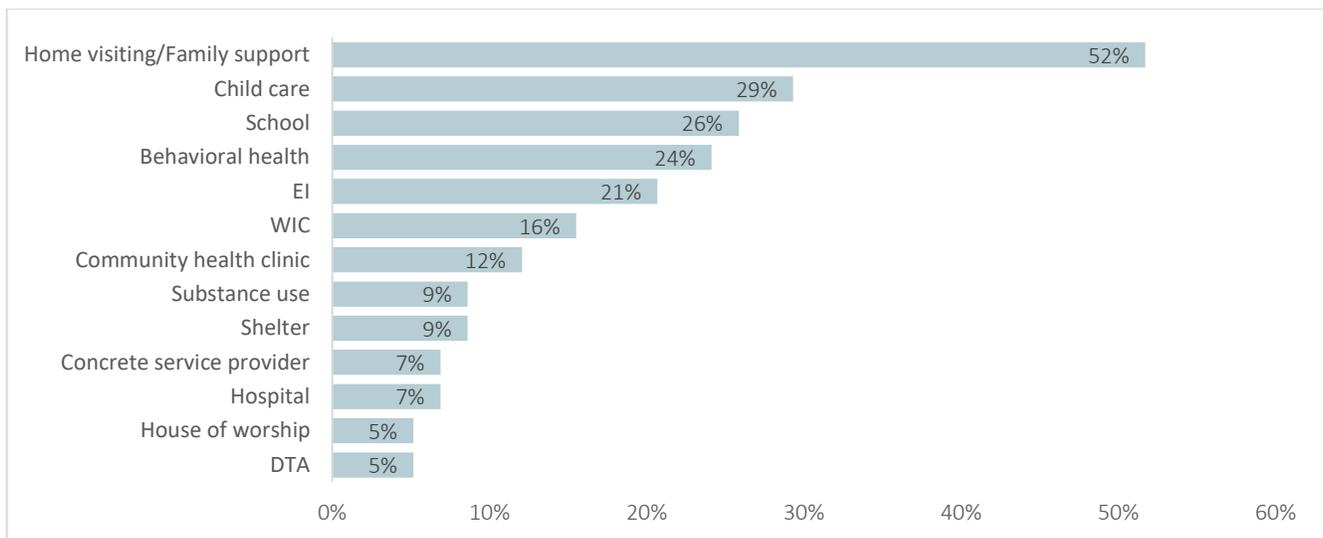


Figure III.19. Services with Which Programs are Co-located (program sample, n = 85)

Respondents indicated some of the benefits that co-location brings. Of those that described benefits (n = 65), a third identified ease of referrals as a benefit of co-location, and 22% identified access to services for families. Smaller percentages of respondents perceived provider collaboration (14%), resource sharing (13%), communication about shared services and cases (11%), and opportunities for outreach and visibility (7%) as benefits of co-location. Only 21 respondents identified any downsides. Perceived downsides included lack of space (62%), building restrictions (24%), and challenges related to confidentiality (14%).

Of the 84 respondents that answered whether they would like to be co-located with another service or agency, 39% indicated they would; MIECHV programs were more likely than the other program types to endorse that answer ($\chi^2 (3) = 15.16, p < .05$).

Collaboration with other Community Services

We asked respondents to list the community programs with which they had the most positive and most challenging working relationships. We coded their responses by service type. Of respondents who reported positive relationships (*n* = 112), the most common programs mentioned were other home visiting and family support programs (55%), WIC (37%), EI (37%), health (23%), and EEC (20%). Of negative relationships (*n* = 112), the most commonly mentioned were DCF (51%), health (40%), schools (28%), and housing (22%). Figure III.22 shows the balance between positive and challenging relationships. As can be seen, respondents indicated the most difficult relationships are with DCF, health, schools, DTA, housing, and behavioral health, areas in which survey findings also suggested are among home visiting populations’ most pressing needs.

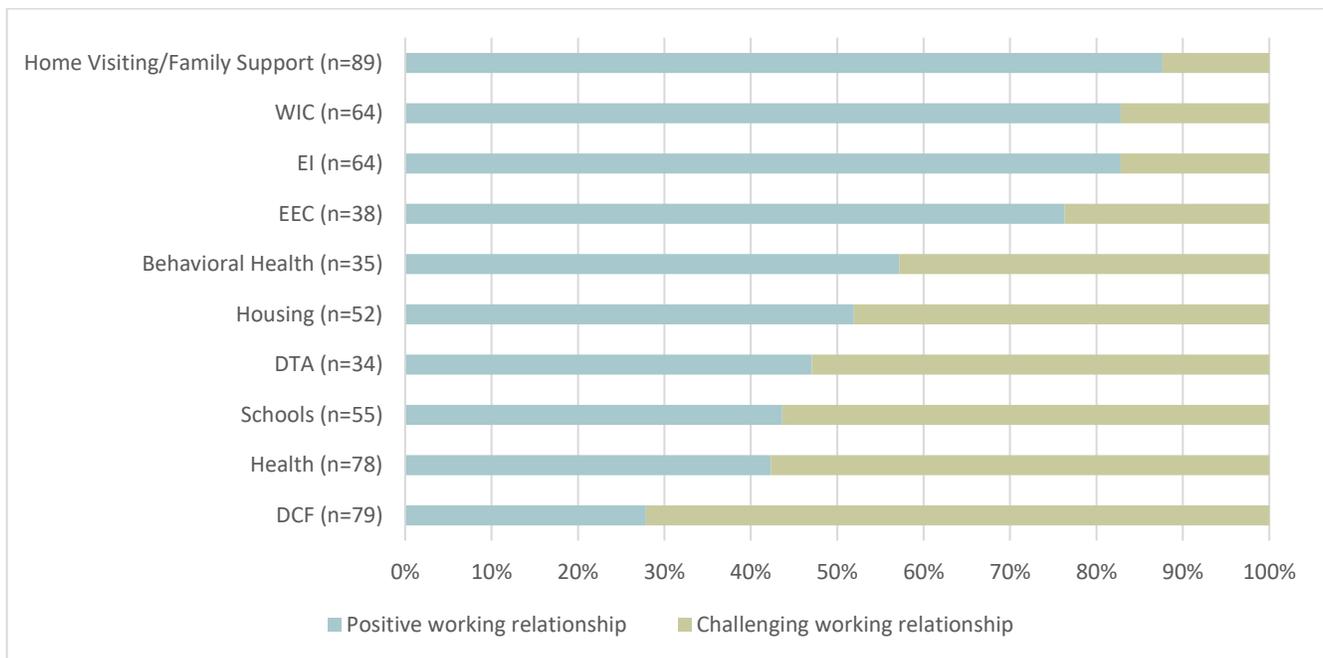


Figure III.20. Distribution of positive and challenging relationships (excluding service types with 5 or fewer mentions; respondent sample, *n* = 112)

MA MIECHV Staff Discussion about DCF Collaborations

We were able to delve into this finding about collaboration with DCF during the MA MIECHV AGM, using the CEDAC exercise described in Section II.F. About 50% of the participants identified strained relationships with DCF as a pressing issue and worked together in small groups to generate the following root causes and solutions related to this problem.

Root Causes. Across each participating group, the most frequent reason cited for home visitors’ challenges collaborating with DCF was DCF’s strained relationship with families, which in turn affected home visitors’ perception of the agency. On the post-it notes, home visitors described negative attitudes from the case workers (e.g., “Disrespectful, insensitive to parent’s feelings, unsupportive, not looking at strengths”; “Nit-picking; abuse of power”), and a reluctance to accommodate, communicate, and partner with families (e.g., “[Families] not knowing the service plan”; “They blanket participants with too many mandated services”). They posited that the absence of strengths-based or trauma-informed training may be contributing factors to DCF staff’s strained relationship with families (e.g., “Not well trained in child development, parenting or health”).

The groups also observed as major challenges to collaboration DCF’s geographically inconvenient and unwelcoming office environments, and an apparent lack of willingness among DCF staff to meet in alternate, more family-friendly places; a misunderstanding among DCF staff around the purpose, requirements and role of home visiting programs (e.g., “Make referrals mandatory when we are a voluntary program”; “DCF doesn’t see the value of home visitors”); and strained communication with DCF staff, noting feelings that DCF is

unwilling to share information and/or work together (e.g., *They never call back*; *Not providing consistent schedule, visit time changing*; *Won't give master list of emails for workers*; *Not collaborating with programs around goals of Family Action Plan*).

Solutions. Participants brainstormed solutions to address the issues they identified as root causes. To improve their working relationship with DCF moving forward, they made the following procedural recommendations: Learn more about internal and external policies that guide DCF’s work to better understand how their staff work (e.g., *home visiting programs can make effort to learn more about DCF policies & procedures*; *[Home visiting] [a]gency should have a firm policy of when to file 51-A and how to work with DCF specifically*); share streamlined and up-to-date information on the home visiting program and the role of its staff with DCF agencies (e.g., *Provide clear and consistent info about [our] services*); and explore new ways to facilitate partnership between the two systems, including an appointed home visiting liaison to work with DCF, shared trainings, and more opportunities to meet with each other (e.g., *Make a concerted effort to welcome DCF to brainstorm how to better collaborate*; *1x year DCF training at sites to learn process and build relationships*). Participants identified ways they can mitigate strained relationships between DCF and families, including being physically present during interactions with DCF and encouraging parents to self-advocate (e.g., *Co-visit with social worker and help with conflicting messages*). They also suggested that DCF could institute trainings to foster relationships with involved families (e.g., *mandated training around cultural humility, awareness, & trauma*).

III.C. State’s capacity for providing substance abuse treatment and counseling services

Here we use a range of methods and data sources to provide an overview of Massachusetts’ capacity to provide SUD treatment and counseling services, focusing on whether the available services, programs, and resources meet the needs of pregnant women and families with young children across the state. Our review includes analysis of data indicators pertaining to SUD including mapping of existing SUD services and programs in Massachusetts to gauge alignment between needs and the availability of SUD services across the state and within particular communities. We also used data from the home visiting capacity survey, our review of MA MIECHV site visit reports, and interviews and focus groups to further explore needs and service gaps centered on families eligible for or enrolled in home visiting who also experience SUD. We also describe collaborations between home visiting programs and SUD service providers.

III.C.1. SUD-Related Needs and Service Availability across Massachusetts

The prevalence of OUD and deaths due to overdoses in Massachusetts is among the highest in the nation. As described in Section III.A.1.d, nearly 24 per 100,000 residents die from opioid overdose annually and nearly 1,600 per 100,000 residents enroll in BSAS/MDPH-funded or licensed substance addiction service programs, on average.

As shown in Table III.5, five of the 12 cities and towns with the most significant challenges related to SUD did not meet the overall cut-off needed to be included in the 17 MA MIECHV communities experiencing the greatest public health challenges, with a majority located in the Southeast region of Massachusetts. Further, as summarized in Section III.A.3, high NAS rates and opioid overdose deaths were observed in several communities in Western Massachusetts.

Table III.5. Municipalities Ranked in the Top Ten for SUD-Related Challenges, with Overall City/Town Ranking

Towns experiencing the most significant challenges related to SUD	SUD Ranking	City/town ranking from data indicators analysis
Fall River	1	4
New Bedford	2	3
Salisbury	3	—
Pittsfield	4	15
Falmouth	5	—
Worcester	6	8

Towns experiencing the most significant challenges related to SUD	SUD Ranking	City/town ranking from data indicators analysis
Wareham	7	—
Everett	8	17
Weymouth	8	—
Brockton	8	10
Barnstable	9	—
Holyoke	10	1

Note. City/town ranking provided only for the 17 MA MIECHV communities experiencing the greatest public health challenges.

In Appendix III.10, maps one through four present a detailed look at city/town rates of the two indicators within the SUD domain and the two SUD-related indicators within the adverse perinatal outcomes domain. The maps present each SUD data indicator by quintile classification^x alongside SUD services provided, according to the IHR resource,^y across the Commonwealth. Below we highlight key findings of the four maps.

The average annual rate of enrollment in BSAS/MDPH-funded substance addiction services from 2014–2018 ranged from zero to 5,288.97 per 100,000 residents, with about one-fifth of cities and towns ($n = 70$) having a rate greater than 1,669.65 (lower-bound of top quintile; see Appendix III.10, map one). The average annual rate of opioid overdose death occurrences among residents from 2013–2017 ranged from zero to 76.09 per 100,000 residents, with about one-fifth of cities and towns ($n = 69$) having a rate greater than 19.93 (lower-bound of top quintile; see Appendix III.10, map two). Cities and towns in the top quintiles for both indicators are spread throughout Massachusetts. Focusing on SUD indicators for pregnant women and infants, Appendix III.10, map three presents the average annual rate of enrollment in BSAS/MDPH-funded substance addiction services among pregnant women from 2014–2018. These rates ranged from zero to 220.32 per 100,000 women residents, with about one-sixth of cities and towns ($n = 59$) having a rate greater than 23.83 (lower-bound of top quintile). Finally, the rate of infants born with NAS from 2012–2016 ranged from zero to 59.82 per 1,000 live births, with about 7% of cities and towns ($n = 26$) having a rate greater than 25.29 (lower-bound of top quintile; see Appendix III.10, map four).

As seen on all four maps, most available SUD services in Massachusetts focus on recovery or treatment, with only a handful providing more comprehensive wrap-around services. There are many pockets in the state, notably in the Southeast, Western, and Central regions, where rates are high and availability of services appears insufficient to meet the local needs of the population.

Findings from the review of MA MIECHV site visit reports revealed that across Massachusetts, marijuana use was mentioned as an emerging issue for many LIAs, with programs noting that many parents do not perceive marijuana to have unfavorable or harmful physical or mental effects. Comorbid SUD and mental health issues among participants and/or family members was also a challenge for LIAs across the state. Moreover, opioid and prescription drug misuse were perceived as challenges by programs in many Massachusetts communities. Specifically, a few LIAs in the Southeast and Western regions of the state mentioned increases in cocaine and/or crack use alongside heroin use. Alcohol use was flagged as a significant issue by only a handful of LIAs in Central and Northeast Massachusetts.

Based on home visiting survey data, only 18% of respondents identified SUD as one of the top five challenges families experience and 46% of programs selected SUD as one of their focus areas (see Section III.B). Of

^xQuintiles are equal-sized classes of the population, with the population being the 351 Massachusetts cities and towns; when at least 20% of the population had a rate of zero on any one indicator, cities and towns with rates of zero were classified into the first quintile (i.e., bottom 20%), and the remaining cities and towns with rates greater than zero were distributed into the second, third, fourth, and fifth quintiles equally.

^yExisting programs per the Institute for Health and Recovery's Resource Page.

programs that reported hosting groups for special populations ($n = 33$), 52% reported that they provided groups to families experiencing SUD. But these findings were not distributed equally across the state; programs in the Western region were more likely to endorse all three of these items.

III.C.2. Training needs

Based on findings from the MA MIECHV site visit reports, many staff across the state indicated a need for specific SUD-related training, including: working with families who comorbidly experience SUD and mental health issues, signs and symptoms of substance use, marijuana use, NARCAN administration, substance exposed newborns, recovery, and advanced substance use training, including a focus on new and emerging drugs. Home visitors expressed a need for additional clinical supports, both within the home visiting program and through partnerships with mental health providers, to strengthen their work with families who experience both SUD and mental health challenges. LIAs varied in their implementation and perceptions of the utility of a comprehensive substance use screening tool that captures more than tobacco use. LIAs in the Southeast and Metro West perceived participants to be reticent discussing potential substance use and SUD. A key challenge mentioned by several LIAs in the Southeast was around determining sensible and effective strategies to support participants who do not disclose known substance use during the screen, and an LIA in the Northeast mentioned concerns with how home visitors can avoid stigmatizing or re-traumatizing participants who are experiencing SUD.

III.C.3. Collaborations with Other Services

The review of MA MIECHV site visit reports included a review of the Levels of Cooperative Activities Chart, a program self-assessment that captures the nature of collaborations with community partners, that programs submit prior to their annual site visits. Based on this chart, many LIAs reported some level of collaboration with several community SUD programs or services, whereas one LIA in the Northeast had a strong collaboration with just one program. Several LIAs identified SUD programs and services in their communities but were in the early stages of developing strategic and collaborative relationships. LIAs identified service gaps for families experiencing SUD, including long waitlists for services (Central and Western Massachusetts), and the need for translation services (Northeast Massachusetts), residential and in-patient programs (Southeast and Western Massachusetts), and long-term recovery support (Western Massachusetts).

Findings from the review of MA MIECHV site visit reports revealed that DCF involvement and SUD are inextricably linked in many communities across Massachusetts, making DCF a key collaborator of home visiting programs serving families experiencing SUD or in recovery. As revealed in the findings related to collaborations (see Section III.B.3), however, we know that this relationship can be very challenging.

III.C.4. The Role of DCF

Every participant in the two focus groups with mothers with OUD expressed great frustration with, and fear of, DCF. The threat of custody loss was a constant anxiety among parents in recovery, and home visitors' role as mandated reporters sometimes made it very hard for families to accept home visitors as helpers. Here we report some of the most common themes across focus group participants.

Relapse as part of the pathway to recovery. Contrary to the ways in which SUD treatment programs view relapse—as a natural part of the recovery process—DCF workers, according to participants, see relapse as indicative of failure, and in many cases as eliminating the possibility of reunification. Although it is not an official DCF stance or perspective, most participants reported that individual case workers were quick to “write them off” as incapable of working toward sobriety and reunification with their children if they experienced a relapse. Furthermore, participants voiced hopelessness about their reunification potential if they did relapse, which decreased their motivation to continue to work on their recovery, almost a self-fulfilling prophecy.

Inadequacies of the foster care system. Participants voiced great apprehension about the effects of the foster care system on their children. Participants believed that children's needs were left out of the service plan, which eliminated some opportunity for parents to hold DCF accountable for ensuring those needs were met.

Rather, parents felt that DCF leaves much of the responsibility for meeting children's needs to foster parents. Participants felt that, in some cases, foster parents were not adequately caring for their children, leaving parents without any mechanism to advocate on their children's behalf. Parents whose children were in foster care agreed that their children would benefit from addressing the trauma in their lives. When parents and children are separated, participants voiced dissatisfaction with the amount of time they were able to visit their children while they were in foster care. Most stated they were able to see their children for one hour per week, at most. This amount of time, they felt, was not enough to maintain a bond and connection. Participants felt that if they were provided more opportunities to connect with their children, as well as additional resources to support their parenting before and during these interactions, fewer family disruptions would occur while parents actively engaged in substance use treatment, which would reduce the burden on the child welfare system.

Lack of clarity about the reunification process. Many participants voiced having no clear understanding of what they needed to do in order to regain (or maintain) custody of their children. In many cases, participants stated they felt they had done everything asked of them, only to be told they had new or additional requirements to complete, on a perpetual basis. Others stated they never had a good sense of what they needed to do, and felt that DCF would find their progress insufficient no matter what they did. In some cases, participants passionately stated their belief that DCF would never allow them to reunify, preferring to have their children adopted. Some participants believed strongly that DCF benefits financially from adoptions, and that this was at least partial motivation for social workers to deny parents a clear path to reunification. Service plans are the primary document that outlines the requirements of both DCF and parents who have had their children removed from their custody. Although the document exists, participants' perceptions were that DCF workers had minimal accountability to their requirements as part of this service plan. These findings underscore participants' larger concerns around a lack of adequate communication from DCF. They felt their workers neither keep them informed about what steps parents need to take in particular nor about their case in general. This includes how their children are doing in foster care and what needs they have, what the trajectory for the case is, and the possibilities for resolution.

III.C.5. Promising Approaches in Home Visiting for Participants Experiencing SUD

We examined two novel approaches that embed recovery support within home visiting to comprehensively address recovery, pregnancy, and parenting needs among families with young children in Massachusetts. First is an examination of a MA MIECHV pilot of an overlay of peer recovery coaching in one PAT LIA. Second is the previously mentioned FIRST Steps Together program, funded by BSAS through the SOR. FIRST Steps Together enhances services and access to treatment, recovery, and parenting supports for pregnant and parenting families impacted by OUD using a peer recovery workforce cross-trained in parenting support.

III.C.5.a. PAT Recovery Coach Overlay

To date, the pilot PAT overlay has involved one parent educator/recovery coach with lived SUD and recovery experience in Berkshire County who was hired and trained in both recovery coaching and the PAT curriculum in Fall 2018. She is "living proof" of how it is to be a mother and a woman in recovery, helping families work through trauma and gain confidence to fully embrace parenting. The program supervisor also completed recovery coach training and attended a recovery coach supervisor academy. Families in recovery were recruited and enrolled in PAT and began receiving home visits and group services in early 2019. The pilot is gaining momentum in the community, with a range of new referral sources from various sectors including health, mental health, and DCF. Through this unique pilot, the PAT program in Western Massachusetts is striving to eliminate stigma associated with parenting in recovery. Part of this work involves collaborating with DCF, including trying to help families meet the multiple requirements the state agency places on them. Socioeconomic inequities in the region, including intergenerational poverty, hinder self-sufficiency, and a lack of transportation makes it challenging for families to access employment or training programs. A further unintended consequence of these demands and mandates from DCF is that they constrain the time parents

have for home visiting. Recovery coaches have a clearer understanding of recovery in the context of parenting, understanding that relapse is often part of the process. The home visitor cross-trained in recovery coaching frequently supports parents during supervised visits with their children and provides consultation after these supervised visits to debrief and facilitate deeper discussion about the visit. While the implementation of the recovery coaching element to PAT has been welcomed in the community, the staff we spoke with expressed concern that one staff member alone cannot meet the demand for recovery support services of the entire community. They said they would welcome the funding to hire a second recovery coach, who could not only provide direct services, but would also provide additional support and peer mentoring for the existing staff member and help to reduce feelings of isolation.

III.C.5.b. FIRST Steps Together

Since 2018, the homegrown FIRST Steps Together model has served parents who experience OUD in strengths-based, flexible, individualized, and recovery-minded ways, combining elements of home visiting and recovery coaching to support participants to simultaneously strengthen their parenting skills and focus on their recovery efforts. Our discussions with FIRST Steps Together participants and providers reveal great enthusiasm for the benefits of the program, but also some frustration with what is seen as strict eligibility criteria (mother experiencing OUD and has a child under five years). To better understand which populations desired and were not eligible for the program we reviewed the FIRST Steps Together exception request data. First, the focus on mothers leaves out two important populations: fathers experiencing OUD, and grandparents who have custody of their children due to their children experiencing OUD. Families with children older than five years of age impacted by OUD also requested exceptions; these were granted in instances where caregivers were identified as high risk for relapse, but were denied in other circumstances. Finally, there were many people who were turned away from the program because their SUD centered around alcohol and substances other than opioids.

Section IV. Conclusions and Recommendations

In this section we offer high-level conclusions and recommendations, organized again by the three needs assessment goal areas. We end this section with observations regarding racial equity.

IV.A. Identifying Communities with the Greatest Public Health Challenges

The results of our analyses of the 42 indicators across 9 domains identified essentially the same 17 cities/towns that had been identified in past MA MIECHV needs assessments as facing the most challenges in Massachusetts. These are also the same cities and towns that were often identified as having the highest concentrations of public health challenges in the 26 state and local needs assessments we reviewed prior to conducting our own analyses. This is not surprising, given the structural inequities—the result of decades of redlining, disenfranchisement, and other manifestations of systemic racism—that have historically characterized these communities. The consistency of these findings affirms the decisions MDPH has made about allocation of resources. In many ways this is reassuring, given how well-established the MA MIECHV-funded programs in those 17 communities are, and how potentially disruptive it would be to engage in any major redirection of funding at this point.

There are, however, several limitations of relying on this methodology to guide funding. First, global rankings obscure important findings within each domain; our method also identified other communities that experience significant challenges—overall or within certain domains—that would benefit from home visiting. These additional communities tended to cluster in Western, Southeast, and Central Massachusetts, and were also mentioned by the MA MIECHV Advisory Committee and other experts in the state as areas with heightened need. Second, family challenges are not neatly conscribed within a town's boundaries. Findings from the focus groups, site visit reports, and the home visiting capacity survey strongly confirmed the reality that populations vulnerable to poor health outcomes exist in communities across the state. Using per capita rates leaves out communities whose overall affluence masks substantial poverty, racial and ethnic inequities, and substandard

housing experienced by many of its residents. Finally, while robust, our method excluded some important indicators given lack of data availability. For example, we did not incorporate disproportionate incarceration rates or some other proxy of inequities in the criminal justice system. Additionally, we did not include indicators that explicitly examine inequities at the community level, such as air pollution and residential displacement.

Decisions must be made about how to allocate scarce public health resources, and a thorough analysis of administrative data is a valid approach to informing this calculus. However, these indicators are only a gauge; they dilute significant discrepancies in communities with both significant affluence and significant poverty, they oversimplify the complexities of families' lives and experiences, and they do not take into account the economic and social upheavals that have characterized the COVID-19 pandemic. Results confirm that the current MA MIECHV communities are appropriate for focus, given they experience the greatest public health challenges according to the indicators and methods agreed upon by HRSA and MDPH. The question is not whether and how to re-allocate funding away from these communities. Rather, our purpose in raising these considerations is to encourage MDPH to think strategically about how to maximize MA MIECHV's impact, given the limitations inherent in being able to select only a subset of the 351 communities in the Commonwealth. We offer some recommendations below.

Extending MA MIECHV's Reach Beyond the Top 17. Considering whether and how to adapt programming to address needs outside of the 17 MA MIECHV communities is a challenging conundrum. Although MDPH could potentially expand the procurement process to include communities beyond the 17, it would then run the risk of spreading resources too thin, and potentially disrupting well-established programming in the existing MA MIECHV communities. Along those lines, while Revere did not rise to the top 17 in this current analysis, it has been particularly hard hit by COVID-19 in the past six months, and it may be imprudent to redirect services away from that community. One more feasible way for MA MIECHV to extend its reach might be to reserve a small portion of funding to dedicate to collaborations with early childhood and family support initiatives already on the ground in non-MIECHV communities that rose as communities experiencing challenges related to specific indicators. Examples of these include SAFE Child Communities on Cape Cod,² Family Centers in three of the communities identified by our analysis as facing challenges (i.e., Athol, Greenfield, and Martha's Vineyard), and the *Opioid Task Force*^{aa} in Franklin County. Further, findings and lessons learned through MA MIECHV programming and evaluation can be disseminated to non-MIECHV communities through publications, best practice toolkits, trainings, and collaborations with other family support programs that are established in those areas. MA MIECHV could create more deliberate resource-sharing partnerships with, for example, FIRST Steps Together, for families affected by OUD; Family Resource Centers, which are present in many of the non-MIECHV communities and primarily serve families involved with DCF; and the EI system, available in every community across the state.

Change the Unit of Analysis. In the future, MDPH may want to consider revisiting the unit of analysis when using data to identify community strengths and challenges. In Massachusetts, the county-level is too large and broad, but the city/town-level may be too granular to allow for a more nuanced understanding of families' experiences. One possibility is to consider using existing home visiting catchment areas for statewide programs (e.g., those used by EI, or HFM) and other indicator data to create new units of analysis that would better overlap with the catchment areas of home visiting programs. This analysis may enable us to better understand the clustering of social, economic, and public health challenges, as well as available services or service gaps, impacting families, with the aim of ensuring MA MIECHV programming serves the broadest range of families possible. As we describe in more detail in a later section (see Section I.D.), we should also add a domain looking specifically at racial inequities in communities.

²<https://childrenstrustma.org/our-programs/safe-child-communities>

^{aa}<https://www.opioidtaskforce.org/>

IV.B. Home Visiting Capacity and Community Systems of Care

The home visiting models funded through MA MIECHV play a unique role in the state’s early childhood system of care. They report screening for a broader range of challenges and offering a wider range of programming foci than do other types of home visiting programs. MIECHV home visiting staff’s understanding of participant challenges is also broader—more likely than other models to be inclusive of domestic violence, behavioral health, education, and employment. In many ways the advent of MIECHV—with its comprehensive screening requirements and performance measures focused on referrals and service linkage—has codified this more eclectic approach to service delivery into policy. The survey findings that referrals and coordination were as important a focus for programs as parenting confirms our earlier research documenting the depth and breadth of MA MIECHV home visitors’ work to help families connect to needed services.⁸⁴ We have documented, as well, how much families rely on their home visitors—with some participants indicating this as the only model of a healthy relationship in their lives—and how much families value the role that home visitors play in helping them to navigate these complicated service systems.⁸⁵

Home visiting, with its relational approach and willingness to meet families where they are, is uniquely well-positioned to be flexible and responsive to emergent needs. The focus of home visiting is on parenting, but it is also on parenting “*in the context of...*”. The context has been laid bare in the past six months: in the context of racism; of crowded housing; of dangerous working conditions; of being undocumented; of lack of access to transportation, education, food, upward mobility; and of myriad other seemingly insurmountable barriers for families’ livelihood and well-being. While our needs assessment data collection predated COVID-19, we have observed in recent months how home visiting has risen to the tremendous challenges posed by the pandemic. The focus of home visiting has in many ways shifted to the bottom of Maslow’s hierarchy of needs—attempting to ensure families’ access to housing, nourishment, safe environments and, during this life-threatening pandemic, health. As the pandemic continues to unfold, and the economic costs become greater, home visitors will continue to serve these complicated roles, and in many ways to be a lifeline for their families.

Despite the wide reach of home visiting, clear gaps emerged. Families with older children are not well-served by home visiting programs. For families that do not meet the eligibility criteria for indicated or selective programs, but could still benefit from home visiting services, programs can be sparse. Focus group findings also suggested that many families who do meet eligibility criteria for home visiting are not being reached or are reluctant to engage in services—a clear implication for outreach and referral coordination efforts. Families across Massachusetts cited both language and transportation barriers as reasons why they are not enrolled in home visiting, as well as confusion about which home visiting programs are the best fit for them. They also mentioned a fear of judgment, and worse, of losing custody of their children. For many families, especially families whose lives have intersected with non-voluntary statutory services, such as child welfare, the offer of home visiting did not always feel voluntary. This is concerning, given that being voluntary is a cornerstone of MIECHV home visiting programs.

In this section we discuss some of the areas in which MA MIECHV may be poised to increase enrollment in home visiting for the families that need it most, and to use its position as a state system to strengthen state- and community-level collaborations to create more seamless continua of care.

IV.B.1. Build Home Visiting Coalitions at the Community Level

When considering home visiting capacity in Massachusetts, the challenge is not quantity; as suggested by our sampling for the home visiting capacity survey, the state has (at least) 226 home visiting programs. Rather, the challenge is one of efficiency, collaboration, and equity. In many communities across the state, our research has consistently revealed competition between programs to maintain caseloads, and concerns among programs that they cannot fill their allocated slots. This needs assessment has demonstrated substantial inequities in Massachusetts and has identified where particular challenges may be clustered. We know that there are more than enough families in Massachusetts who could benefit from home visiting; these findings

should give MA MIECHV and individual communities insight into whether their current caseloads mirror the needs in the community. There are hard-to-reach families (e.g. due to language, culture, immigration status) in all these communities who have not been offered home visiting services, and do not know how to begin to access them. To minimize competition, maximize outreach and enrollment, and ensure that families are recruited into the home visiting programs that best meet their needs, there needs to be deliberate, consistent collaboration among home visiting programs within communities and catchment areas. Ideally, these local home visiting program coalitions should include the following:

- **Regular meetings.** There should be formal, funded mechanism for home visiting providers to regularly meet with each other, share information about programming, discuss caseloads and recruitment efforts, and address challenges as they arise. Participants in these meetings should be paid for their time.
- **Shared understanding of programs.** Coalition members should have a shared understanding of each home visiting program's model, curriculum, eligibility, capacity (including language capacity), and priority populations. There should be a common document that clearly delineates these program features.
- **Shared vision for how families should move through the home visiting system.** Collectively, coalitions should create a community-wide home visiting decision tree, mapping out eligibility requirements and criteria for each program alongside families' needs, and providing prescriptive guidance on how best to refer families to programs. The decision tree should be holistic, considering families' entry into home visiting starting prenatally, in some cases, and continuing to school entry. This decision tree would need buy-in from all participating programs and would need to be updated as program eligibility and community needs shift. Finally, and most importantly, families who have participated in home visiting should be included in the process for developing this decision tree, as they are most well-suited to articulate an ideal pathway of services.
- **Shared intake and outreach strategy** with consistent understanding and messaging about the array of home visiting services available. Ideally, there can be one intake and outreach coordinator who could serve as the point of entry into home visiting for the community, understanding the strengths of programs and the needs of families, and maximizing the match between the two. As part of outreach, a flow chart could be created and disseminated to referral sources, to help them make informed choices with families. This would ensure that community partners do not always refer families to the known entity, but rather make an intentional choice with the families' needs and preferences at the center.
- **A deliberate, data-driven communication structure** in place that allows programs to follow the families they refer and allows administrators to make sure that families are not falling through the cracks. There are platforms that home visiting programs could use to facilitate a more seamless intake and referral process for families. Some examples include 413cares, currently being used by some home visiting programs in Springfield;^{bb} IRIS,^{cc} which was developed for use with Kansas MIECHV programs and is being implemented by the Massachusetts Early Childhood Comprehensive Systems initiative in Chelsea; and NowPow,^{dd} currently being adapted for use with the Families First program in Washington, DC. While supporting platforms like these may be beyond the scope of what MA MIECHV can do on its own, collaboration with other state agencies and early childhood initiatives could make wide-spread adoption of such platforms possible.

^{bb} www.413cares.org

^{cc} <https://connectwithiris.org/>

^{dd} <https://www.nowpow.com/>

IV.B.2. Ensuring a Continuum of Care

Referral and outreach enhancements are only effective if there are programs to which families can be referred. While at least some kind of home visiting is available in every community in Massachusetts, some cities and towns have access only to EI and HFM, both of which serve very particular populations and stop providing services once children turn three years old. Parents in the focus groups talked about how hard it is when their children age out of home visiting, and home visitors expressed a desire to be able to serve families with older children. While simply extending age limits for existing programs is impractical financially, and also not conducive to model fidelity (i.e., the evidence base is with the ages they currently serve), it is worth considering how to add robust programming for three to five-year-olds into existing or new home visiting programs. This could be general school readiness support for families with preschool-aged children, or more targeted support for children experiencing developmental, behavioral, or socio-emotional challenges. MA MIECHV programs also have a critical role to play in helping families transition in and out of programs as children grow older. There are a number of ways home visitors can ease these often difficult transitions, including articulating clear feeder pathways into community programs that serve older children, developing a plan for “warm hand-offs” with these organizations (e.g., offering to do a shared home visit with the new provider), and (for those programs serving five-year-olds), helping families understand and plan for kindergarten entry, including familiarizing families with school-based resources and supports.

IV.B.2.a. Collaborating with Other Community Providers: Challenges and Opportunities

One of the Massachusetts Title V priorities is to “eliminate health inequities caused by unjust social, economic, and environmental systems, policies and practices.” Home visitors, as a key entry point into these systems for families, have firsthand knowledge about the inadequacy of supports for families, the inequitable distribution of resources, and the morass of policies and eligibility requirements families often are expected to wade through in order to access a needed service. While home visitors are not care coordinators, this role is increasingly a substantial part of their jobs, and one that home visitors may be uniquely poised to fill. Home visitors engender trust among their families, encouraging even the most reticent participants to connect with other services. Our past research revealed that home visitors had an average of 171 conversations per participant related to service coordination and referrals as a typical part of their service delivery.⁸⁴

Findings from the survey and focus groups highlighted major gaps in the local and state service systems of care. Affordable housing, mental health, and involvement with child protective services consistently emerged as among the most pressing concerns for families, and there is a sense across all of the populations we spoke with that their family has to reach a crisis point before the supports they need are made available to them. Families spoke about the lack of preventive services, about their lack of knowledge about and access to services like home visiting, and about how hard it is to navigate the extremely complicated service systems in the state. For home visitors to support families, triage and manage care, and prevent crises, they need a better coordinated system at the state-level. This state-level system needs to keep the whole family in mind, creating a safety net and system of supports that prevents avoidable crises and does not let families with children fall through the cracks.

Address Housing Needs

In this needs assessments and our past research on MA MIECHV and HFM, housing has emerged as a driving unmet need, a time-consuming focus of care coordination for home visitors,⁸⁴ and, on a more hopeful note, as an area in which HFM had a strong positive impact for families; in a study of HFM impact, those who received home visiting were less likely to experience homelessness than families in the control group.⁸⁶ We know that home visitors supported families’ housing needs through a variety of activities, including help with housing applications, ensuring families are on waiting lists for affordable housing, referring families to (and in some cases, physically helping them to move into) shelters, and advocating on behalf of families when they have been denied housing services to which they are entitled.⁸⁴ For home visitors to be effective, however, there needs to be housing stock to which they can actually refer their families, and this is simply not the case in

many communities across the state.⁸⁷ While MA MIECHV home visitors are well-positioned to help families navigate this service need at the individual level, the systemic barriers home visitors and families experience are considerable. Housing is a problem that requires state- and community-level coordination. Without concerted state efforts to coalesce around the critical need for housing support for families, the state is unlikely to move the needle on this intractable challenge—a challenge, like so many others, that has worsened during the COVID-19 pandemic. As one initial step in this process, MA MIECHV should strongly consider including representatives from the Department of Housing and Community Development, as well as selected local housing authorities, as part of its advisory committee.

Address Mental Health Needs

This is an area in which MA MIECHV is well-poised to support MDPH's Title V priority to "strengthen the capacity of the health system to promote mental health and emotional well-being." Significant work can be done by state systems, community organizations, and service providers to reduce stigma associated with mental health receipt, and to normalize and promote families' connections to counseling, treatment, and other related services. Home visiting programs have found ways to leverage scarce resources to support families, for instance cultivating strong partnerships with trusted community organizations, which can sometimes help families access needed services more easily than if there were no such collaboration in place. Some home visiting programs have been able to establish formal subcontracts with clinical specialists and other mental health providers who advise home visitors on when and where to refer families who need mental health supports, and who come to groups and other events to educate families directly about available resources in their communities. These formalized, funded contracts between home visiting and service providers in the community may help make referrals and service connections a smoother and more seamless experience for families; helping to support these types of arrangements is one way in which MA MIECHV can address this perpetually pressing need in Massachusetts.

Support Families Who are Involved with DCF

According to MA MIECHV survey respondents, almost 40% of the families in their caseloads are involved with DCF, with families affected by substance use feeling the agency's presence most keenly. Because of this high level of DCF involvement, home visitors are frequently called upon to interact with this system; indeed, it was one of the most frequent collaborations mentioned by home visitors. Of those who reported this collaboration, however, 72% characterized the relationship as a challenging one, a finding that was expanded upon by MA MIECHV staff at the MA MIECHV AGM. Given the high rate of DCF involvement by home visited families in Massachusetts, a strained relationship between the two entities—both of which share the goal of helping families create safe, stable, and nurturing home environments for themselves and their children—represents a missed opportunity. Strengthening the collaborations between DCF and MA MIECHV has the potential to help families feel more globally supported in their parenting, and to make the work of both DCF workers and home visitors more efficacious and rewarding.

MA MIECHV can support better collaboration with DCF at multiple levels. First, it seems important to strengthen and make more robust the partnership between DCF and MDPH at the state level. DCF is represented on the MA MIECHV Advisory Committee, but one-on-one meetings between the two agencies would likely be a more appropriate setting to identify how to coordinate to support families involved with both systems. More concerted collaboration at the state level could pave the way for more consistent collaboration at the regional and local levels. At the regional and local levels, MA MIECHV could host meetings, supported by MDPH, with DCF workers to develop consistent policies for communication and transparency (to the extent possible). Clear and consistent messaging to families is important—about expectations, requirements, and the path to reunification with their children. It also would be helpful to have opportunities for home visitors to educate DCF workers about the role home visiting plays for families (highlighting its voluntary nature). Together, home visitors and DCF workers should identify those key junctures in families' DCF action plans

where it makes the most sense for home visitors and DCF workers to collaborate with each other, and to identify mechanisms through which communication can effectively occur.

Parents with past DCF involvement should sit on advisory committees with DCF and home visiting programs, informing how to improve outreach and communication, how to put children and parents at the center of services, and how to avoid further stigmatizing parents. These parents could also be trained as peer mentors to parents who are currently involved in the child welfare system, helping to offer direct support, but also just a listening ear. Intentional hiring of home visitors who have directly experienced DCF in their lives—as children or as parents—would offer a critical, and often underrepresented, perspective to home visiting. These home visitors would understand how the child welfare system works and how best to navigate it, as well as being uniquely able to offer empathy and encouragement to families involved in the system.

Resource Advocate for Families

Finally, LIAs may want to consider appointing someone within their MA MIECHV program as a resource advocate who could act as the point person for care coordination and community collaborations. A resource advocate role may be a useful middle ground between a designated case manager, which may be perceived as too impersonal to families, and the current practice of home visitors taking on this role as an add-on to their many other duties. Ideally, this person would have personal lived experiences with local services and systems; would understand eligibility requirements, application processes, and service components; and would have established points of contact at the other community agencies. This resource advocate could do some of the logistical legwork for home visitors working to connect families to services, which would help ease the burden for home visitors. They also could represent home visiting in community meetings and events, and create and maintain close relationships with programs and services across the community.

IV.B.3. Value and Cultivate the Home Visiting Workforce

To recruit the best home visiting workforce—a compassionate, dedicated cadre of individuals from the communities in which they work, sharing many of the same experiences as the families they serve—programs need to offer wages commensurate with their knowledge, training, and experience. Our survey revealed that MA MIECHV home visitors' median salary is \$32,700 to \$34,850. When one considers the intensive work home visitors do with families, this salary—\$5,000 less than the state median in 2018—is unacceptably low. The Office of Planning, Research & Evaluation's *Home Visiting Career Trajectories: Final Report*⁸⁸ documented low pay as a key reason home visitors view home visiting as an unsustainable long-term career, and findings from our survey confirmed this reality in Massachusetts. In addition to enhancing job satisfaction and retention, raising home visitors' wages makes economic sense. Programs spend a great deal of time and resources training home visiting staff. If home visitors are leaving programs just when they have become well-versed in the policies, curriculum, and requirements of the model, programs are losing their investment without reaping the benefits. Families are losing out as well; the participant-home visitor relationship is at the heart of these programs, and turnover of staff often disrupts families' engagement in services and the quality of service delivery. Additionally, given the complicated challenges facing many families who are eligible for or enrolled in home visiting, having a home visitor who is experienced, and has been working in the community for a long time, contributes to high quality services.

MA MIECHV and the other organizations funding and administering home visiting and other early childhood programs are well-aware of this issue. Funding is limited, LIAs each have their own salary structures in which they need to operate, and the problem of undervaluing the early childhood and home visiting workforce in many ways feels intractable. There are ways, however, that MA MIECHV can join with other agencies to take a role in sustaining the home visiting workforce in Massachusetts, helping LIAs to create opportunities for professional development, promotion and progress that position home visiting as a long-term career. At the state-level, home visiting systems can partner with community colleges and local universities to grant paraprofessional home visitors access to early childhood education post-secondary programs, adapting the curriculum to address issues salient to both fields. Home visitors should receive bonuses or salary raises in line

with their tenure, in recognition that families' engagement and retention can often be attributed to their relationship with their home visitors, regardless of curriculum and other model components. Finally, and relatedly, we need to push for hiring, promotion and compensation structures that value lived experience on a par with advanced education and certification. Home visitors are a critical linchpin in the system of care for Massachusetts, and their hard work and emotional labor should be more appropriately compensated.

IV.C. Providing Supportive Services to Families Experiencing Challenges Related to Substance Use

The current findings suggest that although Massachusetts is working to address the needs related to substance use, families continue to face challenges that are impacted by systemic limitations in the state. First, the prevalence of OUD and deaths due to overdoses in Massachusetts is among the highest in the nation, but findings from our data indicator analysis and home visiting capacity survey highlight how regionally defined these rates are. Communities in the Southeast and Western regions of the state have higher rates of SUD than do other regions. Treatment options, however, are not adequately available in those communities, as resources tend to be concentrated mostly in the Boston area. Second, the federal focus on OUD, and the considerable funding that has flowed into states as a result, is a welcome resource, but focusing primarily on OUD (excluding other forms of substance use, including alcohol) leaves out swaths of the population who could also benefit from more generalized SUD treatment. Finally, the inextricable link between SUD and DCF involvement poses both challenges and opportunities for home visiting programs working with this population. Focus group participants who experienced SUD overwhelmingly described feeling judged by child welfare agencies and service providers based on their prior history of substance use rather than their current recovery progress or potential for future growth. Participants felt that such a stance does not support a therapeutic relationship, nor does it foment an effective change model within a service delivery program.

MA MIECHV – nor any single program – cannot directly solve the problem of the OUD/SUD crisis in Massachusetts. However, as a primary support to families who are struggling with this issue, and a potential liaison within a community system of care that is providing direct SUD-related services to these families, home visiting has a critical role to play in the implementation of the Title V priority to “prevent the use of substances, including alcohol, tobacco, and marijuana, among women and youth.” Below we outline some recommendations that may be feasible for MA MIECHV to implement.

Strategic Partnerships with Recovery Coach Models. When working with families experiencing challenges related to SUD, there needs to be a two-pronged focus, addressing both recovery and parenting issues simultaneously and in collaboration. Several such models are currently being piloted, including a PAT recovery coach overlay in Berkshire County, and a close collaboration between FIRST Steps Together and PAT in Springfield and Fitchburg. While there have been no formal evaluations of these particular approaches to date (TIER is starting an evaluation in Fall 2020), anecdotal evidence suggests there is great promise in these amalgam approaches to supporting families who are experiencing SUD.

Focus on Messaging During Outreach and Recruitment. A strengths-based, non-judgmental approach to service provision is crucial, from the time that parents are first learning of these services. Parents need to be approached about services – particularly home visiting services – at the right time and in the right way. This approach needs to make clear that services are completely voluntary, not punitive, and designed to support children and families, rather than supervise them. Communicating this effectively can be extremely challenging if recruitment into the program occurs simultaneously with a report to DCF due to SUD (often immediately after the birth). Specific training for home visitors on how to frame home visiting to these populations could be helpful, as well as a focused campaign to better educate other referral sources on how to present home visiting as a voluntary, non-judgmental, option.

Programs need to respond to the fact that family constellations are increasingly complicated in light of the opioid epidemic. Due to parents' SUD, children are often living with alternate caregivers, such as grandparents or foster parents, who are not traditionally served by family stabilization programs. It is important for

programs serving parents without custody of their children to be flexible and creative in how to support family stabilization and reunification. This might mean increasing attention paid to fathers, or creatively engaging alternate caregivers as part of the treatment team. Our findings show that a handful of programs offer groups for grandparents and families affected by SUD. Given the diversity of family constellations, it may make sense to more explicitly require these specialized groups. Widening the scope of service provision aligns with the Title V priority to “engage families, fathers and youth with diverse life experiences through shared power and leadership to improve MCH services.”

There are not enough treatment options. Existing services do not appear to overlay geographically onto the areas most in need (at least, according to the IHR data on which we based our maps). Providers and families alike describe the existing system of care for families struggling with SUD as insufficient. The availability of treatment centers, MAT options, and behavioral health supports for families in recovery are nowhere near commensurate with the demonstrated need at the community level. To varying degrees, home visiting programs find themselves sidestepping their mission to bridge this gap. Given that SUD is outside of their direct professional purview, such a practice is not a reasonable long-term solution, and home visiting programs would need additional supports and resources to continue responding to this gap.

Home visitors often do not feel equipped to provide families experiencing SUD the supports that they need. Providers raised several concerns about working with families experiencing SUD that are of particular importance here, including: how challenging it is to focus on both parenting and recovery at the same time; the inadequacy of received training to deal with emerging SUD issues; and finally, the lack of available clinical supports within either their agency or community at large. Providers agree that a two-pronged focus addressing both recovery and parenting issues simultaneously and in collaboration, as well as more comprehensive training opportunities, are requirements for effectively working with families with SUD. Approaches integrating peer recovery coaching with home visiting programs, as described above, have the potential to provide specialized services to home visited families experiencing SUD, while easing the burden on the rest of the home visiting staff, who may not feel as comfortable working with these populations.

IV.D. Addressing Racial Equity Through MA MIECHV

Findings from this report highlight racial inequities on almost every indicator, including poverty, education, employment, maternal morbidity, maternal mortality, homelessness, and infant death. These inequities are the manifestations of systemic and structural racism, of economic and political structures that, *by design*, elevate some by oppressing others. And, as has been the case across the country, these existing inequities have widened exponentially in the wake of the COVID-19 pandemic. Massachusetts residents who are Black and Latinx are more likely than White residents to be essential workers, to live in crowded and substandard housing, to rely on public transportation, and to experience racial bias from medical providers. Not surprisingly, these populations are also more likely to contract, and to die from, COVID-19. Relatedly, those Massachusetts communities that have the highest populations of BIPOC—most of which were identified as MA MIECHV communities in this needs assessment—are disproportionately bearing the brunt of the pandemic’s socioeconomic devastation.

When George Floyd was murdered by the police in May 2020, it catalyzed a national reckoning around systemic racism against a backdrop of the COVID-19 pandemic. This social discourse is likely having a real-time impact on the perceptions of home visitors for which our data cannot account. For example, on the home visiting survey, completed by most respondents before the social upheaval of the spring and summer began, not a single respondent selected the option “challenges related to racism” as one of the most pressing challenges their families face. But were we to administer the survey now, in this current climate, it is possible that home visitors would answer differently, reflective of the growing public understanding of not only how structural racism directly affects families, but also of how structural racism affects programs, institutions, and policies—even those with the explicit goal of supporting families. Home visitors may now be more aware of

how racism has consciously or unconsciously infiltrated their everyday work and relationships with families, and perhaps have a renewed commitment to learning about explicitly anti-racist approaches and practices.

Educators from the Racial Equity Institute would describe this deepening understanding as bringing us closer to what they term a “groundwater approach” to addressing structural racism.^{89,90,ee} This approach is underscored by three realities: “racial inequity looks the same across systems; socioeconomic difference does not explain the racial inequity; and inequities are caused by systems, regardless of people’s culture or behavior” (p. 4) In their metaphor for this framing, a dying fish in a lake represents individual circumstances or behaviors (e.g., a failing student) and the lake represents the system in which the circumstances are occurring (e.g., the school system). What social service providers generally do, the authors observe, is attempt to fix the fish. Sometimes we try to fix the water in the lake. But rarely do we extend our analyses and interventions to the groundwater (structural racism) feeding these lakes. Without addressing the groundwater—the racist foundations of systems and institutions—change will not occur. Just as our society at large is grappling with ways to address systemic racism and its consequences, MIECHV has a role to play at the federal, state, community, and individual levels in addressing racism.

The Role of Researchers. The population-level indicators we used for this needs assessment, highlighting racial inequities, suggest the impacts of systemic racism on families. Even when disaggregated by race, however, this set of indicators did not allow us to use quantitative data to examine structural inequities in a more deliberate and nuanced way. Future MIECHV assessments should include a 10th domain examining issues of racial equity at the community level. Indicators can include incarceration rates, displacement from gentrification, air pollution, rent burden, segregation, and police brutality. In future needs assessments, and evaluations of home visiting in general, we need to think more creatively about how to provide the data necessary for true systemic reform. Recent community-level measures, such as the Child Opportunity Index 2.0⁹¹ based on 29 education, health and environment, and social and economic indicators known to influence children’s health and well-being, may add specificity to existing metrics. It is also feasible to download publicly available data on indicators of interest and compute the racial disproportionality index, which compares the percentage of children or adults by race in the general population to their percentage on the selected indicator.⁹² Inclusion of metrics of racial inequities in reports assessing communities is imperative moving forward.

The Role of State Agencies. MDPH’s BFHN has dedicated a great deal of time and resources toward establishing a racial equity framework for their work. Indeed, there are two Title V priorities^{ff} that explicitly center ending the deleterious effects of racism on institutions, programming, and populations. It is likely that other state agencies that are part of families’ systems of care (EEC, DTA, DCF, DHCD) are similarly engaged in equity work. This work, however, is too often done in isolation. As underscored in this needs assessment, families move between and within multiple systems, all of which are rooted in and play a role in perpetuating racial inequities. Agency work that is siloed does not address this “groundwater” and will not be sufficient to change policies and practices across systems. With collaboration, providers and programs have a mutual opportunity and responsibility to facilitate each other’s growth and best practices and hold one another accountable. Establishing (or joining, if one exists) a racial equity taskforce with representatives from each agency may be a way forward. The taskforce could be responsible for planning cross-sector trainings, and for agreeing on common language and approaches that embody an anti-racist perspective. The taskforce could take on a statewide root cause examination of how each agency has created and upheld institutional and structural racism, and how they can collectively reframe their work going forward. We know this recommendation reaches far beyond what MA MIECHV can do on its own, but it is worthwhile to mention

^{ee}For more information, go to <https://www.racialequityinstitute.com>

^{ff}Title V Priority: Eliminate institutional and structural racism in internal DPH programs, policies, and practices to improve maternal and child health. Title V Priority: Eliminate health inequities caused by unjust social, economic, and environmental systems, policies and practices.

here; without a community of peers working to the same end, individual agencies' own impact and progress will inevitably be stymied, and systemic reform will remain out of reach.

At a more direct administrative level, the MDPH team has an important role to play. The team should articulate a vision for how the MA MIECHV LIAs could address racial equity, and work to communicate this vision (and related requirements) to agencies on the ground. Several guiding questions can serve to direct this process. For example: How does racism contribute to different aspects of programming, policies, and practice, and how should LIAs address this? Should there be direction about who to include on advisory boards, such as expectations about racial representation based on the needs and demographic of surrounding communities? Should anti-racist training be included in the core training requirements for all home visitors? Progress in addressing the consequences of and reforming systemic racism within MA MIECHV programming requires guidance and oversight, and MDPH is well-positioned to offer this support to programs on the ground.

The Role of Home Visiting Programs. It is incumbent on MA MIECHV LIAs not only to hire home visitors that reflect the demographics and lived experiences of the home visited families, but also to create work environments that are fully supportive of these staff. Program coordinators and supervisors, many of whom are white and are in the position of supervising BIPOC staff, would likely benefit from education and trainings focused on managing these dynamics. Similarly, programs could likely use guidance and support around having honest (and often difficult) workplace conversations about how racism impacts their work, and their own lives. At a more operational level, programs need to value and remunerate lived experience just as we do college degrees. Ideally, programs could work in innovative ways to hire parents who have graduated from home visiting themselves as home visitors. We know this happens organically at some programs, with significant benefits; piloting a formal program to recruit and train home visited parents could be an important step in building a strong home visiting workforce that is reflective of MA MIECHV's priority populations. Finally, as mentioned earlier, it is crucial that we address the unacceptably low salaries MA MIECHV home visitors are currently paid. Home visitors and early childhood educators, overwhelmingly women and disproportionately BIPOC, comprise one of the most underpaid workforces in our country. Although it can be difficult to move the needle on this issue, it is a strategy that would lead to a more diverse and well-supported workforce and to improved outcomes for families.

The Role of Families. Home visiting programs work to empower families to meet their own needs. They can also help to facilitate opportunities for families to use their voices as decision-makers in spaces where programs are being designed and policies are being written. They can encourage families to name and resist bias when they see and experience it. Joining with families in these efforts—affirming families' recognition of when they are being discriminated against and validating their rights to resist—will empower both home visitors and families to be strong and effective advocates for themselves and their communities in the face of systemic racism.

References

1. The Massachusetts Home Visiting Initiative Task Force and Work Group. Massachusetts Statewide Needs Assessment for Maternal, Infant, and Early Childhood Home Visiting Programs. 2010.
2. University of Massachusetts Donahue Institute and Massachusetts Department of Public Health. Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Initiative 2016 Needs Assessment. 2016. <https://tufts.box.com/s/ivximys6w5i5km492iq4fd68iyovtfyz>.
3. Citizens' Committee for Children (CCC) of New York. CCC's community risk ranking: Measuring Child-well being in New York city's 59 community districts. 2015; <https://www.cccnewyork.org/data-and-reports/publications/ccs-community-risk-ranking-child-well-being-in-new-york-citys-59-community-districts/>. Accessed June 5, 2019.
4. Adirim T, Supplee L. Overview of the federal home visiting program. *Pediatrics*. 2013;132(Supplement 2):S59-S64.
5. Israel BA, Schulz AJ, Parker EA, et al. Critical issues in developing and following CBPR principles. *Community-based participatory research for health: Advancing social and health equity*. 2017:31-46.
6. Mass.gov. Information about Plan of Safe Care (POSC). <https://www.mass.gov/info-details/information-about-plan-of-safe-care-posc>. Accessed December 15, 2019.
7. Moosmann DAV, Fauth, R.C., Marin, A.S., and Goldberg, J. *Needs assessment review across Massachusetts, 2015–2019*. Medford, MA: Tufts Interdisciplinary Evaluation Research (TIER);2019.
8. Massachusetts Department of Public Health. 2017 Massachusetts State Health Assessment. <https://www.mass.gov/files/documents/2017/11/03/2017%20MA%20SHA%20final%20compressed.pdf>. Accessed June 1, 2019.
9. U.S. Census Bureau. 2018: American Community Survey 1-Year Estimates Data Profiles. Demographic and housing estimates | TableID: DP05 – Massachusetts. . <https://data.census.gov/cedsci/table?q=nonwhite%20hispanic&hidePreview=true&tid=ACSDP1Y2018.DP05&t=Hispanic%20or%20Latino&y=2018&g=0400000US25&moe=false>. Accessed December 1, 2019.
10. U.S. Census Bureau. 2018: American Community Survey 1-Year Estimates Data Profiles. Demographic and housing estimates | TableID: DP05 – United States. . <https://data.census.gov/cedsci/table?q=DP05&tid=ACSDP1Y2018.DP05&hidePreview=true>. Accessed December 5, 2019.
11. Massachusetts Department of Public Health | Registry of Vital Records and Statistics. Massachusetts Births 2016. 2018; <https://www.mass.gov/doc/2016-birth-report/download>. Accessed July 1, 2019.
12. U.S. Census Bureau. 2018: American Community Survey 1-Year Estimates Data Profiles. Age and sex | TableID: S0101 – Massachusetts. *Children*. https://data.census.gov/cedsci/table?g=0400000US25&tid=ACSST1Y2018.S0101&t=Age%20and%20Sex&hidePreview=true&cid=DP05_0001E&vintage=2018. Accessed December 5, 2019.
13. U.S. Census Bureau. 2018: American Community Survey 1-Year Estimates Subject Tables. Children characteristics | TableID: S0901 – Massachusetts. *Race and ethnicity for children*. <https://data.census.gov/cedsci/table?q=children&g=0400000US25&tid=ACSST1Y2018.S0901&t=Children&hidePreview=true>. Accessed December 5, 2019.
14. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Subject Tables. Poverty status in the past 12 months | TableID: S1701 – Massachusetts. Data indicator – *Percent*

- of individuals living below the federal poverty level (FPL) in the past 12 months in 2017.*
<https://data.census.gov/cedsci/table?q=poverty&hidePreview=true&tid=ACSST1Y2017.S1701&t=Poverty&vintage=2018&g=0400000US25>. Accessed July 1, 2019.
15. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Detailed Tables. Gini index of income inequality | TableID: B19083 – Massachusetts. Data indicator – *Gini coefficient of income inequality from 2013–2017.*
<https://data.census.gov/cedsci/table?q=gini%20coefficient&tid=ACSDT5Y2017.B19083&hidePreview=true&g=0400000US25>. Accessed July 1, 2019.
 16. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Subject Tables. Poverty status in the past 12 months | TableID: S1701 – County subdivisions of Massachusetts. Data indicator – *Percent of children under the age of 5 living below the federal poverty level (FPL) in the past 12 months from 2013–2017.*
<https://data.census.gov/cedsci/table?q=poverty&g=0400000US25.060000&hidePreview=true&tid=ACSST5Y2017.S1701&t=Poverty&vintage=2018>. Accessed July 1, 2019.
 17. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Detailed Tables. Poverty status in the past 12 months by sex and age (White alone). | TableID: B17001A – Massachusetts. Data indicator – *Percent of children under the age of 5 living below the FPL in the past 12 months.*
<https://data.census.gov/cedsci/table?q=b17001&g=0400000US25&tid=ACSDT1Y2017.B17001A&vintage=2018&hidePreview=true>. Accessed July 1, 2019.
 18. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Detailed Tables. Poverty status in the past 12 months by sex and age (Asian alone). | TableID: B17001D – Massachusetts. Data indicator – *Percent of children under the age of 5 living below the FPL in the past 12 months.*
https://data.census.gov/cedsci/table?g=0400000US25&t=Children%3ARace%20and%20Ethnicity&tid=ACSDT1Y2017.B17001D&vintage=2017&text=children&hidePreview=true&cid=B17001A_001E. Accessed July 1, 2019.
 19. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Data Profiles. ACS demographic and housing estimates | TableID: DP05 – County subdivisions of Massachusetts. *Total population from 2013–2017.*
<https://data.census.gov/cedsci/table?q=population&g=0400000US25.060000&tid=ACSDP5Y2017.DP05&hidePreview=true&vintage=2018>. Accessed July 1, 2019.
 20. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Data Profiles. Poverty status in the past 12 months by sex and age (Hispanic or Latino). | TableID: B17001I – Massachusetts. Data indicator – *Percent of children under the age of 5 living below the FPL in the past 12 months.*
https://data.census.gov/cedsci/table?g=0400000US25&t=Children%3ARace%20and%20Ethnicity&tid=ACSDT1Y2017.B17001I&vintage=2017&text=children&hidePreview=true&cid=B17001A_001E. Accessed July 1, 2019.
 21. Massachusetts Department of Elementary & Secondary Education. Selected Populations. 2018–2019 Selected Populations Report (District).
<http://profiles.doe.mass.edu/statereport/selectedpopulations.aspx>. Accessed July 1, 2019.
 22. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Data Profiles. Selected social characteristics in the United States | TableID: DP02 – Massachusetts. Data indicator – *Percent of children under the age of 18 living in single parent households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households in 2017.*

- <https://data.census.gov/cedsci/table?q=single%20parent&tid=ACSDP1Y2017.DP02&hidePreview=true&g=0400000US25>. Accessed July 1, 2019.
23. MassHealth. MassHealth: Roadmap to 2014 | Affordable Care Transition Plan (Revised). 2013; <https://www.mass.gov/files/documents/2017/12/18/aca-transition-plan-draft-05-01-13.pdf>. Accessed May 1, 2019.
 24. U.S. Census Bureau. 2018: American Community Survey 1-year Estimate Subject Tables. Selected characteristics of health insurance coverage in the United States. | TableID: S2701. https://data.census.gov/cedsci/table?q=S2701&g=0400000US25_0100000US&tid=ACSST1Y2018.S2701&hidePreview=true. Accessed December 1, 2019.
 25. Data Resource Center for Child & Adolescent Health. 2016–2017 National Survey of Children’s Health. Child and family health measures: health care access and quality – Massachusetts. <https://www.childhealthdata.org/browse/survey/results?q=5457&r=23&r2=23&g=664>. Accessed July 1, 2019.
 26. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Subject Tables. Employment status | TableID: S2301 – Massachusetts. Data indicator – *Percent of population 16 years of age and older who were unemployed in 2017*. <https://data.census.gov/cedsci/table?q=unemployment&tid=ACSST1Y2017.S2301&vintage=2018&hidePreview=true&g=0400000US25>. Accessed July 1, 2019.
 27. Department of Transitional Assistance. *Public records request – Transitional Aid to Families with Dependent Children (TAFDC) and Supplemental Nutrition Assistance Program (SNAP) families data. Data indicator – Percent of families who received cash assistance from TAFDC out of all families from 2014–2018 (Custom Report)*. 2019.
 28. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Subject Tables. Educational attainment | TableID: S1501 – Massachusetts. Data indicator – *Percent of persons 25 and older without a high school diploma in 2017*. <https://data.census.gov/cedsci/table?q=high%20school&g=0400000US25&hidePreview=true&tid=ACSST1Y2017.S1501&vintage=2018>. Accessed July 1, 2019.
 29. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Data Profiles. Sex by educational attainment for the population 25 years and over (Hispanic or Latino). | TableID: B150021 – Massachusetts. Data indicator – *Percent of persons 25 and older without a high school diploma*. <https://data.census.gov/cedsci/table?q=B150021&g=0400000US25&tid=ACSST1Y2017.B150021&hidePreview=true>. Accessed August 10, 2019.
 30. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Subjects Tables. Educational attainment | TableID: S1501 – Massachusetts. Data indicator – *Percent of population aged 18–24 who did not graduate from high school in 2017*. <https://data.census.gov/cedsci/table?q=high%20school&g=0400000US25&hidePreview=true&tid=ACSST1Y2017.S1501&vintage=2018>. Accessed June 1, 2019.
 31. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Subject Tables. Sex by school enrollment by educational attainment by employment status for the population 16 to 19 years old | TableID: B14005 – Massachusetts. Data indicator – *Percent of 16 to 19-year-old individuals not enrolled in school and not a high school graduate out of same age residents in 2017*. <https://data.census.gov/cedsci/table?q=high%20school%20graduate&tid=ACSST1Y2017.S1501&vintage=2017&hidePreview=true&moe=false&g=0400000US25>. Accessed July 1, 2019.
 32. Massachusetts Department of Elementary and Secondary Education. High School and Beyond. 2018–19 Dropout Report (District) All Students. Data indicator – *Percent of students in grades 9–12 who stopped going to high school out of all students enrolled in grades 9–12 during the 2018–*

- 2019 school year. <http://profiles.doe.mass.edu/statereport/dropout.aspx>. Accessed August 1, 2019.
33. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Detailed Tables. Geographical mobility in the past year by tenure for current residence in the United States | TableID: B07013 – Massachusetts. Data indicator – Percent of the population (1 year and over) in housing who lived in the same house 1 year ago out of total householders in 2017. <https://data.census.gov/cedsci/table?q=B07013&tid=ACSDT1Y2017.B07013&vintage=2018&hidePreview=true&g=0400000US25>. Accessed June 1, 2019.
 34. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Data Profiles. Selected housing characteristics | TableID: DP04 – Massachusetts. Data indicator – *Ratio of renter-occupied to every 1 owner-occupied residence in 2017*. <https://data.census.gov/cedsci/table?q=rent&tid=ACSDP1Y2017.DP04&vintage=2018&hidePreview=true&g=0400000US25>. Accessed July 1, 2019.
 35. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Data Profiles. Tenure (Hispanic or Latino Householder). | TableID: B250031 – Massachusetts. Data indicator – *Ratio of renter-occupied to every 1 owner-occupied residence*. <https://data.census.gov/cedsci/table?q=B250031&g=0400000US25&tid=ACSDT1Y2017.B250031&hidePreview=true>. Accessed July 1, 2019.
 36. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Data Profiles. Tenure (Black or African American alone Householder). | TableID: B25003B – Massachusetts. Data indicator – *Ratio of renter-occupied to every 1 owner-occupied residence*. <https://data.census.gov/cedsci/table?q=B25003B&g=0400000US25&tid=ACSDT1Y2017.B25003B&hidePreview=true>. Accessed July 1, 2019.
 37. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Data Profiles. Tenure (American Indian and Alaska Native alone Householder). | TableID: B25003C – Massachusetts. Data indicator – *Ratio of renter-occupied to every 1 owner-occupied residence*. <https://data.census.gov/cedsci/table?q=B25003C&g=0400000US25&tid=ACSDT1Y2017.B25003C&hidePreview=true>. Accessed July 1, 2019.
 38. Health MDOP, Executive Office of Health and Human Services. Maternal and Child Health Services Title V Block Grant: Massachusetts - FY 2016 Application/FY 2014 Annual Report. 2016. <https://tufts.box.com/s/d3vbj1fpvkzp9guk4zcxxd09477aum9>.
 39. United States Interagency Council on Homelessness. Massachusetts Homelessness Statistics. 2019; <https://www.usich.gov/homelessness-statistics/ma>. Accessed January 5, 2020.
 40. Department of Housing and Community Development Massachusetts. Emergency Assistance, HomeBASE (Building Alternatives to Shelter) and Residential Assistance for Families in Transition (RAFT) Programs | Fiscal year 2018, fourth quarterly report. 2018; <https://www.mass.gov/files/documents/2018/11/27/FY18Q4EA.pdf>. Accessed July 1, 2019.
 41. Massachusetts Department of Elementary and Secondary Education. Homeless Student Program Data 2017–2018. Data indicator – *Count of homeless children and youth enrolled in Massachusetts' public schools during the 2017–2018 school year*. <http://www.doe.mass.edu/sfs/mv/2017-18districtdata.html>. Accessed July 1, 2019.
 42. Department of Health & Human Services USA, Administration for Children & Families. Early childhood homelessness in the United States: 50-state profile. Data indicator – *Percent of children under 6 experiencing homelessness were served by Head Start/Early Head Start or McKinney-Vento-funded ECE programs from 2014–2015*. 2017; https://www.acf.hhs.gov/sites/default/files/ece/epfp_50_state_profiles_6_15_17_508.pdf. Accessed July 1, 2019.

43. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Data Profiles. Selected social characteristics in the United States | TableID: DP02 – Massachusetts. Data indicator – *Percent of all residents who were non-US-born in 2017.*
<https://data.census.gov/cedsci/table?q=social%20characteristics&tid=ACSDP1Y2017.DP02&vintage=2018&hidePreview=true&g=0400000US25>. Accessed June 1, 2019.
44. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Detailed Tables. Sex by age and nativity and citizenship status (Asian alone). | TableID: B05003D – Massachusetts. Data indicator – *Percent of all residents who were non-US-born in 2017.*
<https://data.census.gov/cedsci/table?q=B05003D&g=0400000US25&tid=ACSST1Y2017.B05003D&hidePreview=true>. Accessed July 1, 2019.
45. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Detailed Tables. Sex by age and nativity and citizenship status (Black or African American alone). | TableID: B05003B – Massachusetts. Data indicator – *Percent of all residents who were non-US-born in 2017.*
<https://data.census.gov/cedsci/table?q=B05003B&g=0400000US25&tid=ACSST1Y2017.B05003B&hidePreview=true>. Accessed July 1, 2019.
46. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Detailed Tables. Sex by age and nativity and citizenship status (Hispanic or Latino). | TableID: B05003I – Massachusetts. Data indicator – *Percent of all residents who were non-US-born in 2017.*
<https://data.census.gov/cedsci/table?q=B05003I&g=0400000US25&tid=ACSST1Y2017.B05003I&hidePreview=true>. Accessed July 1, 2019.
47. Massachusetts Office For Refugees and Immigrants. Massachusetts Office For Refugees and Immigrants Annual Report 2017. Data indicator – *Count of new refugees and individuals with other qualifying immigration statuses in Massachusetts during the fiscal year of 2017.* 2017;
https://www.mass.gov/files/documents/2018/06/11/MORI_4_27_2018.pdf. Accessed July 1, 2019.
48. Foundation TAEC, Kids Count Data Center. National Survey of Children’s Health (NSCH) survey findings 2016-2017. Data indicator – *Percent of children who ever had a parent or guardian who served time in jail during their lifetime.* <https://datacenter.kidscount.org/data/tables/9734-children-who-had-a-parent-who-was-ever-incarcerated-by-race-and-ethnicity?loc=1&loct=2#detailed/2/23/false/1603/13/18996>. Accessed July 1, 2019.
49. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Subject Tables. Veteran status | TableID: S2101 – Massachusetts. Data indicator – *Percent of residents 18 years of age and older who were veterans in 2017.*
<https://data.census.gov/cedsci/table?q=veterans&g=0400000US25&tid=ACSST1Y2017.S2101&t=Veterans&hidePreview=true>. Accessed July 1, 2019.
50. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Detailed Tables. Sex by age by veteran status for the civilian population 18 years and over (White alone) | TableID: B21001A – Massachusetts. Data indicator – *Percent of residents 18 years of age and older who were veterans in 2017.*
<https://data.census.gov/cedsci/table?q=B21001A&g=0400000US25&tid=ACSST1Y2017.B21001A&hidePreview=true>. Accessed July 1, 2019.
51. U.S. Census Bureau. 2017: American Community Survey 1-Year Estimates Detailed Tables. Sex by age by veteran status for the civilian population 18 years and over (Asian alone) | TableID: B21001D – Massachusetts. Data indicator – *Percent of residents 18 years of age and older who were veterans in 2017.*
<https://data.census.gov/cedsci/table?q=B21001D&g=0400000US25&tid=ACSST1Y2017.B21001D&hidePreview=true>. Accessed July 1, 2019.

52. Substance Abuse and Mental Health Services Administration (SAMHSA). National Survey on Drug Use and Health (NSDUH) model-based prevalence estimates 2016-2017 – Massachusetts. 2018; <https://www.samhsa.gov/data/report/2016-2017-nsduh-state-prevalence-estimates>. Accessed June 1, 2019.
53. National Institute on Drug Abuse. Opioid Summaries by State. 2018 Opioid-Involved Overdose Death Rates (per 100,000 people) - Massachusetts. <https://www.drugabuse.gov/drugs-abuse/opioids/opioid-summaries-by-state>. Accessed July 1, 2019.
54. Massachusetts Department of Public Health (MDPH) Bureau of Substance Addiction Services (BSAS). *Opioid-related overdose deaths – Massachusetts. Data indicator – Average annual rate of occurrence of opioid overdoses per 100,000 residents from 2013–2017 (Custom Report)*. 2019.
55. Health MDOP, Bureau of Substance Addiction Services. *Fiscal years 2014–2018 BSAS program enrollment rates per 100,000 – Massachusetts. Data indicator – Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents based on 2016 MA population estimates from 2014–2018 (Custom Report)*. 2019.
56. Federal Bureau of Investigation. Crime in the United States by State, 2017. Data indicator – *Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents in 2017*. <https://ucr.fbi.gov/crime-in-the-u.s/2017/crime-in-the-u.s.-2017/topic-pages/tables/table-5>. Accessed June 1, 2019.
57. Centers for Disease Control and Prevention. Sudden Unexpected Infant Death and Sudden Infant Death Syndrome – Massachusetts. Data indicator – *Rate of SUIDs per 100,000 live births 2013–2017*. <https://www.cdc.gov/sids/data.htm>. Accessed July 1, 2019.
58. Massachusetts Department of Public Health. *Injury Surveillance Quality Improvement 5-year Estimates – Massachusetts. Data indicator – Rate of emergency department events for children aged 0–9 associated with unintentional injuries per 100,000 same age residents during the 2010–2015 fiscal years (Custom Report)*. 2019.
59. Massachusetts Department of Public Health. *Injury Surveillance Quality Improvement 5-year Estimates – Massachusetts. Data indicator – Rate of emergency department events for children aged 0–3 associated with unintentional injuries per 100,000 same age residents during the 2010–2015 fiscal years (Custom Report)*. 2019.
60. Department of Children and Families Massachusetts. *Total maltreatment counts for 0–17-year old children from 2014–2018 – Massachusetts. Data indicator – Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents from 2014–2018 (Custom Report)*. 2019.
61. Massachusetts Department of Public Health. Bureau of Family Health and Nutrition 1-year Estimates – Massachusetts. Data indicator – *Rate of the death of a woman while pregnant or within one year of termination of pregnancy, irrespective of the cause per 100,000 live births in 2014 (Custom Report)*. 2017; <https://www.mass.gov/files/documents/2018/05/07/maternal-mental-health-data-brief.pdf>. Accessed July 1, 2019.
62. Massachusetts Department of Public Health. Maternal Mortality and Morbidity Review in Massachusetts, A bulletin for Health Care Professionals | Substance Use among Pregnancy-Associated Deaths – Massachusetts, 2005–2014. Data indicator – *Percent of pregnancy-associated deaths in which acute or chronic substance use contributed directly to the death as indicated on the death certificate in 2014*. 2018; <https://www.mass.gov/doc/substance-use-among-pregnancy-associated-deaths-massachusetts-2005-2014/download>. Accessed July 1, 2019.
63. Massachusetts Department of Public Health. *Pregnancy Risk Assessment Monitoring System (PRAMS) 2018 Survey Findings - Massachusetts. (Custom Report)*. 2019.

64. Health MDOP, Bureau of Family Health and Nutrition. *Neonatal abstinence syndrome (NAS) rate by community. Data indicator – Rate of Infants NAS Per 1,000 Live Births from 2012–2016 (Custom Report)*. 2019.
65. Kochanek KD, Murphy, S L., Xu, J., Arias, E. National Center for Health Statistics. National Vital Statistics Reports, Vol. 67, No.8 – Massachusetts. Data indicator – *Rate of infant (under 1 year) deaths per 1,000 live births in 2017*.68(June 24, 2019):1-76.
https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_09-508.pdf.
66. Health MDOP, Office of Data Translation. *Pregnancy to Early Life Longitudinal Data System (PELL) Findings 2015 – Massachusetts (Custom Report)*.
67. Massachusetts Department of Public Health. *Early Intervention Information System, Enrolled IFSP Children – Massachusetts. Data indicator – Average percent of children <3 years of age enrolled in early intervention (EI) out of all children <3 years of age during fiscal years 2015–2017 (Custom Report)*. 2019.
68. Commonwealth of Massachusetts. *Massachusetts Department of Early Education and Care (EEC), 2018 Annual report. Data indicator – Percent of EEC programs that received a Quality Rating and Improvement System (QRIS) of: Level 1, 2, 3, or 4 in 2018*. 2019.
69. Massachusetts Department of Elementary and Secondary Education. Kindergarten Enrollment Report. 2019 Kindergarten Enrollment Report (District) - All Students. Data indicator – *Percent of students who were enrolled in a full day kindergarten program out of all students in kindergarten in the 2018–2019 school year*.
<http://profiles.doe.mass.edu/statereport/kgenrollment.aspx>. Accessed August 1, 2019.
70. Massachusetts Department of Elementary and Secondary Education. Student Attendance Report. 2018-19 Attendance Report (District) - All Students – Massachusetts. Data indicator – *Percent of students who were absent 10% or more of their total number of student days of membership in a school out of all students enrolled for the 2018–2019 school year*.
<http://profiles.doe.mass.edu/statereport/attendance.aspx>. Accessed July 1, 2019.
71. Massachusetts Department of Elementary and Secondary Education. Student Attendance Report. 2018-19 Attendance Report (District) - All Students – Massachusetts. Data indicator – *Percent of students who were truant with more than 9 unexcused absences out all of students enrolled for the 2018–2019 school year*.
<http://profiles.doe.mass.edu/statereport/attendance.aspx>. Accessed July 1, 2019.
72. Massachusetts Department of Elementary & Secondary Education. Next Generation MCAS Achievement Results by School District for 2019 Third Grade Students.
<http://profiles.doe.mass.edu/statereport/nextgenmcas.aspx>. Accessed August 1, 2019.
73. Massachusetts Department of Elementary and Secondary Education. Accountability Report - District 2019. Data indicator – *Percent of school districts across MA that required assistance or intervention during the 2018–2019 school year*.
<http://profiles.doe.mass.edu/statereport/accountability.aspx>. Accessed August 1, 2019.
74. Commonwealth of Massachusetts. Children’s Behavioral Health Initiative data reports | Behavioral Health (BH) screening cumulative quarterly report. 2012-2018;
<https://www.mass.gov/info-details/cbhi-data-reports>. Accessed July 1, 2019.
75. Data Resource Center for Child & Adolescent Health. 2016–2017 National Survey of Children’s Health.
<https://www.childhealthdata.org/browse/survey/results?q=5545&=amp&r2=23&g=646>. Accessed August 1, 2019.
76. Commonwealth of Massachusetts. MassHealth Dashboard | All MassHealth Members - Snapshot Report for December 2018. 2019; <https://www.mass.gov/lists/masshealth-measures#2019-masshealth-monthly-caseload-reports>-. Accessed August 1, 2019.

77. Health MDOP, Bureau of Environmental Health. Pediatric asthma – Massachusetts. Data indicator – *Prevalence of pediatric asthma per 100 students for children in kindergarten through 8th grade for the 2016–2017 school year*. <https://www.mass.gov/guides/phit-data-pediatric-asthma#explore-pediatric-asthma-data>. Accessed July 1, 2019.
78. Database MHD, Massachusetts Center for Health Information and Analysis. *Asthma prevention and control program 5-year estimates – Massachusetts. Data indicator – Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19 from 2010–2014 (Custom Report)*. 2019.
79. Health MDOP, Bureau of Environmental Health. PHIT Data: Childhood Lead Poisoning. <https://www.mass.gov/guides/phit-data-childhood-lead-poisoning>. Accessed August 1, 2019.
80. Massachusetts Department of Public Health. *Obesity and WIC participants – Massachusetts. Data indicator – Percent of overweight or obese children (< 5 years of age) of active WIC participants as of July 2019 (Custom Report)*. 2019.
81. Massachusetts Department of Public Health. Results from the Body Mass Index screening in Massachusetts public school districts, 2014. Data indicator – *Percent of students in grades 1, 4, 7, and 10 considered overweight or obese in the 2013–2014 school year out of all students screened*. <https://www.mass.gov/files/documents/2016/08/pv/status-childhood-obesity-2014.pdf>. Accessed August 1, 2019.
82. Mass.gov. Map: Executive Office of Health and Human Services Regions. https://matracking.ehs.state.ma.us/eohhs_regions/eohhs_regions.html#MyPopup. Accessed December 5, 2019.
83. Springer JF, Phillips J. The Institute of Medicine Framework and its implication for the advancement of prevention policy, programs and practice. *California, Community Prevention Initiative*. 2007.
84. Goldberg J, Winestone JG, Fauth R, Colón M, Mingo MV. Getting to the warm hand-off: A study of home visitor referral activities. *Maternal and child health journal*. 2018;22(1):22-32.
85. Goldberg JL, M. *Massachusetts Maternal, Infant, and Early Childhood Home Visiting (MA MIECHV) Formula Grant Evaluation: Final report to the Massachusetts Department of Public Health*. Medford & Shrewsbury, MA: Tufts Interdisciplinary Evaluation Research, Tufts University & UMass Donahue Institute; 2018.
86. Stargel L, E., Fauth, R. C., & Easterbrooks, A., M.,. Home visiting program impacts on reducing homelessness among young mothers. *Journal of Social Distress and the Homeless*. 2018;27(1):89-92.
87. Fauth RC, Winestone, J. G., & Goldberg, J, . Home visiting for system involved young mothers: A longitudinal investigation of risks, supports, and outcomes. 2018. <https://ase.tufts.edu/tier/documents/2018AECF-HFM-Roundtable.pdf>. Accessed August 2, 2020.
88. Sandstrom H, et al. Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services | Home visiting career trajectories: Final report (OPRE Report #2020-11). 2020; https://www.urban.org/sites/default/files/publication/101641/home_visiting_career_trajectories_0.pdf. Accessed September 1, 2020.
89. Jones CP. Levels of Racism: A Theoretic Framework and a Gardener's tale. *American Journal of Public Health*. 2000;90(8):1212.
90. Hayes-Greene F, & Love, B. P. The Groundwater Approach: Building a Practical Understanding of Structural Racism. 2018; <https://static1.squarespace.com/static/578fa7e3d482e9af82f8f507/t/5c1b08a50ebbe8eec9f38d21/1545275564106/REI+Groundwater+Approach.pdf> Accessed November 11, 2020.

91. Noelke C, McArdle, N., Baek, M., Huntington, N., Huber, R., Hardy, E., & Acevedo-Garcia, D. diversitydatakids.org | Child opportunity index 2.0 technical documentation. 2020; diversitydatakids.org/research-library/research-brief/how-we-built-it. Accessed September 1, 2020.
92. Groos M, Wallace M, Hardeman R, & Theall KP. Measuring inequity: a systematic review of methods used to quantify structural racism. *Journal of Health Disparities Research and Practice*. 2018;11(2):13.

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Appendix I.1—Acronyms Used in the MA MIECHV 2020 Needs Assessment

ABA: Applied Behavior Analysis

ACEs: Adverse Childhood Experiences

ADA: Americans with Disabilities Act

ADHD: attention deficit hyperactivity disorder

APNCU: Adequacy of Prenatal Care Utilization

BIPOC: Black, Indigenous, and People of Color

BFHN: Bureau of Family Health and Nutrition

BLLs: blood lead levels

BSAS: Bureau of Substance Addiction Services

CAPTA: Child Abuse Prevention and Treatment Act

CBPR: Community Based Participatory Research

CCC: Citizens' Committee for Children

CEDAC: Cause and Effect “Fishbone” Diagram with the Addition of Cards (CEDAC)

CMSP: Children’s Medical Security Plan

CP: Cerebral palsy

CPS: Child Protective Services

CYSHCN: Children and Youth with Special Health Care Needs

DCF: Department of Children and Families

DESE: Massachusetts Department of Elementary and Secondary Education

DHCD: Department of Housing and Community Development

DTA: Department of Transitional Assistance

DV: domestic violence

EBHV: evidence-based home visiting

EBLLs: elevated blood lead levels

ECE: Early Childhood Education

EEC: Department of Early Education and Care

EEIP: Early Intervention Parenting Partnerships

EFC: Essentials for Childhood

EHS: Early Head Start

EI: Early Intervention

ELA: English language arts

ELs: English learners

EMDR: eye movement desensitization and reprocessing

EOHHS: Executive Office of Health and Human Services

EPSDT: Early and Periodic Screening, Diagnosis, and Treatment

ETO: Efforts to Outcomes

FIRST: Families in Recovery Support Steps Together

FPL: federal poverty level

FY: fiscal year

GED: general education development

GPA: grade point average

HFM: Healthy Families Massachusetts

HiSET: High school equivalency test

HRSA: Health Resources and Services Administration

HS: Head Start

HUD: Department of Housing and Urban Development

ICU: Intensive Care Unit

IEP: Individualized education program

IHR: Institute for Health and Recovery

IPV: intimate partner violence

JRI: Justice Resource Institute

LGBTQ: lesbian, gay, bisexual, transgender, and questioning (or queer)

LIAs: Local Implementing Agencies

MA: Massachusetts

MAT: medication assisted treatment

MCAS: Massachusetts Comprehensive Assessment System

MCH: Maternal Child Health

MDPH: Massachusetts Department of Public Health

MHVI: Massachusetts Home Visiting Initiative

MIECHV: Maternal, Infant, and Early Childhood Home Visiting Program

MIS: management information systems

MSW: Master of social work

NAS: neonatal abstinence syndrome

NHVM: National home visiting model

NICU: neonatal intensive care unit

OB/GYN: Obstetrician/gynecologist

OT: occupational therapy

OUD: opioid use disorder

PAT: Parents as Teachers

PCA: Personal Care Assistant

PCP: primary care physician

PDS: Participant Data System

POC: People of Color

POSC: Plan of Safe Care

PPHSD: Preventive Pediatric Healthcare Screening and Diagnosis

PT: physical therapy

PTSD: post-traumatic stress disorder

QRIS: quality rating and improvement system

SAMHSA: Substance Abuse and Mental Health Services Administration

SEN: substance exposed newborns

SES: socioeconomic status

SNAP: Supplemental Nutrition Assistance Program

SOR: State Opioid Response grant

SUD: substance use disorder

SUID: sudden unexpected infant death

SY: school year

TAFDC: Transitional Aid to Families with Dependent Children

TANF: Transitional Assistance for Needy Families

TIER: Tufts Interdisciplinary Evaluation Research

µg/dL: microgram per deciliter

U.S.: United States

WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children

WOC: women of color

YWCA: Young Women's Christian Association

Appendix I.2—Glossary for the MA MIECHV 2020 Needs Assessment

Applied Behavior Analysis (ABA): According to May Institute,¹ “ABA is the application of principles of learning to achieve meaningful outcomes. ABA emphasizes direct observation, objective measurement, and evaluation of the effects of assessments and interventions to be sure they are having the desired outcome.” ABA techniques are used with individuals who have autism spectrum disorder and their families.

Adequate physical activity for children and adolescents: The CDC recommends that children and youth engage in moderate-to-vigorous physical activity for 60 minutes daily.²

Americans with Disabilities Act: The Americans with Disabilities Act is a United States Law³ that prohibits discrimination on the basis of disability in employment, State and local government, public accommodations, commercial facilities, transportation, and telecommunications. The ADA defines disability as a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment. The ADA does not specifically name all of the impairments that are covered.

Body mass index: As defined by the CDC,⁴ BMI is calculated by dividing a person’s weight in kilograms by the square of height in meters. For children and teens, BMI is age- and sex-specific and is often referred to as BMI-for-age. A child’s weight status is determined using an age- and sex-specific percentile for BMI rather than the BMI categories used for adults.

Bureau of Family Health and Nutrition: BFHN provides programs and services ensuring the health of the Commonwealth’s mothers, infants, children and youth, including CYSHCN and their families.⁵

Cerebral Palsy: As defined by the CDC,⁶ “(CP) is a group of disorders that affect a person’s ability to move and maintain balance and posture. CP is the most common motor disability in childhood. *Cerebral* means having to do with the brain. *Palsy* means weakness or problems with using the muscles. CP is caused by abnormal brain development or damage to the developing brain that affects a person’s ability to control his or her muscles.”

Childhood Obesity: As defined by the CDC,⁴ when a children’s BMI is at the 95th percentile or greater, they are considered obese.

Children and Youth with Special Health Care Needs: As defined by McPherson et al.,⁷ “children with special health care needs are those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally.”

Community-Based Participatory Research (CBPR): An approach to research that calls for equitable involvement by all partners in the research process. This approach emphasizes the importance of: 1) placing knowledge production in the hands of those most directly affected by the issues being studied;

2) forming academic-community partnerships that are genuinely based on a commitment to co-learning; 3) building evaluation capacity in communities (training community members in research); and 4) proposing program and policy solutions that represent communities' goals and aspirations.⁸

Community Evaluator: Community Evaluators are knowledgeable leaders and/or members of their respective communities who were hired by TIER to select and recruit families for focus group participation, lead focus group discussions, and contribute to data analysis and strategy creation in response to what they learned from focus group participants. The role of a CE is grounded in Community Based Participatory Research models that emphasize the involvement of members of communities most impacted by public health disparities in knowledge production.⁹

Community Health Workers: CHWs are public health workers who apply their unique understanding of the experience, language and/or culture of the populations they serve in order to carry out one or more of the following roles: 1) Providing culturally appropriate health education, information and outreach in community-based settings, such as homes, schools, clinics, shelters, local businesses and community centers; 2) Bridging and/or culturally mediating between individuals, communities and health and human services, including actively building individual and community capacity; 3) Assisting people to access the services they need; 4) Providing direct services, such as informal counseling, social support, care coordination and health screenings; and 5) Advocating for individual and community needs.¹⁰

Cost Burdened: As defined by HUD,¹¹ families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care.

Cultural competence: According to the U.S. Department of Health and Human Services,¹² cultural competence describes a “set of attitudes, perspectives, behaviors, and policies – both individually and organizationally – that promote positive and effective interactions with diverse cultures.”

Department of Children and Families: DCF works in partnership with families and communities to keep children safe from abuse and neglect. In most cases, DCF is able to provide supports and services to keep children safe with parents or family members. When necessary, DCF provides foster care or finds new permanent families for children through kinship, guardianship or adoption.¹³

Department of Housing and Community Development: The DHCD provides and oversees funding and support to assist in providing safe and affordable housing for Massachusetts residents.¹⁴

Department of Transitional Assistance: DTA assists and empowers low-income individuals and families to meet their basic needs, improve their quality of life, and achieve long term economic self-sufficiency. DTA serves one in nine residents of the Commonwealth with direct economic assistance (cash benefits) and food assistance (SNAP benefits), as well as workforce training opportunities.¹⁵

Doula: According to DONA International, a doula is “a trained professional who provides continuous physical, emotional and informational support to a mother before, during and shortly after childbirth to help her achieve the healthiest, most satisfying experience possible.”¹⁶

Down Syndrome: As defined by the CDC,¹⁷ down syndrome is a condition in which a person has an extra copy of chromosome 21 which changes the development of the brain and body. Also known as Trisomy 21.

Early Intervention: EI is a program for infants and toddlers (birth to 3 years old) who have developmental delays or are at risk of a developmental delay.¹⁸

Early Intervention Parenting Partnerships Program: EIPP is a home visiting program that, through a team approach, engages with and supports families during pregnancy, continuing through the child's first year. The organization's teams, by providing early support, help families assess their needs and get connected to additional resources when appropriate.¹⁹

Elevated Blood Lead Levels: As defined by the CDC,²⁰ EBLs are blood levels equal to or above 5 µg/dl that are harmful to children.

Environmental Justice Communities: Based on U.S. census data, environmental justice communities are those where the annual median income is equal to or less than 65% of the statewide median, or 25% or more of its residents identify as race other than White, or 25% or more of its households have no one over 14 years who speaks English well.²¹

The fourth trimester: The period between birth and 12 weeks postpartum.²²

Head Start: HS is a federal program that offers funding for childcare and early education to low income families for children ages 5 and under.²³

Health Literacy: The degree to which individuals can obtain, process, and comprehend any relevant basic health information when making decisions about one's health and the care needed.²⁴

Health Inequities vs. Health Disparities: Inequities are differences that are unnecessary and avoidable, rooted in social injustices (i.e., structural racism), resulting in some populations being more vulnerable than others with respect to experiencing negative health outcomes. Disparities are differences that are unavoidable (i.e., rooted in genetics), resulting in health outcome differences between populations.²⁵

Healthy Baby/ Healthy Child: The Healthy Baby/Healthy Child Program (HB/HC) provides free services to pregnant women and parenting families in Boston with community-based home visit programming to promote infant survival, positive birth outcomes, oral health, and family unity. The program offers mothers and families with a range of support and health services within the scope of their own culture and language.²⁶

Infant Mortality Rate: As defined by the CDC,²⁷ IMR is the number of infant deaths per 1,000 live births before their first birthday.

Intimate Partner Violence (IPV): The CDC²⁸ defines IPV as "physical violence, sexual violence, stalking, or psychological harm by a current or former partner or spouse. This type of violence can occur among heterosexual or same-sex couples and does not require sexual intimacy."

Low Birthweight: As defined by the CDC,²⁹ this is defined as an infant weighing less than 2,500 grams at birth.

Massachusetts Department of Public Health: MDPH promotes the health and well-being of all residents by ensuring access to high-quality public health and healthcare services, and by focusing on prevention, wellness, and health equity in all people.³⁰

Massachusetts Home Visiting Initiative: MHVI provides evidence-based home visiting services to families across the state through local service agencies. It is part of MIECHV.³¹

Maternal, Infant, and Early Childhood Home Visiting Program: MIECHV gives pregnant women and families, particularly those considered at-risk, necessary resources and skills to raise children who are physically, socially, and emotionally healthy and ready to learn.³²

Medication- assisted treatment: As defined by the CDC,³³ MAT is a treatment that combines the use of medications, such as methadone, buprenorphine, or naltrexone, with counseling and behavioral therapies. It is commonly used to treat OUD.

NARCAN: the brand name of Naloxone, which blocks the effects of opioids such as heroin, fentanyl, oxycodone, hydrocodone, codeine, and methadone in the brain.³⁴

Neonatal Abstinence Syndrome: this indicates a host of problems that infants experience when withdrawing from exposure to narcotics.³⁵

Opioid Use Disorder: As defined in the DSM-5,³⁶ OUD is a problematic pattern of opioid use that causes significant distress and/or impairment. To be diagnosed, at least 2 of the following symptoms must be present: larger dose or longer period of use than intended; inability to stop use despite desire to do so; large amount of time spent in obtaining, using and/or recovering from opioid use; craving for opioids; failure to fulfill major role obligations at work, school, or home as a result of opioid use; continued use despite persistent or recurrent social or interpersonal problems as a result of opioid use; the reduction or cessation of important recreational, social, or occupational activities as a result of opioid use; the use of opioids in physically dangerous situations; continued use despite physical or psychological problems that are caused or made worse by opioids; tolerance; withdrawal.

Personal Care Assistant (PCA) – PCAs provide assistance with daily tasks in the home, such as grooming and hygiene, dressing, and meal preparation, to individuals who have illnesses, disabilities, or are elderly.³⁷

Preterm Birth: As defined by the CDC,³⁸ this is defined as an infant being born prior to 37 weeks of gestation.

Racial Residential Segregation: Defined as the separation of racial groups in urban space.³⁹

Section 8: As defined by the Department of Housing and Urban Development,⁴⁰ the housing choice voucher program is a federal program that assists very low-income families, the elderly, and the disabled in affording decent, safe, and sanitary housing in the private market. Vouchers are administered locally by public housing agencies (PHAs). Participants who are granted a voucher are responsible for choosing their own housing. Participants pay the difference between the actual housing costs and the amount subsidized by the program.

Severe Maternal Morbidity: defined as significant unexpected (short- or long-term) consequences to a women's health resulting from giving birth.⁴¹

Structural Racism: According to the Aspen institute,⁴² structural refers to “a system in which public policies, institutional practices, cultural representations, and other norms work in various, often reinforcing ways to perpetuate racial group inequity. It identifies dimensions of our history and culture

that have allowed privileges associated with “whiteness” and disadvantages associated with “color” to endure and adapt over time.”

Sudden Unexpected Infant Death: According to the CDC,⁴³ this term used to describe the sudden and unexpected death of a baby less than 1 year old in which the cause was not obvious before investigation. These deaths often happen during sleep or in the baby’s sleep area.

The Special Supplemental Nutrition Program for Women, Infants, and Children: According to the USDA,⁴⁴ WIC provides federal grants to states for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk.

Title V Needs Assessment (NA): TIER partnered with MDPH to conduct the Title V Maternal and Child Health (MCH) Block Grant Needs Assessment, which is required of Title V programs in Massachusetts every five years. Title V is administered nationally by the U.S. Department of Health and Human Services agency Health Resource and Services Administration (HRSA), and in Massachusetts by the MDPH. Title V is intended to ensure the health and well-being of families, women, infants, children, youth, and children and youth with special health needs in MA. The NA guides the use of Title V Block Grant funds for infrastructure and programming targeted at the MCH population.⁴⁵

Uber: Uber is a company that facilitates ride sharing for a fee and with the use of privately-owned vehicles.

Visiting Nurse Association of New England: According to their website, VNANE is an integrated network of non-profit, community-based home health care agencies that provides home health care and hospice services in Connecticut, Massachusetts, Rhode Island, and parts of southern New Hampshire. Both core services and specialized services such as Maternal/Child Health Care are offered to make transition from hospital to home successful and to ensure stability of medical care in the home.

YouthBuild: According to the Massachusetts YouthBuild Coalition’s website, the YouthBuild program provides academic and job skill training for 16-24-year-olds by offering one week of classroom time for students to work towards their GED or diploma, followed by a week of helping build and renovate affordable housing in their communities.⁴⁶

51A report: a report of suspected child abuse or neglect

Section 521 of the Code of Massachusetts Regulations (521 CMR): 521 CMR is a compilation of regulations issued by the Architectural Access Board to make public buildings and facilities accessible, safe, and functional for people with disabilities.

References

To access references, use this link: <https://tufts.box.com/v/TuftsMANeedsAssessmentReview>

1. May Institute. Applied Behavioral Analysis. <https://www.mayinstitute.org/autism-aba/aba.html>. Accessed August 6, 2020.
2. The U.S. Department of Health and Human Services. Executive Summary | Physical Activity Guidelines for Americans 2nd Edition. 2018. <https://tufts.box.com/s/c60jlabvfwf11vqor2xqjjuywf4xgyp84>.
3. U.S. Department of Justice. A Guide to Disability Rights Laws. <https://www.ada.gov/cguide.htm>. Published 2020. Accessed August 6, 2020.
4. Centers for Disease Control and Prevention. Defining Childhood Obesity. <https://www.cdc.gov/obesity/childhood/defining.html>. Published 2018. Accessed.
5. Mass.gov. Bureau of Family Health and Nutrition (BFHN). <https://www.mass.gov/orgs/bureau-of-family-health-and-nutrition>. Published 2019. Accessed.
6. Centers for Disease Control and Prevention. Cerebral Palsy (CP). [https://www.cdc.gov/ncbddd/cp/facts.html#:~:text=Cerebral%20palsy%20\(CP\)%20is%20a,problems%20with%20using%20the%20muscles](https://www.cdc.gov/ncbddd/cp/facts.html#:~:text=Cerebral%20palsy%20(CP)%20is%20a,problems%20with%20using%20the%20muscles). Accessed August 12, 2020.
7. McPherson M, Arango P, Fox H, et al. A new definition of children with special health care needs. *Pediatrics*. 1998;102(1):137-139. <https://tufts.box.com/s/7by2qkuk13i2wbun6x1n4m4o6chom3oz>.
8. Israel BA, Schulz AJ, Parker EA, et al. Critical issues in developing and following CBPR principles. *Community-based participatory research for health: Advancing social and health equity*. 2017:31-46.
9. Israel BA, Schulz AJP, E. A. Becker, A. B. Allen, A. J. Guzman, R. Critical issues in developing and following community based participatory research principles. In: M Minkler NW, ed. *Community-Based Participatory Research for Health*. San Francisco, CA: Jossey-Bass; 2003:53-76.
10. Mass.gov. What is a Community Health Worker? <https://www.mass.gov/service-details/what-is-a-community-health-worker>. Published 2019. Accessed.
11. U.S. Department of Housing and Urban Development. Affordable Housing. https://www.hud.gov/program_offices/comm_planning/affordablehousing/. Published 2019. Accessed.
12. HHS.gov, Office of Population Affairs. Cultural Competence. <https://www.hhs.gov/ash/oah/resources-and-training/tpp-and-paf-resources/cultural-competence/index.html>. Accessed August 6, 2020.
13. Mass.gov. Massachusetts Department of Children & Families. <https://www.mass.gov/orgs/massachusetts-department-of-children-families>. Published 2019. Accessed.
14. Mass.gov. Housing and Community Development. <https://www.mass.gov/orgs/housing-and-community-development>. Accessed August 6, 2020.
15. Mass.gov. Department of Transitional Assistance. <https://www.mass.gov/orgs/department-of-transitional-assistance>. Published 2019. Accessed.
16. DONA International. What is a Doula? <https://www.dona.org/what-is-a-doula/>. Accessed August 6, 2020.
17. Centers for Disease Control and Prevention. Down Syndrome. <https://www.cdc.gov/ncbddd/birthdefects/downsyndrome.html>. Accessed August 6, 2020.

18. Mass.gov. Early Intervention Division (EI). <https://www.mass.gov/orgs/early-intervention-division>. Published 2019. Accessed.
19. Mass.gov. Early Intervention Parenting Partnerships (EIPP). <https://www.mass.gov/early-intervention-parenting-partnerships-eipp>. Accessed August 9, 2020.
20. Centers for Disease Control and Prevention. Childhood Lead Poisoning Prevention | Blood Lead Levels in Children. <https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm>. Published 2019. Accessed.
21. Mass.gov. Environmental Justice Communities in Massachusetts. <https://www.mass.gov/info-details/environmental-justice-communities-in-massachusetts>. Published 2019. Accessed.
22. The American College of Obstetricians and Gynecologists. Optimizing Postpartum Care. <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2018/05/optimizing-postpartum-care>. Accessed August 6, 2020.
23. Mass.gov. Head Start/Early Head Start. <https://www.mass.gov/guides/head-start-early-head-start>. Accessed August 6, 2020.
24. City of Worcester Division of Public Health, Fallon Health, UMass Memorial Medical Center. Greater Worcester Community Health Assessment | 2018 CHA. 2018. <https://tufts.box.com/s/qfue515sydi51txilqzdpsvs3cbbzwx1>.
25. Boston Public Health Commission. Health Disparities vs. Health Inequities. . <https://www.bphc.org/whatwedo/health-equity-social-justice/what-is-health-equity/Pages/Health-Disparities-vs.-Health-Inequities.aspx>. Published 2019. Accessed.
26. Coming Home Directory. Boston Public Health Commission: Healthy Baby/Healthy Child. <https://www.cominghomedirectory.org/coming-home-post/boston-public-health-commission-healthy-babyhealthy-child/#:~:text=The%20Healthy%20Baby%2FHealthy%20Child,five%20who%20reside%20in%20Boston>. Accessed August 6, 2020.
27. Centers for Disease Control and Prevention. Infant Mortality. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm>. Published 2019. Accessed.
28. Centers for Disease Control and Prevention. Violence Prevention | Intimate Partner Violence. <https://www.cdc.gov/violenceprevention/intimatepartnerviolence/index.html>. Accessed August 6, 2020.
29. Centers for Disease Control and Prevention. Birthweight and Gestation. <https://www.cdc.gov/nchs/fastats/birthweight.htm>. Published 2019. Accessed.
30. Mass.gov. Department of Public Health. <https://www.mass.gov/orgs/department-of-public-health>. Published 2019. Accessed.
31. Mass.gov. Massachusetts Home Visiting Initiative (MHVI). <https://www.mass.gov/massachusetts-home-visiting-initiative-mhvi>. Published 2019. Accessed.
32. Health Resources & Services Administration | Maternal & Child Health. Home Visiting. <https://mchb.hrsa.gov/maternal-child-health-initiatives/home-visiting-overview>. Published 2019. Accessed.
33. Centers for Disease Control and Prevention. CDC's Response to the Opioid Overdose Epidemic | Medication-Assisted Treatment for Opioid Use Disorder Study (MAT Study). <https://www.cdc.gov/opioids/Medication-Assisted-Treatment-Opioid-Use-Disorder-Study.html>. Accessed August 6, 2020.
34. Mass.gov. Overdose Prevention and Naloxone Access. <https://www.mass.gov/overdose-prevention-and-naloxone-access>. Published 2019. Accessed.

35. Stanford Children's Health. Neonatal Absence Syndrome. <https://www.stanfordchildrens.org/en/topic/default?id=neonatal-abstinence-syndrome-90-P02387>. Published 2019. Accessed.
36. Centers for Disease Control and Prevention. Module 5: Assessing and Addressing Opioid Use Disorder (OUD). <https://www.cdc.gov/drugoverdose/training/oud/accessible/index.html>. Accessed August 6, 2020.
37. U.S. News and World Report. Best Jobs | Personal Care Aide | Overview. <https://money.usnews.com/careers/best-jobs/personal-care-aide>. Accessed August 6, 2020.
38. Centers for Disease Control and Prevention. Preterm Birth. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm>. Published 2019. Accessed.
39. Boustan LP. National Bureau of Economic Research Working Paper Series | Racial Residential Segregation in American Cities. 2013. <https://tufts.box.com/s/x4mfti7zy1yhmp5xwbod4t7ipnsqv8fh>.
40. U.S. Department of Housing and Urban Development. Housing Choice Vouchers Fact Sheet. https://www.hud.gov/topics/housing_choice_voucher_program_section_8. Accessed August 6, 2020.
41. Kilpatrick SK, Ecker JL, Obstetricians ACo, Gynecologists. Severe maternal morbidity: screening and review. *American journal of obstetrics and gynecology*. 2016;215(3):B17-B22. <https://tufts.box.com/s/r994mh6s4jn1dylcuqu3a713f4n16sp>.
42. Lawrence K, Sutton S, Kubisch A, Susi G, &, Fullbright-Anderson K. Structural Racism and Community Building. 2004. <https://tufts.box.com/s/nge7320mtbdwbiqzcn8e3juc7x1nlgoh>.
43. Centers for Disease Control and Prevention. About SUID and SIDS. https://www.cdc.gov/sids/about/index.htm?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fsids%2FAboutSUIDandSIDS.htm. Published 2018. Accessed.
44. U.S. Department of Agriculture | Food and Nutrition Service. Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). <https://www.fns.usda.gov/wic>. Published 2019. Accessed.
45. Mass.gov. Title V Maternal and Child Health Block Grant: An Overview. <https://www.mass.gov/service-details/title-v-maternal-and-child-health-block-grant-an-overview>. Accessed August 6, 2020.
46. Massachusetts YouthBuild Coalition. Our Mission. <http://www.massyouthbuild.org/mission.html>. Accessed August 6, 2020.

Appendix II.1—State Needs Assessment Review

NEEDS ASSESSMENT REVIEW ACROSS MASSACHUSETTS 2015–2019

Prepared for the
Massachusetts Department of Public Health



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Key Findings

This report summarizes and synthesizes publicly available data, focus group findings, key informant interviews, and surveys from 26 community and government assessments conducted throughout the state between 2015 and 2019. The purpose of this review is to describe: (a) the population in MA, with a focus on the different characteristics and experiences (e.g., race and ethnicity, socioeconomic status) that are often linked to health and health inequities; (b) the health and well-being of MA residents across various indicators, with a focus on mothers and children; (c) the health-related needs and barriers to good health experienced by MA residents; and (d) some of the key strengths and resources that promote favorable health. Wherever relevant, we describe racial and ethnic, regional, and socioeconomic variation in findings, as any observed differences along these characteristics may represent health inequities.

- While Massachusetts (MA) leads the U.S. in K–12 education, health insurance coverage for children, and overall child well-being, residents also experience significant inequities by race and ethnicity, socioeconomic status, and region in health and related outcomes.
- MA has a higher proportion of White non-Hispanic residents relative to the U.S., but also has the eighth highest percentage of immigrant or refugee residents in the U.S. Boston, Holyoke, Lawrence, Lowell, New Bedford, Worcester, and Shrewsbury host large proportions of non-White and foreign-born residents.
- MA has a strong economic and educational standing in the U.S., typically topping national charts and indices, but these figures belie substantial racial and ethnic and regional variation in the state. For example, some MA communities have large numbers of unemployed adults, or adults working in seasonal employment or low-wage jobs with little opportunity for advancement. While more than 40% of MA adults have a college degree, Black non-Hispanic and Hispanic residents are about two times less likely to earn a college degree relative to White non-Hispanic and Asian non-Hispanic residents.
- Residents of MA encounter several community-level barriers to their good health and well-being, notably access to and affordability of high-quality housing. The Commonwealth has high rates of homelessness, including homeless families and youth, with LGBTQ youth experiencing disproportionately high rates of homelessness.
- Children's exposure to community violence, as well as the prevalence of maltreatment, domestic violence, and sexual violence all affect families' perceptions of safety and the likelihood of children and families experiencing trauma and mental health issues. Southeastern and Western MA had the highest child maltreatment rates in the state, more than three times higher than the state rate. Domestic violence accounted for 14% of all homicides in the state.
- Structural racism in MA has resulted in significant racial and ethnic health inequities in the Commonwealth, with Black and Latino residents disproportionately experiencing a range of chronic health conditions and diseases. Racism and discrimination also account for trauma and stress among people of color, Native Americans, Muslims, the LGBTQ population, and undocumented individuals.
- Despite overall high health insurance coverage in MA, residents encountered several barriers to receiving health care including: (a) coverage limitations; (b) health care costs; (c) health literacy

(i.e., complexity accessing health insurance and care, understanding health care information); (d) provider and service shortages; and (e) transportation. Barriers were particularly salient for families of children and youth with special health care needs (CYSHCN), as well as for immigrants and undocumented individuals.

- The health of mothers during the pregnancy and the postpartum period is critical to their own and their children's overall health and well-being. Most women in MA received adequate prenatal care, with Black non-Hispanic and Hispanic women least likely to report adequate prenatal care. Severe maternal morbidity and postpartum depression are important postpartum health issues affecting new mothers, with highest rates observed among Black non-Hispanic women. New mothers are eager for more postpartum social and emotional support to cope with the challenges of having a new baby.
- More women in MA breastfeed than in the U.S., but socioeconomic disparities are apparent, with women on public health insurance (MassHealth) less likely to report breastfeeding at the 8-week postpartum follow-up than women on private insurance.
- Smoking and substance use during pregnancy was an issue across the state. Notably, smoking rates for White non-Hispanic pregnant women were particularly high. The recent legalization of recreational marijuana has led to concerns (and lack of guidance) around women using marijuana prenatally and postnatally, including when breastfeeding. And, opioid use remains a significant issue across the Commonwealth, with increasing rates of pregnant women enrolled in treatment programs and using medication-assisted treatment (MAT).
- Black non-Hispanic infants were most likely to experience preterm birth, low birthweight, sudden unexpected infant death (SUID), and infant mortality in MA. Particular communities in MA had higher prevalence of these unfavorable conditions, including Central MA (preterm, low birthweight, infant mortality), Western MA (preterm, infant mortality), Southeast MA (preterm, low birthweight), Chelsea (infant mortality), Lynn (infant mortality), and Northeast MA (infant mortality).
- Children growing up in the Commonwealth experience some of the highest asthma and obesity rates in the U.S.; the prevalence is particularly high for Black non-Hispanic and Hispanic children and youth. While overall adherence to recommended annual well-child visits was high, Black non-Hispanic youth in MA were less likely to receive an annual medical check-up.
- The Commonwealth has witnessed an increase in referrals to early intervention (EI) services, which may be due to the recent surge of infants diagnosed with neonatal abstinence syndrome (NAS). Despite these increases in EI support, however, many MA residents perceived barriers to school readiness and developmental services for their young children.
- Child care is expensive and unaffordable for most families across the Commonwealth, with MA residents reporting the need for accessible high-quality child care more generally, as well as more specifically during the time families receive health care services.
- In comparison to MA students overall, children who are English learners struggle in school, have lower proficiency in English and Math (based on achievement test scores), and have a higher prevalence of high school dropout.
- Despite low high school dropout rates in MA, some communities (Springfield, Chelsea, Holyoke) had dropout rates more than three times the state average, with higher rates among students who were Hispanic or Latino, Black/African American, and American Indian or Alaska Native, classified as having a disability, and considered to be economically disadvantaged.

- Focusing on youth mental health, youth who identify as LGB reported fewer home and school social supports, higher rates of bullying at school, more depressive symptoms, and suicide attempts.
- Nearly a fifth of MA middle schoolers and more than a quarter of high schoolers reported symptoms of depression, with rates being higher among females and Black non-Hispanic and Hispanic students. A similar pattern was found for suicide attempts. Many needs assessments noted the critical need of improved child and youth mental health services.
- Most youth in MA are aware of the potential harms of binge drinking and drugs, with the exception of marijuana, which is largely not perceived as a harmful substance. About a quarter of high schoolers in MA used marijuana in the past month, with highest rates among males, White non-Hispanic and Hispanic students, and LGB youth. About 10% of youth in MA used prescription drugs, with higher rates observed among females and LGB students. Focus groups participants across MA articulated the need for improved substance use prevention education and treatment services for youth.
- About a quarter of youth used tobacco, and a fifth reported vaping in past month. Smoking rates were higher among males, White non-Hispanic students, and LGB youth.
- Although the Commonwealth's teenage birth rates have significantly decreased across the past decade, rates for Hispanic teens were 3.5 times higher than the state average. Hispanic high schoolers were also more likely to engage in risky sexual behavior, eschewing condoms and birth control.
- Focusing on strengths and resources, MA residents perceived the MA health care system to be high-quality. Many residents also felt a strong sense of community and saw strengths in the state's cultural diversity. These strengths—and others gleaned from this review—need to be harnessed to address the critical needs in the state.

Section I. Introduction

Massachusetts (MA) leads the U.S. in K–12 education, health insurance coverage for children, and overall child well-being.¹ Despite this, MA has high income inequality and housing costs,² and is among the top ten states for opioid overdose deaths,³ suggesting substantial variation in health outcomes across the state. The Massachusetts Department of Public Health (MDPH) is committed to promoting optimal health outcomes to all MA residents regardless of race, ethnicity, socioeconomic status (SES), geographic location, or physical ability.² Aligned with this commitment, two of the Commonwealth’s key target populations are mothers and children. Housed within the Bureau of Family Health and Nutrition (BFHN), MA’s Title V statewide program provides comprehensive, community-based, and family centered services to over 1 million women and children, including children and youth with special health care needs (CYSHCN) per year.⁴ Also housed within BFHN, the Massachusetts Home Visiting Initiative (MHVI), part of the national Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV), is a statewide program that provides evidence-based home visiting services to families in 17 communities throughout the Commonwealth.⁵ Aligned with MDPH’s framework on the social determinants of health,² the purpose of this needs assessment review is to understand:

- a) The existing health-related needs and barriers experienced by MA residents,
- b) How racial and ethnic, regional, and socioeconomic disparities are differentially linked to health-related outcomes for the population generally, and for mothers and children (including CYSHCN), specifically, and
- c) The strengths and resources of communities and health care across the Commonwealth.

This review summarizes and synthesizes publicly available data, focus group findings, key informant interviews, and surveys from 26 community and government assessments conducted throughout the state between 2015 and 2019.

Section II. Method

We conducted a Google search using keywords and Boolean operators for existing needs assessments from community and government agencies, coalitions, and organizations that serve families and children across the Commonwealth. We searched for assessments that were conducted within the past 5 years to focus this summary on the most recent information available. Initially, we found and screened 38 documents, keeping those that were most relevant to our target population, women and children (including CYSHCN). This resulted in extracting and summarizing information primarily from 26 documents.

Section III. Findings

In this section, we first present demographic characteristics for MA residents, followed by an overview of socioeconomic and community factors that are typically related to health. Following this, we review

the most commonly reported barriers to health care experienced by MA residents. Next, we explore findings on health indicators for mothers, infants, and children and youth, including CYSHCN, that emerged as crucial for their overall well-being. We then summarize findings on other determinants of health, including child and youth education, youth substance use, and youth sexual behavior and birth rates. Throughout each of these sections, we highlight disparities by race and ethnicity, as well as by region, and, when relevant, by SES and insurance type. In Section 4, we summarize findings on the strengths and resources of communities and health care across the Commonwealth. Finally, in Section 5, we provide recommendations for topical areas of focus for the Title V and MIECHV needs assessments currently underway. According to common convention, when highlighting differences in health outcomes between populations in this review, we use the term “inequity” to reflect differences that are unnecessary and avoidable, implying unfairness or injustice (e.g., higher rates of infant mortality among Black vs. White babies), and “disparity” to reflect more general differences that may be unavoidable (e.g., male babies born at heavier weight than female babies). See Appendix B for a definition of these two terms. Terminology around race, ethnicity, gender, sex, and sexuality is presented in the same language as it was in the original assessments throughout the review.

III.A. Demographic Characteristics of MA

III.A.1. Population and Density

MA is the third most densely populated U.S. state, and with 6.8 million residents in 2017, it ranks fifteenth in population size.² Slightly more than half (56%) of MA’s cities and towns are classified as rural, comprising around 10% of the Commonwealth’s population.² Rural communities tend to experience greater economic distress, with fewer jobs, lower wages, and limited infrastructure affecting residents’ access to health and social services and means of economic advancement.² The population in MA is aging, with over a third of residents older than 45 years.² From 2013 to 2017, 52% of MA residents older than 18 years were female, and children under the age of 18 years accounted for 20% of the MA population⁶. Data from the 2009-2010 National Survey on Children with Special Health Care needs indicated that 18% of MA children had a special health care need.² MA’s population includes a higher percentage of White non-Hispanic residents than the U.S. overall (73% vs. 61%, respectively), yet the growth rate of non-White populations in MA exceeds the nation’s (4% increase between 2010 and 2016 vs. 2.6%, respectively);² these growth rates were largest in Nantucket, Essex, and Norfolk counties.² In addition, MA has the eighth highest percentage of immigrant or refugee residents in the U.S., the majority of whom come from near East and South Asia, Africa, Latin America, and the Caribbean.^{2,4} Relatedly, from 2011 to 2015, slightly more MA residents spoke a language other than English at home compared to U.S. residents overall (22.5% and 21%, respectively).²

III.A.2. Racial and Ethnic Diversity

Though most MA residents identify as White non-Hispanic (73%),² pockets of racial and ethnic diversity exist. For example, Greater Lowell and Greater Lawrence in Northeast MA stand out as diverse communities: from 2010 to 2014, 21% of Lowell’s population was Asian, 18% was Hispanic, and 7% was Black,⁷ and in 2014, 76% of Lawrence’s population was Hispanic.⁸ Lowell is considered a gateway city for immigrants, with foreign-born residents making up about 25.2% of the population,⁷ and similarly, in Central MA, 21.5% of Worcester’s and 20.6% of Shrewsbury residents from 2012 to 2016 were foreign-

born.⁹ Boston also stands out as diverse; in 2015, 22.9% of residents were Black and 19.5% were Latino of any race.¹⁰ Likewise, in Southeast MA, New Bedford’s resident population was 17.5% Hispanic or Latino from 2013 to 2017,¹¹ and Holyoke’s resident population in Western MA was 47%.¹²

III.A.3. Key Findings

- *Adult females comprise a little more than half of the Commonwealth’s population, with children under the age of 18 comprising 20% of the population; of these children, nearly 20% have a special health care need.*
- *Relative to the U.S., a higher proportion of Massachusetts’ residents identify as White non-Hispanic. Yet, MA has the eighth highest percentage of immigrant or refugee residents in the U.S. Notably, the communities of Boston, Holyoke, Lawrence, Lowell, New Bedford, Worcester, and Shrewsbury host large proportions of non-White and foreign-born residents.*

III.B. Socioeconomic Factors Linked to Health

III.B.1. Income

Between 2011-2015, MA’s median household income (HHI) was \$68,563, nearly \$15,000 higher than the national median (\$53,889).² While most racial and ethnic groups in MA had higher median HHIs than the national median, this was not true for Hispanic residents; the median HHI for MA Hispanics was 16% lower than the median HHI for U.S. Hispanics.² Within MA, White non-Hispanic residents had a median HHI 1.7 times higher than Black non-Hispanic residents and 2.0 times more than Hispanic and Native American residents.² Regional differences in HHI existed across the state: Barnstable County,¹³ Southeast MA (notably Fall River and New Bedford),¹⁴ Western MA (i.e., Berkshire and Hampden Counties),^{12,15} as well as Lawrence,⁸ Worcester,⁹ and some Boston¹⁶ neighborhoods all had lower median HHI’s relative to the statewide median. And, these regional economic inequities were starkest in communities of color. For example, in the Boston neighborhoods of Roxbury and Mattapan, among the city’s most racially and ethnically diverse, median HHIs were significantly lower than the city’s overall income of \$55,448 at \$25,254 and \$42,206, respectively.²

III.B.2. Poverty

Through the focus groups, key informant interviews, and surveys it was evident that experiencing poverty was a root of stress for many communities and the residents therein.² Although only 14.9% of MA residents overall had incomes that were at or below 125% of the federal poverty level between 2011 and 2015,² inequities by race and ethnicity, as well as region were present; from 2011-2015, 29.3% of Hispanic, 22% of Black non-Hispanic, 22.9% of Native American, and 22.4% of Native Hawaiian or other Pacific Islander MA residents reported incomes below the federal poverty level relative to 14.6% of Asian non-Hispanic and 7.8% of White non-Hispanic residents.² Moreover, a higher prevalence of residents in some communities were living below the federal poverty level than the state overall, including residents of Worcester (22.1%),⁹ Lawrence (28%),⁸ Fall River (22%),¹⁴ New Bedford (23.5%),¹⁴ and Boston (20%).¹⁰ Focus group participants in Boston echoed these findings, expressing concern about the wealth disparity among residents in their city.¹⁶ Household composition is frequently associated with poverty: poverty rates among female-headed families were higher than the state’s average in Southeast

MA (i.e., New Bedford [41%] & Fall River [38.6%]),¹⁷ Boston (34%),¹⁰ and Northeast MA (i.e., Lowell [31.7%]).¹⁸

III.B.3. Unemployment

Unemployment is relatively low across the state (2.9% in 2018).¹⁴ Despite strong labor force participation, many residents reported challenges related to working at low-paying jobs.² Unemployment rates varied across regions, with pockets of high unemployment. Between 2011 and 2014, Lawrence’s unemployment rate rose from 9% to 14%.^{7,8} In 2015, Western MA (i.e., Hampden and Berkshire Counties) had unemployment rates of around 8% and 6%, respectively, Central MA had a rate of 6.2% in 2015,⁵ and Southeast MA’s unemployment rate was 5.4% in 2017.¹⁴ Unemployment rates on Cape Cod typically fluctuate due to its seasonal economy; Barnstable County’s 2015 unemployment rates was 9% in January vs. 5% in July (i.e., during peak tourism season).¹³ While Boston’s 2015 unemployment rates were low overall,¹⁹ unemployment rates were higher for Black and Latino residents compared to White residents (11% and 9% vs. 4%, respectively).¹⁰

III.B.4. Educational attainment

Educational attainment is a key indicator of families’ SES. MA has the second highest educational attainment in the U.S., with 40.5% of MA residents aged 25 years and older attaining a bachelor’s degree or higher between 2011 and 2015.⁵ This impressive aggregate statistic masks wide racial and ethnic inequities in educational attainment, with college graduation rates (bachelor’s degree or higher) among adults as high as 57.5% for Asian non-Hispanics and 43.1% for White non-Hispanics, relative to less than a quarter (23.4%) of Black non-Hispanic and less than a fifth (17.5%) of Hispanic adults earning college degrees.² Across MA from 2009 to 2013, just 10.6% of MA residents older than 25 did not graduate from high school, with much higher rates observed among residents from Chelsea (36.3%), Lawrence (33.4%), Fall River (29.7%) and New Bedford (29.5%).⁵

III.B.5. Key Findings

- *The median HHI among all MA residents was higher than the national median. White non-Hispanic MA residents had higher median HHIs than both Black non-Hispanic and Hispanic MA residents. Regional variation in income also existed, with communities of color reporting the lowest incomes.*
- *About 15% of MA residents experienced poverty. White non-Hispanic and Asian non-Hispanic MA residents were less likely than Black non-Hispanic, Hispanic, Native American, and Native Hawaiian or other Pacific Islander MA residents to experience poverty. Residents of Boston, Fall River, Lawrence, New Bedford, and Worcester experienced the highest poverty rates in MA.*
- *Nearly 3% of MA residents experienced unemployment. High unemployment rates were observed in Central MA, Lawrence, Western MA, and Southeast MA with the nature of Cape Cod’s seasonal economy creating fluctuating unemployment rates in winter vs. summer.*
- *About 41% of MA residents ≥ 25 years have at least a bachelor’s degree. Asian non-Hispanic and White non-Hispanic MA residents had higher college graduation rates than Black non-Hispanic and Hispanic MA residents. About 11% of MA residents > 25 did not graduate high school, with higher rates (about a third of residents over 25 years) observed in Chelsea, Fall River, New Bedford, and Lawrence.*

III.C. Community Factors Linked to Health

III.C.1. Housing

Unaffordable Housing

Unaffordable housing was found to be a prevalent issue across MA, with many residents being cost burdened (i.e., paying more than 30% of income on housing costs),²⁰ experiencing rent increases without income gains, and having few opportunities to become homeowners. In 2013, 38% of homeowners and 50% of renters in MA were cost burdened,⁴ with a notably high prevalence in Barnstable County (48% of renters and 38% of homeowners),¹³ Lowell (46.1% of residents),¹⁸ Springfield (nearly 50% of residents),²¹ Worcester (53.9% of residents),⁹ and Boston (41% of residents).¹⁶

Across multiple regions, MA residents experienced increases in rent without concomitant increases in income. Focus group participants from Western MA (i.e., Berkshire County) talked about the stress of not being able to find affordable housing,²² with focus group participants in Greater Lowell pointing out that rent prices had risen,¹⁸ a phenomenon apparent in Boston as well, where income gains have not kept up with rising rent and housing costs.¹⁰ In fact, the median rent cost in MA increased from \$1,006 between 2006 and 2010 to \$1,102 between 2011 and 2015, making it 17.1% higher than the national average (\$928).² According to the MIECHV 2016 needs assessment,¹⁹ MA ranks among the 10 states with the largest gap between average wages and rental costs for a two-bedroom apartment in a fair market. In some MA regions, increases in rent were attributed to various factors, including gentrification in Boston²³ and more affluent residents purchasing second homes in Western MA (i.e., southern Berkshire County).¹⁵ Rising rent and housing costs have led some families to live in sub-standard housing,¹⁸ with poor living conditions serving as a source of stress for families with young children.²²

Poor Quality Housing

MA ranks second in the nation for age of its housing stock,⁴ with 51.1% of houses constructed 59 plus years ago and only 8.5% constructed in the past 19 years.² Older housing was often associated with quality issues, both proximal (e.g., lead paint) and distal (e.g., proximity to power plant). Focus group participants in Boston,²⁴ Central MA,²⁵ and Western MA (i.e., Hampden County)²² expressed concern over poor housing conditions and the presence of lead and/or asbestos, with upwards of 80% of older homes in MA potentially containing lead paint.^{2,4} Relatedly, key informant interviewees in Fall River voiced concern over the fact that maintenance was limited on older houses, especially for renters,¹⁴ resulting in a low likelihood of lead and asbestos removal. Exposure to lead, mold, pest, insects, and asbestos, among other harmful substances is a major cause of respiratory illnesses and other health problems.² Moreover, several communities had a high prevalence of environmental justice (EJ) communities,^a including Fall River and New Bedford,¹⁷ as well as Holyoke and Springfield,²² with the latter having particularly poor air quality. Across MA, communities with concentrated populations of Black non-Hispanic, Asian non-Hispanic, Hispanic, and non-English speaking residents, as well as families

^aBased on U.S. census data, environmental justice communities are those where the annual median income is equal to or less than 65% of the statewide median, or 25% or more of its residents identify as race other than White, or 25% or more of its households have no one over 14 years who speaks English well.

living in poverty, often lived closer to contaminated and abandoned sites, regulated facilities, and sources of pollution.²

Homelessness

Related to both unaffordable and lower-quality housing, among other factors, experiencing homelessness was an issue for residents across the Commonwealth. Based on data from the Department of Housing and Urban Development (HUD), in 2015, around 21,000 residents of MA experienced homelessness, with youth, elderly, and LGBTQ residents, as well as those experiencing mental health issues, being especially vulnerable.² From 2012 to 2013, MA experienced the fifth highest increase in homelessness across the nation.⁴ For example, the count of people who experienced homelessness in Boston increased by 9% between 2011 and 2013, rising from 6,647 individuals in 2011 to 7,248 individuals in 2013.¹⁶

Particularly concerning was the increase in families experiencing homelessness from 2013 to 2015, with Boston experiencing a 25% increase²⁴ and in Hampden County, a 35% increase.²² According to the MA Head Start 2018-2019 Needs Assessment,²⁶ about a quarter of Head Start programs reported that homelessness increased among the families they serve. Across the state, Head Start programs supported homeless families by working with community homeless liaisons, addressing trauma through mental health referrals, and helping families find temporary housing; however, programs struggled with successfully finding families affordable permanent housing.²⁶ Focus group participants confirmed these findings, highlighting the need for more beds in homeless shelters,¹⁵ as families with children were forced to live in overcrowded hotels.²⁵

Focus group participants also perceived homelessness to be a severe issue among youth.^{18,24} These focus group findings are confirmed by the quantitative data: the number of public-school students in MA who experienced homelessness increased by 62% from 2009-2010 to 2015-2016,² and a third of residents who experienced homelessness in Boston in 2016,¹⁰ as well as in Central MA in 2014,²⁵ were under the age of 18. It is crucial to note that LGBT high schoolers experienced homelessness at higher rates than their peers who identified as heterosexual (1 in 4 vs. < 1 in 20), as these youth often experienced strained family relationships, which may be linked to youth running away or being kicked out of their homes.²⁷ Moreover, focus group participants reported the need for easier access to health care for individuals experiencing homelessness^{7,13} given links between homelessness and trauma, stress,⁵ and untreated mental health and substance use.¹⁴ Together, these findings indicate a growing need to address housing instability throughout the state, focusing on the unique needs of families and children experiencing homelessness.

III.C.2. Access to Healthy Food

Many MA communities with large populations of residents who were living in poverty or experiencing low-income were deemed food deserts, which refers to areas with limited access to affordable and nutritious food. Convenience stores and fast food chains typically outnumber supermarkets and health food shops in food deserts. Increased access to healthy food emerged as a need across the Commonwealth, notably in Boston,² Northeast MA,^{2,18} Central MA,⁹ Western MA,^{12,15,28,29} Southeast MA,¹⁷ and Barnstable County.¹³ Focus group participants mentioned that, even if available, the high cost of nutritious food was a barrier to eating healthy,^{18,23} and that marketing and education about nutrition and healthy eating was needed.⁴

III.C.3. Violence

Child Maltreatment

Child maltreatment was also found to be a prevalent issue across MA. In 2013, the state rate of substantiated maltreatment cases was 19.2 per 1,000 children between the ages of 0 and 9; 94% of these cases were for neglect, 10% for physical abuse, and 2% for sexual abuse.⁵ The rates in Southeast MA (56.4 substantiated cases per 1,000 children) and Western MA (63 per 1,000 in Berkshire County and 57 per 1,000 in Hampden County) were the highest in the state.¹⁹ Key informants from Southeast MA corroborated these high rates, identifying child abuse and neglect as an increasingly urgent need.¹⁴

Domestic Violence

Domestic violence, including domestic homicide, emerged as an issue across MA. In the fiscal year of 2015, nearly 30,000 protective orders for domestic abuse were filed, and over a 10-year review period, domestic violence accounted for 14% of all homicides in the state, with rates being 4 times higher for Black non-Hispanic residents, 3 times higher for Hispanic residents, and 2 times higher for foreign-born residents than for White non-Hispanic residents.² Community assessments echoed these findings, with domestic violence consistently emerging as a problem across multiple regions, including Central MA,^{9,25} Western MA,²² Northeast MA,¹⁸ and Boston.²⁴ Focus group participants mentioned that in rural regions, domestic violence victims were less likely to report incidents given a perceived lack of anonymity.² And, in Western MA, the demand for domestic violence services outpaced the existing resources.²

Sexual Violence

Sexual violence is a problem in the Commonwealth. In 2017, 6.8% of MA high schoolers reported being physically forced to have sexual intercourse in their lifetimes, with a higher prevalence among females (9.2%),³⁰ students who identified as LGB (12.9%),³¹ and youth with special health care needs (18%),² in comparison to males (4.3%), students who identified as heterosexual (4.5%), and youth without special health care needs (6%). Moreover, a higher prevalence of rape occurred among Black non-Hispanic (9.5%), Hispanic (11%), and other/multiracial non-Hispanic (12.6%) high schoolers in comparison to White non-Hispanic high schoolers (4.9%).³⁰ Among adults, sexual violence was more prevalent for women than it was for men across the Commonwealth (17% vs. 6%, respectively).² Several rural towns (e.g., Athol, Florida, Monroe) reported double the rate of rapes (67 vs. 33 per 100,000 population) and had more than 3 times the number of registered sex offenders compared to state averages.²

Community Violence

MA children's and youth's exposure to community violence impacts their mental and physical health.² Boston youth focus group participants spoke about the high levels of trauma, post-traumatic stress, anxiety, and depression that they experienced as a result of either experiencing violence themselves or losing a loved one to violence.²⁴ Moreover, community violence limited children's and youth's outdoor physical play and exercise.⁸ Boston youth cited community violence as a top health issue,²⁴ reporting that they did not feel safe in their communities.¹⁶ Residents who lived in communities where large proportions of residents experienced low-income or identified as other than White non-Hispanic were more likely to be exposed to violence² or perceive their neighborhoods as unsafe. For example, in Boston, most adult Black and Latino residents (70% and 69%, respectively) perceived their neighborhoods to be unsafe, as opposed to only 5% of White residents.¹⁰ Reducing children's and

youth’s exposure to violence and promoting safe communities is an important public health issue for MA.

III.C.4. Racism

Structural and systemic racism focuses on the wider policies, practices, and norms that perpetuate racial and ethnic inequities. Structural racism indirectly impacts the health outcomes of people of color through disproportionate experiences of poverty (see Section 3.2) and residential segregation. Racial residential segregation, defined as the separation of racial groups in urban space,³² emerged as an issue in the more racially and ethnically diverse regions of MA, including Boston (e.g., Boston, Chelsea, and Everett), Northeast MA (e.g., Greater Lowell and Greater Lawrence), Central MA (i.e., Worcester), and Western MA (e.g., Holyoke and Springfield). In 2010, Boston ranked in the top 20th percentile of highly segregated U.S. metropolitan areas,¹⁰ and several counties in Western MA (i.e., Hampden, Hampshire, and Franklin) were reported to be among the most segregated for both Black or African American and Latino residents.²⁸ As a result of limited resources in these areas, racial residential segregation was found to be determinant of poor health.²²

Structural racism has been cited as a major cause of racial and ethnic health inequities, evidence of which is seen across the Commonwealth. For example, Black and Latino residents in Hampden County (Western MA) experienced rates of heart disease and stroke that were 50-60% higher and diabetes hospitalization rates that were more than three times higher than White residents’ rates in 2012; rates of mental health disorder were 65% higher among Latino than White residents.²² Similar trends were found in Central MA^{9,25} and Boston.^{10,16} Kidney disease,⁹ hypertension,⁹ obesity,¹⁰ and cancer-related mortality⁹ were among the other health conditions where racial and ethnic inequities were evident.

For many individuals, trauma due to experiences of interpersonal discrimination and oppression attributed to racism was common. Youth and adult focus group participants across MA shared how racism impacted multiple areas of their lives including the workplace, social interactions, school, and medical services, often fueling “*sadness, stress, and anger*”.⁴ In Greater Worcester, people of color, Muslims, the LGBTQ population, and undocumented individuals experienced extreme racism and discrimination, including, for undocumented residents, fear of deportation.⁹ In North Central MA, focus group participants reported that immigrants experienced discrimination and were not treated with respect because of their limited English skills.²⁵ These findings resonate with a growing concern across the Commonwealth regarding recent immigration policies, including deportation and travel bans, resulting in stress among immigrant families and children.³³ Focus group participants of the Nipmuc Tribe expressed how the trauma of long-term oppression has negatively impacted their lives. Specifically, one participant shared “*Nipmuc people have a story of indigenous people under occupation. For us, it’s been centuries since we’ve been the first contact people. Mental health issues, self-esteem issues, and alcohol issues all stem from this trauma and legacy.*”² Across MA, key informant interviewees reported the need to expand education on racism and oppression and their links to trauma to better enable services to deliver trauma-informed care to individuals affected by these powerful forces.²

III.C.5. Key Findings

- *Unaffordable housing is an issue across the Commonwealth. Residents of Barnstable County, Boston, Lowell, Springfield, and Worcester were highly cost burdened. Focus group participants*

described the challenges finding affordable housing when rent prices rise at a higher rate than do incomes.

- *Higher quality housing is needed across the Commonwealth. Focus group participants expressed concern over poor housing conditions, including the presence of lead and/or asbestos. Communities with concentrated populations of Black non-Hispanic, Asian non-Hispanic, and Hispanic residents, as well as families living in poverty, were often closer to contaminated and abandoned sites, regulated facilities, and sources of pollution.*
- *Homelessness is an issue across the Commonwealth. Some regions experienced recent increases in homelessness, including Boston and Greater Lowell, with Boston and Hampden County experiencing increases in family homelessness. Youth homelessness was a severe issue across MA, with LGBT youth experiencing it at disproportionately higher rates than their peers who identified as heterosexual.*
- *Increased access to healthy food is needed across the Commonwealth. Several communities within Barnstable County, Boston, Central MA, Northeast MA, Southeast MA, and Western MA were deemed food deserts, lacking access to affordable and nutritious food.*
- *Child maltreatment is prevalent across the Commonwealth, with the Southeast and Western MA regions having the highest child maltreatment rates in the state.*
- *Sexual violence among youth and women is prevalent across the Commonwealth. Among high school youth, females, those who identified as LGB, and those with special health care needs were more likely to have experienced forced sexual encounters than their counterparts. In comparison to MA overall, rural towns had more reported rapes at crisis centers and registered sex offenders.*
- *Domestic violence accounted for a significant share of homicides across MA, particularly among Black non-Hispanic, Hispanic, and foreign-born MA residents. The demand for domestic violence services outpaced existing resources in rural regions.*
- *Exposure to community violence limited children’s and youth’s outdoor physical play and exercise. Boston youth focus group participants spoke about the high levels of trauma, post-traumatic stress, anxiety, and depression that they experienced as a result of either experiencing violence themselves or losing a loved one to violence. Residents who lived in communities where large proportions of residents experienced low-income or identified other than White non-Hispanic were more likely to be exposed to violence.*
- *Black non-Hispanic and Hispanic MA residents disproportionately experienced negative health outcomes in comparison to White non-Hispanic residents due, in part, to the forces of structural racism. People of color, Native Americans, Muslims, LGBTQ individuals, undocumented individuals, and immigrants who experienced racism and discrimination noted how the trauma of oppression has negatively impacted their lives. Across MA, key informant interviewees reported the need enhance education on the links between racism and trauma, and the need for services to deliver trauma-informed care to individuals affected by racism.*

III.D. Barriers to Receiving Health Care

Despite overall high health insurance coverage in MA, residents encountered several barriers with respect to receiving health care, including: (a) coverage limitations; (b) health care costs; (c) health

literacy (i.e., complexity accessing health insurance and care, understanding health care information); (d) provider and service shortages; and (e) transportation.

III.D.1. Health Insurance Coverage

Since 2006, the Commonwealth has provided access to affordable health insurance to its residents through MassHealth.³⁴ From 2013 to 2017, the Commonwealth had the lowest rate of uninsured individuals in the nation (3%), with slightly higher percentages of Hispanic or Latino (of any race; 5.9%), Black or African American (5.1%), and American Indian or Alaska Native residents (4.9%) being uninsured in comparison to White residents (2.4%).³⁵ The prevalence of uninsured individuals was higher in Barnstable County (5%)¹³ and Boston (4%)¹⁰ when compared to MA as a whole. Despite overall high health insurance coverage, focus group participants perceived¹⁴ the limitations of MassHealth, including inadequate dental^{7,12,14} and vision coverage,⁷ as a barrier to accessing care.¹⁴ Despite very low uninsured rates (<1%) among families of CYSHCN from 2009 to 2010,⁴ 34% of families had insufficient insurance coverage to meet their child's medical needs.²

III.D.2. Health Care Costs

For those who had health insurance, the cost of receiving health care, including copayments, prescriptions, and deductibles was problematic, particularly for residents experiencing poverty or low-income.³⁶ For example, in 2014, 9% of MA residents cited cost as the reason they did not see a medical provider during the previous year,¹³ with residents and key informant interviewees from Boston,²⁴ Northeast MA,⁸ Western MA (i.e., Hampden County),²⁸ Southeast MA,¹⁴ and Barnstable County¹³ all mentioning health care expenses as a barrier to receiving treatment. Survey results in Western MA (i.e., Hampden County) indicated that patients would sometimes postpone appointments if a copay was due at the time of the visit or find new providers to obviate debt at another.²² MA residents who did not identify as White non-Hispanic were disproportionately affected by costs associated with health care; for example, in Boston, when compared with White adults, Black and Latino adults were more likely to report that they did not see a doctor when needed due to cost (5% vs. 13% and 16%, respectively).¹⁰ From 2009 to 2010, 26% of families of CYSHCN had to pay more than \$1,000 out of pocket medical expenses for their child's medical needs, which was a 20% increase from 2005 to 2006.⁴ These additional medical expenses were an extreme burden for families of CYSHCN, a quarter of whom experienced poverty, due in part to parents having to reduce their work hours, and in some cases stop working entirely, to tend to their children's needs.²

III.D.3. Health Literacy

Health literacy is the degree to which individuals can obtain, process, and comprehend basic health information when making decisions about one's health and the care needed.⁹ Being unaware of the processes required to access both health insurance and care, as well as not understanding complex health information, was a significant barrier to receiving health care.^{2,36} Improving health literacy among MA residents was mentioned in community assessments across the state, including Southeast MA,²¹ Western MA (i.e. Hampden County),²² and Central MA.⁹ The two primary issues residents experienced were navigating the health care system, which included completing paperwork, finding providers, and securing insurance, particularly Medicaid and Medicare, as well as advocating for their rights as patients.^{7,13,21}

Health literacy was a particularly salient concern for families with CYSHCN, immigrants, and refugees. Focus groups with parents of CYSHCN and YSHCN found that participants needed additional support navigating the health care system, greater access to translation and interpreter services and culturally competent staff and materials, and improved information on the availability of services located within their communities that can accommodate their specific needs.⁴ Focus group participants and key informant interviewees in Boston,²⁴ Northeast MA (i.e., Greater Lowell),⁷ Southeast MA,¹⁴ and in Central MA⁹ noted that health literacy affected immigrants' and refugees' access to health care given that, in addition to language barriers, many individuals were unaware of their rights to access health care. For example, Central MA focus group members reported that fears of deportation among undocumented residents prevented individuals from seeking out health care.⁹ Moreover, survey respondents in Northeast MA⁸ and focus group participants in Boston¹⁶ indicated that the inability to communicate, due to language barriers, was a main reason for having difficulty navigating the health care system, and thus not having a consistent primary care provider. Together, these findings indicated a need for more translation and interpreter services,^{7,9,13,28} bilingual providers,^{7,9,13,28} and culturally competent care^{9,12,14,18,28} across the Commonwealth.

III.D.4. Provider and Service Shortages

Primary care, dental, and mental health providers (especially for youth) were the most commonly noted areas of health care shortages in Western MA (i.e. Berkshire County and Hampden County),^{12,15} Boston,²⁴ North Central MA,²⁵ and Greater Worcester.⁹ More specifically, in Hampden County, about 43% of service area residents lived in a health care professional shortage area,²⁸ and in Worcester, a 2016 report showed the number of children who needed dental services outnumbered the number of providers who accepted MassHealth.⁹ Moreover, among available providers, it was noted that hours of availability were often inconvenient, especially for residents who worked outside of traditional weekday hours.^{14,22} In Boston, Central MA, and Northeast MA, focus group participants mentioned the need for a greater number of LGBT competent health care providers, as many of the current providers were perceived to be lacking awareness and sensitivity to the challenges and inequities this population experiences.^{7,25,27} Finally, according to the statewide health assessment,² focus group participants brought up the need for increased funding and compensation for health workers to alleviate provider burnout and turnover.

Shortages in services that address substance abuse and mental health, separately and jointly, emerged to be a statewide challenge.³⁶ For example, focus group participants in Barnstable County,¹³ Western MA (i.e., Berkshire County),¹⁵ Northeast MA,⁸ and Central MA,²⁵ reported an inadequate number of substance abuse disorder treatment services and options. Focus group participants from Boston reported that more drop-in centers and prevention and education substance use programs, as well as transition programs for youth are needed.²⁴ Moreover, focus group participants from across the Commonwealth reported the need for improved services and coordinated care to treat substance use disorder and mental health problems simultaneously.² Regionally, this issue was noted in assessments from Western MA,¹² Barnstable County,¹³ and Boston.¹⁶ In Barnstable County, educating the public and health professionals on comorbid diagnoses and expanding disease screening in substance dependent populations was recommended by health experts and input session participants.¹³ A consumer of the Boston Public Health Commission program expressed the need for a support group for dual-diagnosis

(“Double Trouble”) Boston residents.¹⁰ Key informant interviewees also noted a need for training providers on how to incorporate trauma-informed care with substance use disorder patients.²

Two shortages in services specific to CYSHCN emerged as crucial: receiving care through a medical home and support for effective care transition.² In 2016, across MA, fewer CYSHCN (49%) received care in a medical home compared to their peers without special health care needs (61%).² CYSHCN who were Hispanic (34%) and publicly insured (35%) were less likely to meet medical home criteria in comparison to their non-Hispanic Black (54%) and non-Hispanic White (50%) peers who were insured privately (52%).⁴ In 2015, across MA, less than half of parents of CYSHCN (41%) reported that their child’s primary care provider had either talked to them or their child about transitioning medical providers, once their child becomes an adult.⁴ Relatedly, in 2016, only 16% of the Commonwealth’s YSHCN, received services that aided transition to adult care, which was a slightly lower percentage than the national statistic (17%).² Together, provider and service shortages across MA emerged as issues needing attention.

III.D.5. Transportation

Another frequently mentioned barrier to health care was the lack of adequate transportation.² Transportation was one of the top four reasons reported by women in a 2011 survey as to why they did not receive prenatal care during the first trimester.² Regionally, transportation was brought up as a barrier in Boston,²³ Central MA,²⁵ Southeast MA,¹⁴ Barnstable County,¹³ and Western MA (i.e., Berkshire and Hampden Counties).^{15,22} Central MA focus group participants reported that traveling to a larger city (e.g., Worcester, Boston) from a rural area was especially challenging.⁹ Around 14% of Hampden County’s households reportedly did not have a private vehicle.²¹ Unreliability and infrequency of buses and trains was also noted in various Boston neighborhoods,²³ Western MA (i.e., Berkshire County),¹⁵ and Central MA.⁹ In addition, lack of transportation access for elderly and disabled residents, as well as rising cost of transportation fares was a concern in Boston.²³

III.D.6. Key Findings

- *Despite overall high health insurance coverage in MA, some modest racial and ethnic and regional inequities remain. Most concerning, however, is that more than a third of families of CYSHCN had insufficient insurance coverage to meet their child’s medical needs.*
- *The cost of health care is an issue across the Commonwealth. For those who had health insurance, the cost of receiving health care, including copays, prescriptions, and deductibles was problematic, particularly for residents experiencing poverty or low-income. In Boston, Black and Latino residents were more likely to report that they did not see a doctor due to cost in comparison to White residents. A little more than a quarter of families of CYSHCN had to pay over \$1K per annum in out of pocket medical expenses, causing an extreme burden on families.*
- *Increased health literacy is needed across the Commonwealth, with residents across multiple regions wanting help navigating the health care system and advocating for their rights as patients. Families of CYSHCN, immigrants, and refugees needed increased support around health literacy, specifically translation and interpreter services, bilingual providers, and culturally competent care.*
- *Primary care, dental, and mental health provider (especially for youth) shortages were reported across the Commonwealth. Focus group participants mentioned a need for a greater number of*

LGBT competent health care providers, and services and providers that address both substance abuse and mental health. Two service shortages specific to CYSHCN emerged as crucial: receiving care through a medical home and support for effective care transition.

- *Transportation was frequently reported as a barrier to receiving health care across the Commonwealth, particularly among residents living in more rural areas.*

III.E. Indicators of Maternal Health

In this section, we report on prenatal and postnatal indicators of maternal health that emerged as crucial to the overall well-being of mothers and infants. We also explore the prevalence of substance use during and immediately following pregnancy.

III.E.1. Prenatal

Unplanned Pregnancy

Across MA, 39% of births were unplanned,¹⁹ with rates being 2.3 times higher for Black non-Hispanic and 1.7 times higher for Hispanic women than White non-Hispanic women.² The rate of unintended pregnancies among women varied by insurance type; in 2014, women with MassHealth were two times more likely than women with private insurance to have had a live birth resulting from an unplanned pregnancy.^{2,4,19} Relatedly, at the time of the unplanned pregnancy, women with MassHealth were less likely to have used birth control in comparison to women with private insurance (38.3% vs. 69.8%, respectively).²

Prenatal Care

In 2015, among MA women who were pregnant, 78% received adequate prenatal care; however, a lower percentage of Black non-Hispanic (69%) and Hispanic (78%) women received adequate prenatal care in comparison to White non-Hispanic (85%) and Asian non-Hispanic (83%) women.² According to the statewide health assessment,² the primary reasons women did not receive adequate prenatal care were because they were unaware of the pregnancy (24%), did not have a MassHealth card (14%), did not have money or insurance (14%), did not have transportation, childcare, or were unable to take time off from school or work (13%).

Dental Visits

Between 2013 and 2014, 71.7% of women in MA had their teeth cleaned the year prior to their pregnancy and 62.2% of women had their teeth cleaned during their pregnancy.² Inequities by race and ethnicity, as well as SES were evident; among all race and ethnicities, Black non-Hispanic women had the lowest prevalence of visiting the dentist both before (57%) and during pregnancy (49.2%), whereas White non-Hispanic women had the highest prevalence (78.4% and 67.3%, respectively). Also, women who lived at or below the federal poverty level had a lower prevalence of getting their teeth cleaned both before (57%) and during pregnancy (50%) in comparison to women who lived above the poverty level (78% and 67%, respectively).²

III.E.2. Postnatal

Severe Maternal Morbidity (SMM)

Over the past several years, SMM, defined as significant unexpected (short- or long-term) consequences to a women's health resulting from giving birth, has increased.³⁷ Specifically, from 1998 to 2013, the rate of SMM including blood transfusions increased 179%, and the rate of SMM without blood transfusions, increased 81%.² Inequities by race and ethnicity and insurance were present in these rates: the SMM rate including blood transfusions for Black non-Hispanic women from 1998 to 2013 was twice that of White non-Hispanic women.² SMM rates were also higher for women with MassHealth insurance compared to women with private insurance.²

Postpartum Depression (PPD)

Across MA, PPD symptoms for new mothers decreased modestly from 12% in 2012 to 10% in 2014,² with mothers under the age of 24 years reporting symptoms of depression at slightly higher percentages, between 11% and 14%, than older mothers.⁴ Racial and ethnic inequities were evident as well; Black non-Hispanic women experienced the highest percentage of PPD symptoms at 20%, followed by Asian non-Hispanic women at 16%, and then Hispanic women at 15%.² PPD also varied according to mothers' SES, with 16% of women with an HHI at or below the poverty level experiencing PPD symptoms versus 8% of women with an HHI above the poverty level.² Focus group participants in both Western (i.e., Hampden County) and Northeast MA reported feeling especially isolated during the postpartum period, and needing increased social and emotional support to help them cope with the stress and anxiety during this time.^{12,21,22}

Breastfeeding

Across MA, breastfeeding emerged as an important postnatal health-related indicator.^{4,19} On average, breastfeeding prevalence in the Commonwealth was higher than the U.S. (54% vs. 49%, respectively).⁴ In MA, the percentage of mothers who breastfed at the time of hospital discharge increased from 83% in 2011 to 87% in 2015,² as did the percentage of mothers who breastfed at eight weeks postpartum (65% in 2010 to 73% in 2014).² Inequities in breastfeeding by insurance and SES were evident across the Commonwealth: at eight weeks postpartum, 59% of mothers with MassHealth were breastfeeding in comparison to 81% of mothers with private health insurance.² Relatedly, at eight weeks postpartum, a lower percentage of mothers who were part of the Women, Infants, and Children (WIC) Nutrition Program, a means-tested program, breastfed in comparison to mothers who were not on WIC (59% vs. 78%, respectively).⁴ At six months postpartum, this gap had widened even more, with only 28% of mothers on WIC breastfeeding in comparison to 68% of MA mothers overall.² A community assessment in Western MA (i.e., Berkshire County) reported that fewer mothers had planned to breastfeed their babies in comparison to MA mothers overall (73% vs. 84.7%, respectively),¹⁵ and teen mothers who participated in a focus group mentioned how breastfeeding experience varied greatly across mothers, reporting a need for increased breastfeeding support.⁴

III.E.3. Substance Use

Tobacco, Alcohol, and Marijuana

In both the community and government assessments, women's substance use prior to, during, and immediately after pregnancy emerged as a severe issue related to both maternal and infant health. For

example, in 2014, the percentage of MA mothers who reported smoking cigarettes during their pregnancy remained steady at 6.4%, with White non-Hispanic women most likely to report smoking during pregnancy (8.3%).¹⁹ In 2012, pregnant women who lived in Western MA (i.e., Berkshire [22.2%] and Hampden [10.8%] Counties),²¹ Central MA (11.6%),²⁵ Northeast MA (i.e., Lowell [~11%]),⁷ and Southeast MA (i.e., Wareham [19%] and Fall River [18%])¹⁷ smoked at higher percentages in comparison to pregnant women who lived across the state. Moreover, data suggested that many mothers who quit smoking during pregnancy often return to smoking immediately after giving birth, likely putting their infants at risk for experiencing second-hand smoke.⁴

In 2012, 64.2% of mothers reported consuming alcohol in the three months leading up to their pregnancy,⁴ with 12.3% of mothers reporting alcohol use and 1% reporting bingeing on alcohol during the last three months of their pregnancy.¹⁹ With the recent legalization of recreational marijuana in the Commonwealth, government informants have become concerned with the issue of women using marijuana during pregnancy and while they are breastfeeding.³³

Opioids

The prevalence of opioid use disorder and deaths due to overdoses in MA is among the highest in the nation.³ In comparison to mothers across MA, mothers with opioid use disorder were more likely to be younger (<30 years), single, U.S. born, White non-Hispanic, experience low SES, receive prenatal care at a hospital clinic, and have MassHealth insurance.² In 2016, most pregnant women who were enrolled in the Bureau of Substance Addiction Services (BSAS) treatment system, reported to use heroin (71%), other opioids (20%), crack/cocaine (44%), marijuana (37%), and alcohol (35%).² From 2013 to 2014, rates for pregnant women who were enrolled in treatment programs were highest in Boston, Brockton, Southeast MA (i.e., Fall River & New Bedford), Western MA (i.e., Pittsfield & Springfield), and Central MA (i.e., Worcester).¹⁹ Across MA, in 2016, pregnant and postpartum women were 5.7 and 2.9 times more likely to be involved in medication-assisted treatment (MAT) including methadone, naltrexone, or buprenorphine than non-pregnant and non-postpartum women, with Black non-Hispanic pregnant women being 75% less likely to report prior or current MAT than White non-Hispanic pregnant women.² Moreover, pregnancy-associated deaths related to substance use were also prevalent across the Commonwealth, with rates increasing over time. For example, in 2005/2006 only 13.3% of pregnancy-associated deaths were linked to substance use, increasing to 35.4% in 2013/2014. Finally, although opioid-related overdoses occur at lower rates during pregnancy (with the highest rates occurring during the first trimester and the lowest rates occurring during the second and third trimesters), they increase postpartum and are highest 6 to 12 months after delivery.² Across the state, Head Start programs supported families who experienced opioid and other substance misuse, both directly and indirectly, primarily by connecting affected families to community resources and making direct referrals to treatment programs, providing substance misuse training to their staff, and collaborating with Department of Children and Families (DCF) and Department of Transitional Assistance (DTA).²⁶

III.E.4. Key Findings

- *More than one-third of births were unplanned with higher rates among Black non-Hispanic and Hispanic women, as well as women with MassHealth insurance in comparison to White non-Hispanic women and women with private health insurance.*

- *Among MA women who were pregnant, most received adequate prenatal care with a lower percentage among Black non-Hispanic and Hispanic women in comparison to White non-Hispanic and Asian non-Hispanic women. Barriers to receiving prenatal care included being unaware of the pregnancy, not having a MassHealth card, and not having money and insurance.*
- *The rate of severe maternal morbidity has increased over the past several years with higher rates observed among Black non-Hispanic women and women with MassHealth.*
- *The prevalence of PPD symptoms was highest among Black non-Hispanic women, Asian non-Hispanic women, and Hispanic women, as well as women who were living in poverty.*
- *Focus group participants reported a need for increased social and emotional support during the postpartum period.*
- *The prevalence of breastfeeding has increased over the past several years, with a lower breastfeeding prevalence at 8-weeks postpartum among women with MassHealth insurance and women who received WIC.*
- *Smoking during pregnancy was an issue across the state, with the highest smoking prevalence among White non-Hispanic women and a higher prevalence among pregnant women who lived in Western MA, Central MA, Lowell, Wareham, and Fall River.*
- *With the recent legalization of recreational marijuana, there is concern around women using marijuana prenatally and postnatally when breastfeeding.*
- *In comparison to mothers across MA, mothers with opioid use disorder were more likely to be younger (<30 years), single, U.S. born, White non-Hispanic, experience low SES, receive prenatal care at a hospital clinic, and have MassHealth insurance.*
- *Across MA, MAT was more common among pregnant and postpartum women in comparison to non-pregnant and non-postpartum women, with a lower prevalence of MAT among Black non-Hispanic women in comparison to White non-Hispanic women.*
- *The rates of pregnancy-associated deaths related to substance use have increased over the past several years with the rates of opioid-related overdoses being highest 6 to 12 months postpartum.*

III.F. Indicators of Infant Health

In this section, we report on indicators of infant health that emerged as important to infant mortality overall, including neonatal abstinence syndrome (NAS), preterm birth, low birthweight, unsafe sleeping practices, and rates of infant mortality.

III.F.1. Neonatal Abstinence Syndrome (NAS)

Stemming from maternal opioid use, NAS emerged as a severe issue in MA, associated with infant health in both the short- and longer-term. Across MA, the NAS rate increased from 3 per 1,000 births in 2004 to 16 per 1,000 in 2013.² While NAS can result from a pregnant mother who is receiving MAT, MAT is considered best practice for pregnant women with opioid use disorder.² From 2011 to 2012, NAS rates were especially high in Western MA (i.e., Pittsfield [18 per 1,000 live births]), Central MA (i.e., Southbridge [18.8 per 1,000 live births]), Revere (18 per 1,000 live births), and Southeast MA (Fall River [49.9 per 1,000 live births] & New Bedford [36.3 per 1,000 live births]) in comparison to MA overall.¹⁹ According to a community assessment, Barnstable County experienced recent increases in rates of infants' prenatal exposure to substances.¹³ Specifically, from 2014 to 2015, 5% of infants born at the two

local hospitals – Cape Cod and Falmouth – experienced prenatal substance exposure, with 3% of these infants subsequently being diagnosed with NAS.¹³ Finally, both in Boston and the Northeast (i.e., Greater Lowell), key informant interviewees expressed concern over the rapidly increasing rates of infants being born either exposed to or addicted to opioids.^{7,24}

III.F.2. Preterm Birth

Preterm birth is defined as an infant being born prior to 37 weeks of gestation.³⁸ Across MA, 8% of live births were preterm, with Black non-Hispanic (10%) and Hispanic women (9%) giving birth to preterm infants at slightly higher percentages than White non-Hispanic and Asian non-Hispanic women (both 8%).² Community assessments in Boston^{10,16,24} echoed these findings, reporting a higher prevalence of preterm births among Black and Latino residents in comparison to White residents. Between 2010 to 2014, the prevalence of preterm births was especially high in Central MA (i.e., Fitchburg [9.6%] & Southbridge [10.1%]), Western MA (i.e., Springfield [10.4%]), and Southeast MA (i.e., Brockton [10.1%]) in comparison to MA overall (8.5%).¹⁹

III.F.3. Low Birthweight

Low birthweight is defined as an infant weighing less than 2,500 grams at birth.³⁹ In 2013, 7.7% of infants in MA were born low birthweight, with Black non-Hispanic (10.9%), Hispanic (8.2%), and Asian (7.9%) women giving birth to low birthweight infants at slightly higher percentages than White non-Hispanic women (7%).¹⁹ Community assessments in Boston^{10,16,23,24} also reported a higher prevalence of low birthweight among Black and Latino residents in comparison to White residents. The prevalence of low birthweight was especially high in Central MA (i.e., Southbridge [9.8%]), Western MA (i.e., Springfield [9.0%]), and Southeast MA (i.e., Brockton & New Bedford [both 9.1%]) in comparison to MA overall (7.6%) between 2010 and 2014.¹⁹ Also from 2010 to 2014, nearly half of EJ communities had a rate of low birthweight above 110% of the state rate in comparison to only 31% of non-EJ communities.²

III.F.4. Unsafe Sleeping Practices

According to the government assessments, unsafe sleeping practices are linked to sudden unexpected infant deaths (SUIDs),^{2,4,19} which have been noted as the leading cause of infant mortality in the nation.⁴ From 2012 to 2014, the SUID rate across MA was 41.1 per 100,000 infants, with rates being highest for Black non-Hispanic infants (86 per 100,000 infants), followed by White non-Hispanic infants (43 per 100,000 infants) and Hispanic infants (39 per 100,000 infants).² Across MA, the prevalence of recommended safe supine sleep positioning increased from 77% in 2010 to 85% in 2014,² with a lower prevalence among mothers who were younger (<20 years) and Black non-Hispanic or Hispanic, had a lower educational attainment (<high school education), and were on the WIC nutrition program in comparison to MA mothers overall.^{2,4,19}

III.F.5. Infant Mortality

The infant mortality rate (IMR) refers to the number of infant deaths per 1,000 live births before their first birthday.⁴⁰ In 2017, the Commonwealth had the lowest IMR across the nation at 3.7 per 1,000 live births.⁴¹ Inequities by race and ethnicity and region were reported. IMRs were higher for Black non-Hispanic (7.3 per 1,000 live births) and Hispanic (5.0 per 1,000 live births) infants than they were for White non-Hispanic (3.4 per 1,000 live births) and Asian non-Hispanic (2.9 per 1,000 live births) infants.²

A community assessment in Boston¹⁰ reported higher IMRs among Black and Latino residents in comparison to White residents. From 2011 to 2013, IMRs were especially high in Chelsea (17.6 per 1,000 live births, Lynn (6.9 per 1,000 live births), Western MA (i.e., Pittsfield [8.3 per 1,000 live births] & Springfield [7.0 per 1,000 live births]), Central MA (i.e., Fitchburg [10.5 per 1,000 live births]),⁵ and Northeast MA (i.e., Lawrence [5.6 per 1,000 live births] & Lowell [5.4 per 1,000 live births])¹⁹ in comparison to MA overall (4.2 per 1,000 live births).

III.F.6. Key Findings

- *NAS rates have increased over the past several years, particularly in Pittsfield, Southbridge, Revere, Fall River, and New Bedford.*
- *MA witnessed a higher prevalence of preterm births and low birthweight among women who were Black non-Hispanic and Hispanic, and in the communities of Southbridge, Springfield, Brockton, Fitchburg (preterm only), and New Bedford (low birthweight only).*
- *Across the state, EJ communities have significantly higher rates of low birthweight in comparison to non-EJ communities.*
- *Sudden unexpected infant deaths are prevalent across the state with rates being highest for Black non-Hispanic infants, followed by White non-Hispanic infants and Hispanic infants.*
- *The prevalence of recommended safe supine sleep positioning has recently increased, with a lower prevalence among mothers who were younger (<20 years), Black non-Hispanic or Hispanic, had lower educational attainment (<high school education), and were on the WIC nutrition program, potentially increasing the likelihood of sudden unexpected infant death.*
- *The Commonwealth has the lowest infant mortality rate in the nation, yet rates were higher for Black non-Hispanic and Hispanic infants in comparison to White non-Hispanic and Asian non-Hispanic infants; especially high rates of infant mortality were observed in Chelsea, Lynn, Pittsfield, Springfield, and Fitchburg in comparison to MA overall.*

III.G. Indicators of Child and Youth Physical Health

In this section, we report on health indicators for children and youth that emerged as important for their overall physical health and well-being, including preventative medical and dental care, elevated blood lead levels, asthma, obesity, and inadequate physical activity.

III.G.1. Preventative Medical and Dental Care

Between 2011 and 2012, 91% of MA youth aged 12 to 17 received a preventative medical visit in the past year with fewer visits occurring among adolescents who identified as non-Hispanic Black (83%), lived in a single female led household (84%), and who experienced poverty (85%).⁴ In 2017, approximately 90% of middle and high schoolers reported to see a dentist in the past year,³⁰ with fewer visits occurring among adolescents who were Black non-Hispanic (80.5%), Hispanic (80.2%), and Asian non-Hispanic (83.8%) in comparison to their White non-Hispanic (92.6%) peers.³⁰

III.G.2. Elevated Blood Lead Levels (EBLLs)

Earlier, we noted that the Commonwealth's housing stock is one of the oldest in the nation, with many older homes containing lead paint.² Lead exposure is detrimental to young children's health,⁴ with blood

lead levels equal to or above 5 µg/dl considered elevated.⁴² Across MA in 2016, the prevalence of EBLLs for children (aged 9-47 months) was 2%, with a higher prevalence among children who were Black non-Hispanic, Asian non-Hispanic, Hispanic, and lived in lower-income communities.² Relatedly, EBLLs were more prevalent among children who lived in EJ communities in comparison to children who did not (42% vs. 19%, respectively).² From 2013 to 2014, the prevalence of EBLLs for children (aged 9 months to < 4 years) were especially high in Western MA (i.e., North Adams [13.7%] & Springfield [5.6%]), Central MA (i.e., Southbridge [9.3%]), Southeast MA (i.e., Fall River [6.4%]) in comparison to MA overall;¹⁹ some Cape Cod communities also reported a high prevalence of EBLLs.²

III.G.3. Asthma

Some children growing up in MA are exposed to mold and/or asbestos, and in some cases, reside close to sources of pollution.² Poor air quality is linked to respiratory illnesses and asthma. The prevalence of pediatric asthma in the Commonwealth is among the highest in the nation.⁴ From 2013 to 2015, the average annual prevalence for MA children (aged 0 to 17) was 9.9%, with a higher prevalence among children aged 5-17 (12.5%) and who identified as Hispanic (15.2%) or Black non-Hispanic (13.2%) in comparison to children aged 0-4 (3.6%) and who identified as White non-Hispanic (9%).² The prevalence of pediatric asthma was especially high in Western MA (i.e., Hampden County [17%])²² and Central MA (i.e., Worcester [14%]).⁹ In Boston, 17.3% of children aged 5-14 reportedly had asthma along with 23.2% of high schoolers who attended Boston Public Schools, with a higher prevalence among Asian (26.4%), Latino (25.2%), and Black students (22.7%) than White students (20.7%).²⁴ In addition to its high prevalence, pediatric asthma is poorly controlled in MA, especially among young children who experience more emergency department (ED) visits, outpatient observations, and hospitalizations for asthma than older children.² From 2010 to 2014, 27% of EJ communities experienced a childhood asthma ED visit more than double the state rate, in comparison to only 4% of non-EJ communities.² Finally, focus group participants and key informant interviewees cited pediatric asthma to be major health issue,⁹ especially for people of color.²⁴

III.G.4. Obesity

According to the Centers for Disease Control and Prevention (CDC), when children's and youth's body mass index (BMI) is at the 95th percentile or greater, they are considered obese.⁴³ Across the Commonwealth, 11.9% of children ages 0 to 2 and 13.8% of children ages 2 to 5 were overweight in 2014, with 14.4% of young children younger than 5 years considered obese.¹⁹ Among children ages 2-4 enrolled in the WIC program, MA had the 5th highest obesity rate in the nation.² Approximately 11% of MA middle and high schoolers were obese in 2017 and 14% were overweight, with males having a higher obesity prevalence than females and White non-Hispanic students being the least likely to be obese among their peers.³⁰ Regional differences in childhood obesity were present as well. For example, 37% of children who attended Western MA's Berkshire County's Head Start were overweight or obese.¹⁵ In Barnstable County, the prevalence of overweight and obese children was especially high, where more than half of school districts reported a higher prevalence of overweight and obese children in comparison to MA overall.¹³ Some school districts in Southeast MA, specifically Fall River (40.3%) and New Bedford (40.9%; South Coast CHNA, 2016), as well as in Springfield in Western MA (41%),²¹ had a higher prevalence of overweight or obese students than the state overall. Finally, focus group participants and key informant interviewees from Greater Lowell⁷ and Boston¹⁶ noted that childhood

and youth obesity was a major concern in their communities as in 2015, 17.1% of Black and 15.9% of Latino Boston public high schoolers were obese compared to 9.7% of White Boston public high schoolers.²⁴

III.G.5. Physical Activity

Children’s physical activity is an important health indicator related to obesity and mental health, with the CDC recommending that children and youth engage in moderate-to-vigorous physical activity for 60 minutes every day.⁴⁴ In 2017, nearly half of MA middle and high schoolers reported to be physically active for 60 minutes 5+ days a week, with males being more physically active than females in both middle (57.6% vs. 43.9%, respectively) and high school (53.2% vs. 38.4%, respectively).³⁰ Moreover, middle and high schoolers who identified as Black non-Hispanic (35.5% & 34.2%, respectively), Hispanic (42.3% & 36.7%, respectively), Asian non-Hispanic (37.0% & 35.1%, respectively), and Other/multiracial non-Hispanic (47.5% [middle schoolers only]) were less active than their White non-Hispanic peers (56.7% & 50.9%, respectively).³⁰ Focus group participants across the Commonwealth suggested several reasons for inadequate physical activity among children and youth, including limited programming and opportunities specifically focused on physical activity;^{8,22,25} living in unsafe neighborhoods, which is a barrier to outdoor play;^{24,25} and high frequency of screen time.^{24,25} As noted in Section 3.3, residents who identified as other than White non-Hispanic were more likely to be exposed to violence and perceived their neighborhoods to be less safe than White non-Hispanic residents.² Moreover, in 2017, a higher percentage of Black non-Hispanic (42.5%), Hispanic (43.2%), and Asian non-Hispanic (36.2%) middle schoolers spent more than 3 hours per day playing video games and/or using the computer for something other than school work during the week in comparison to their White non-Hispanic peers (30.2%).³⁰ Finally, residents in Boston and the Northeast (i.e., Greater Lowell and Greater Lawrence) noted that increased low-cost and safe opportunities for children and families to be physically active are needed.^{7,8,16,18}

III.G.6. Key Findings

- *Most MA middle and high schoolers received preventative medical and dental visits within the past year. Annual well-child visits were less likely to occur among adolescents who were Black non-Hispanic, living in a single female led household, and experiencing poverty. Annual dental visits were less likely among non-White youth.*
- *EBLLs were prevalent for children aged 9-47 months across the state, with a higher prevalence among children who were Black non-Hispanic, Asian non-Hispanic, Hispanic, and who lived in lower-income communities. EBLLs were more prevalent among children in EJ communities in comparison to children in non-EJ communities.*
- *The prevalence of pediatric asthma in MA is highest in the nation, with a higher prevalence among children aged 5-17 and who identified as Black non-Hispanic or Hispanic. EJ communities experienced a greater number of childhood asthma ED visits than non-EJ communities. Pediatric asthma is poorly controlled in MA with young children having a greater number of asthma-related hospital visits in comparison to older children.*
- *Among young children enrolled in WIC, MA has the 5th highest obesity rate in the nation. Among MA middle and high schoolers, males had a higher obesity prevalence than females with White non-Hispanics being the least likely to be obese among their peers.*

- *A little less than half of MA middle and high schoolers were physically active for 60 minutes 5+ days a week. Focus group participants noted that limited programming and opportunities for physical activity, living in unsafe neighborhoods, and high frequency of screen time were likely related to inadequate physical activity among children and youth.*

III.H. Child and Youth Education Determinants of Health

In this section, we report on educational factors for children and youth, including school readiness, special education, and academic failure that emerged as important given their long-term effects on health, highlighting disparities in MA.

III.H.1. School Readiness

Early Intervention (EI)

The percentage of children between the ages of 4 months and 5 years who were at moderate or high risk for experiencing developmental, behavioral, or social delays increased from 22.1% in 2007 to 25.8% in 2011 to 2012.⁴ Increases in EI enrollments for children under age 3 were also seen from 2009 to 2014, (10.5% to 12.3%, respectively).¹⁹ Boston focus group participants reported that among their communities, many young children lacked school readiness, experiencing speech and language delays, in part because they were unable to access care due to the barriers discussed in Section 3.4 (e.g., insurance, cost, transportation).²⁴ Greater Lowell focus group participants reported that more services are needed with respect to diagnosing young children with social delays, including autism.⁷ EI enrollment increases may reflect the surge in infants diagnosed with NAS, who are able to receive EI services without any out-of-pocket costs¹⁴. In 2015, 36.7% of infants diagnosed with NAS were enrolled in EI with the Metro-West (40%), which had the highest enrollment in MA; Boston (30%) had the lowest.¹⁴ Through the community assessments, the need for increased access to EI services for infants without NAS was mentioned.

Child Care

With average annual costs of infant care at more than \$20K (about \$1,800 per month) and care for a 4-year-old at more than \$15K (about \$1,300 per month),⁴⁵ the high cost of child care emerged as problem across MA, which is second in the nation for child care costs.⁴⁵ Access to affordable child care was cited as a need across the state,⁴ notably in Greater Lowell,¹⁸ Springfield,²¹ and Berkshire County,¹⁵ with focus groups from Berkshire County reporting the need for accessible high-quality child care more generally, but also more specifically for families during the time they receive health care services.¹⁵

English Learners (ELs)

Foreign-born individuals accounted for 16.5% of the MA population in 2016, and 5.3% of these individuals were school-aged children, 5 to 17 years.⁴⁶ Among all school-aged children in MA, 28.7% had at least one foreign-born parent and 5.1% were foreign-born themselves.⁴⁶ Between 2014 and 2015, 8.5% of children enrolled in school districts across MA were ELs, with an especially high prevalence of ELs living in the communities of Boston (29.8%), Worcester (35.1%), Holyoke (28.5%), Lawrence (29.9%), Lowell (26.6%), Chelsea (24.1%), and Brockton (20%).¹⁹ More specifically, in Boston, from 2010 to 2014, nearly 37% of individuals over the age of 5 years spoke a language other than English at home, with percentages being even higher for the neighborhoods of Roxbury (41.7%), Dorchester (41.4%), and

Mission Hill (38.4%).²⁴ Results from the 2016-2017, Massachusetts Comprehensive Assessment System (MCAS) indicated significant English Language Arts (ELA) and Math proficiency gaps between ELs and fluent English speakers that widened across elementary school to high school.⁴⁶ For example, in grade 5, only 13% of the children who were ELs scored proficient in ELA vs. 49% of students overall.⁴⁶

III.H.2. Special Education

Children who experience an educational disability,⁴⁷ including autism, communication impairment, developmental delay, emotional impairment, health impairment, intellectual impairment, neurological impairment, physical impairment, sensory impairment (i.e., hearing, vision, deaf-blind), or specific learning disability may be eligible to receive special education, and subsequently an Individualized Education Program (IEP).⁴⁸ The purpose of an IEP is to improve student outcomes by having parents, students, teachers, special educators, and general educators work together to meet the needs of the student.⁴⁸ Between 2014 and 2015, 17.1% of students enrolled in school districts across MA had an IEP, with an especially high prevalence observed among children living in Western MA (i.e., North Adams [26%] and Holyoke [24.1%]), Central MA (i.e., Fitchburg [22.6%]), and Southeast MA (i.e., New Bedford [21.9%]).¹⁹ In Boston, there was a higher prevalence for IEPs among youth ages 11-14 (18.9%) and 15-17 (19.4%) in comparison to children ages 0-5 (4.5%) and 6-10 (10.6%).²⁴ Through the focus groups, parents of CYSHCN reported that greater care coordination between the health care system and their children's schools,²¹ as well as more after school programs that are inclusive of CYSHCN are needed.²⁴

III.H.3. Academic Failure

Across the Commonwealth, from 2009 to 2013, 2% of students enrolled in school districts across MA, dropped out of high school, with an especially high dropout prevalence observed in the communities of Springfield (7.2%), Chelsea (6.7%), and Holyoke (6.4%).¹⁹ Inequities by race and ethnicity, EL status, SES, and disability status in high school dropout were apparent. Specifically, from 2017 to 2018, Hispanic or Latino (4.5%), Black/African American (2.9%), and American Indian or Alaska Native (2.6%) students who were enrolled in school districts across MA, had a higher prevalence of dropping out of high school than their White peers (1%).⁴⁹ Moreover, students who were enrolled in school districts across the Commonwealth who were ELs (7.6%), economically disadvantaged (3.6%), and classified as having a disability (3.4%) had a higher prevalence of dropping out of high school than MA students overall (1.9%).⁴⁹ Together, these findings provide support that early indicators of education readiness are important contributors to children's long-term academic success.

III.H.4. Key Findings

- *Among young children in MA, nearly a quarter were at moderate or high risk for experiencing developmental, behavioral, or social delays. EI enrollment percentages for children aged 0 to 3 have increased in recent years, which may be due, in part, to increasing NAS diagnoses among infants. Despite EI enrollment increases, many young children who needed EI services and school readiness supports were not receiving them.*
- *Child care is expensive and unaffordable for most families in MA, with focus group participants reporting the need for high-quality child care more generally, as well as more specifically during the time families receive health care services.*

- *Children who were ELs were prevalent among schools across MA, with an especially high prevalence in the communities of Chelsea, Boston, Brockton, Holyoke, Lawrence, Lowell, and Worcester. English and Math achievement test scores indicated significant achievement gaps between ELs and fluent English speakers that widened across grades 3 to 10.*
- *The prevalence of EIPs among children growing up in Fitchburg, Holyoke, New Bedford, and North Adams was especially high.*
- *Parents of CYSHCN reported the need for greater care coordination between health care services and schools and more inclusive after school programs.*
- *While relatively low across the state, high school dropout rates were higher than the state average in Chelsea, Holyoke, and Springfield, and among Hispanic or Latino, Black/African American, and American Indian or Alaska Native students, and for students who were ELs, economically disadvantaged, and classified as having a disability.*

III.I. Indicators of Youth Mental Health

In this section, we report on youth's social support, bullying, sadness and hopelessness, and self-injury and attempted suicide, indicators important to their overall mental health. Youth from MA public secondary schools reported on these behaviors via the 2015 and 2017 Massachusetts Youth Health Survey (MYHS) and the Massachusetts Youth Risk Behavior Survey (MYRBS).^{30,31}

III.I.1. Social Support

Social support is favorably linked to improved mental health. In 2017, most MA high schoolers reported to have an adult at home (81.7%) or at school (75%) that they could talk to about things that were important to them or if they had a problem.³⁰ Inequities by race and ethnicity in social support were present, with fewer Black non-Hispanic (home = 68.5% & school = 65.9%), Hispanic (home = 74.9% & school = 72.0%), Asian non-Hispanic (home = 75.8% & school = 71.2%), and other/multiracial (home = 78.1% & school = 72.2%) high schoolers reporting to have social support in comparison to their White non-Hispanic peers (home = 85.6% & school = 77.5%).³⁰ Moreover, in 2015, fewer high schoolers who identified as LGB received social support (home = 64.5% & school = 71.2%) than their peers who identified as heterosexual (home = 84.4% & school = 74.1%).³¹ Focus groups with LGBTQ youth echoed these findings, perceiving school teachers to be insensitive to name changes for those experiencing transitions, and suggested that school staff take sensitivity training to learn how to work with and support LGBTQ youth.^{25,27} Finally, parents of CYSHCN were concerned for their children who they perceived as experiencing social isolation, requiring enhanced efforts to promote social connectedness.⁴

III.I.2. Bullying

Bullying was prevalent among MA youth: in 2017, 34% of middle schoolers and 14.6% of high schoolers were victims of bullying, with females (middle school = 37.8% & high school = 17.8%) having more experiences with bullying than males (middle school = 29.7% & high school = 11.5%),³⁰ and high schoolers who identified as LGB reporting more experiences with bullying than their peers who

identified as heterosexual (34.3% vs. 13.8%, respectively).^{b31} These findings were echoed in the community assessments, with youth bullying emerging as a problem across multiple regions of MA, including Western MA,^{22,28} Boston,^{10,24} Central MA,^{9,25} and Southeast MA, where bullying was more prevalent in urban schools relative to suburban schools (24.5% vs. 17%, respectively).¹⁷ MA anti-bullying legislation has recently gone into effect, but these efforts have yet to be evaluated for success.³³

III.I.3. Sadness

Poor mental health was prevalent among MA youth. In 2017, 18.9% of MA middle schoolers reported that they felt sad or hopeless for more than 2 weeks during the past year, with a higher prevalence among females (25.1%), as well as Black non-Hispanic (23.3%), Hispanic (29.9%), and other/multiracial non-Hispanic (32.2%) middle schoolers in comparison to males (12.7%) and White non-Hispanic (14.6%) middle schoolers.³⁰ Similar results were found for MA high schoolers: in 2017, 27.4% of MA high schoolers reported feeling sad and hopeless, with a higher prevalence among females (36%), as well as Black non-Hispanic (28.6%), Hispanic (35.2%), Asian non-Hispanic (27.4%), and other/multiracial non-Hispanic (32.5%) students in comparison to males (19%) and White non-Hispanic (25%) students.³⁰ In 2015, there was also a significantly greater prevalence of feeling sad or hopeless among high schoolers who identified as LGB (61.1%) in comparison to their peers who identified as heterosexual (23.9%).³¹

III.I.4. Self-Injury and Attempted Suicide

For youth, feeling sad and hopeless is a risk factor for attempted suicide.⁵⁰ In 2017, 16.8% of MA middle schoolers reported that they had injured themselves intentionally without wanting to die in the past year, and 4.2% attempted suicide.³⁰ Among high schoolers, from 2015 to 2017, the percentage of MA high schoolers that committed self-injury and attempted suicide decreased (18% and 7% vs. 14.5% and 5.4%, respectively).^{30,31} Both middle and high schoolers who were female, as well as those who identified as Hispanic and other/multiracial non-Hispanic had a higher prevalence of both self-injury and attempted suicide in comparison to middle and high schoolers who were male, as well as White non-Hispanic.³⁰ Moreover, in 2015, high schoolers who identified as LGB disproportionately experienced self-injury (49.7%) and attempted suicide (24.8%) in comparison to their peers who identified as heterosexual (14.5% and 5.2%, respectively).³¹ Overall, focus groups participants across MA with both youth and adults reported a need for improved mental health treatment and access to mental health professionals for youth, specifically for those experiencing depression, anxiety, and trauma.^{8,9,12,13,24,25}

III.I.5. Key Findings

- *While most MA high schoolers reported to have social support both at home and at school, Black non-Hispanic, Hispanic, Asian non-Hispanic, and other/multiracial students were less likely than their White non-Hispanic peers, and LGB youth were less likely than youth who identified as heterosexual to have these important supports.*
- *Bullying was prevalent among MA youth, especially for females and youth who identified as LGB youth.*

^bIndicators of youth mental health and substance abuse were not reported in the 2017 Massachusetts Youth Risk Behavior Survey by sexual orientation identification; thus, differences by student's sexual orientation identification are presented for the 2015 Massachusetts Youth Risk Behavior Survey.

- *Poor mental health, self-injury, and attempted suicide was prevalent among MA youth with a higher prevalence among females, Black non-Hispanic (mental health only), Hispanic, other/multiracial non-Hispanic, and Asian non-Hispanic (high school mental health only) students, and high schoolers who identified as LGB.*
- *Focus groups participants across MA reported a need for improved mental health treatment and access to mental health professionals for youth, sensitivity training for school staff to learn how to work with and support LGBTQ youth, and increased efforts to promote social connectedness among CYSHCN to reduce social isolation.*

III.J. Youth Substance Use as a Determinant of Health

In this section, we report on youth substance use given its long term-effect on health using data from the MYRBS. First, we first report on youth’s perceptions of the risks associated with substance use and second, on youth’s substance use engagement, including drinking alcohol, smoking cigarettes, using marijuana, and taking prescription drugs.

III.J.1. Perceptions of Substance Use

Survey results from 2017 revealed that most MA high schoolers reported that most of their peers drank alcohol (80.9%) and smoked cigarettes (82.4%); that the risk of harm from binge drinking (79.9%), inhalants (79.8%), heroine (94.6%), narcotics (87.9%), Ritalin/Adderall (77.1%), and tranquilizers (87.1%) was moderate or great; and that it was *fairly easy* to obtain alcohol (75.9%) and marijuana (73.7%) with ease of access increasing from 9th to 12th grade.³⁰ In contrast, only 32% of high schoolers perceived moderate or great risk from marijuana use.³⁰

III.J.2. Alcohol Use

From 2015 to 2017, there was a slight decrease in MA high schoolers who reported to drink alcohol and binge drink in the past 30 days (33.9% and 17.7% vs. 31.4% and 15.9%, respectively) with drinking becoming more prevalent in the later high school years.^{30,31} In comparison to males, more females reported drinking alcohol in the past 30 days (29.8% vs. 33%, respectively) and fewer reported binge drinking (17.1% vs. 14.8%, respectively).³⁰ White non-Hispanic students were the most likely to report drinking and binge drinking with the past 30 days (35.4% and 19.3%, respectively).³⁰ In 2015, students who identified as LGB reported a slightly higher prevalence of both drinking (36.3%) and binge drinking recently (19.5%) in comparison to their peers who identified as heterosexual (34.2% and 17.9%, respectively).³¹ Finally, alcohol use among high schoolers was reported to be higher in Berkshire County, Western MA than the state overall.¹⁵

III.J.3. Cigarette and Tobacco Use

From 2015 to 2017, there was a slight increase of MA high schoolers who reported smoking cigarettes before the age of 13 (4.3% vs. 5.7%, respectively); however, there was a slight decrease in MA high schoolers who reported using any tobacco products (29.3% vs. 24.6%, respectively) and electronic vapor products (23.7% vs. 20.1%, respectively) in the past 30 days.^{30,31} Males were more likely to report that they had smoked cigarettes before they were 13 (7.1%) and to recently have used tobacco (27.8%) and vapor products (21.9%) in comparison to females (4.2%, 21.2%, and 18.4%, respectively).³⁰ In

comparison to White non-Hispanic students (4.5%), Black non-Hispanic (7.4%), Hispanic (7.8%), Asian non-Hispanic (7.9%), and other/multiracial non-Hispanic (9%) students had a higher prevalence of smoking cigarettes before they were 13; however, the prevalence of recent tobacco use was similar across White non-Hispanic (26.9%), other/multiracial non-Hispanic students (26.7%), and Hispanic students (25%).³⁰ White non-Hispanic students were the most likely to recently use vapor products. Finally, in 2015, students who identified as LGB reported a higher prevalence of both smoking cigarettes prior to age 13 (8.8%) and recently using tobacco (38.9%) in comparison to their peers who identified as heterosexual (3.7% and 28.7%, respectively).³¹

III.J.4. Marijuana Use

From 2015 to 2017, there was a slight decrease of MA high schoolers who reported to have both used marijuana before the age of 13 (6.3% vs. 4.4%, respectively) and to have ever used synthetic marijuana (7.9% vs. 5%, respectively), and no change in the prevalence of MA high schoolers who reported using marijuana in the past 30 days (24.5% vs. 24.1%, respectively).^{30,31} Males were more likely to report that they used marijuana before the age of 13 (6%) and synthetic marijuana (5.7%) in comparison to females (2.8% and 4.2%, respectively).³⁰ In comparison to White non-Hispanic students (3.7%), Black non-Hispanic (6.6%), Hispanic (6.3%) and other/multiracial non-Hispanic students (10%) had a higher prevalence of using marijuana before they were 13 years old.³⁰ White non-Hispanic (25.5%) and Hispanic students (26.6%) had a similar prevalence of recent marijuana use, and Hispanic students had the highest prevalence of ever using synthetic marijuana (7.9%).³⁰ Finally, in 2015, students who identified as LGB reported a higher prevalence of using marijuana prior to age 13 (8.4%), recently using marijuana (28.7%), and ever using synthetic marijuana (10.8%) in comparison to their peers who identified as heterosexual (5.8%, 24.4%, and 7.5%, respectively).³¹

III.J.5. Prescription Drugs Use

In 2017, 10.6% of MA high schoolers reported to have ever used prescription drugs that were not their own, with prevalence increasing with age,³⁰ similar rates emerged for 2015.³¹ Females reported more use of prescription drugs than males (11.8% vs. 9.3%, respectively), and Hispanic students (8.6%), Black non-Hispanic (13.4%) and Hispanic students (18.5%) higher usage than White non-Hispanic students.³⁰ In 2015, students who identified as LGB reported a higher prevalence of ever using prescription drugs (20.1%) in comparison to their peers who identified as heterosexual (10.5%).³¹ According to the statewide health assessment,² MA high schoolers who started drinking and smoking marijuana before the age of 13 were significantly more likely to misuse prescription drugs in the past month in comparison to students who started drinking or using marijuana after the age of 13. Prescription drug use among high schoolers was reported to be higher in North Central MA than the state overall.²⁵ Focus groups participants across MA with both youth and adults, reported substance use a concern among youth with the need for improved substance use prevention education,¹³ as well as treatment services for youth.^{7,12,13,18,51}

III.J.6. Key Findings

- *White non-Hispanic high schoolers and LGB students were the most likely to report drinking and binge drinking within the past 30 days.*

- *Among high schoolers, males, White non-Hispanic students, and LGB youth were more likely to use tobacco, including vaping.*
- *Males in high school were more likely than females to report using marijuana before age 13, including synthetic marijuana.*
- *Black non-Hispanic, Hispanic, and other/multiracial non-Hispanic high schoolers had a higher prevalence of using marijuana before they were age 13 in comparison to their White non-Hispanic peers, and high schoolers who identified as LGB reported a higher prevalence of using marijuana before age 13, in comparison to their peers who identified as heterosexual.*
- *Among high schoolers, females, Black non-Hispanic and Hispanic students, and students who identified as LGB reported a higher prevalence of using prescription drugs.*
- *MA high schoolers who started drinking and smoking marijuana before age 13, were significantly more likely to misuse prescription drugs in the past month, in comparison to students who started drinking or using marijuana after age 13.*
- *Focus group participants reported a need for improved substance use prevention education and treatment services for youth.*

III.K. Youth Sexual Behavior and Birth Rates as a Determinant of Health

Using data from the MYRBS, we report on youth sexual behavior, pregnancy, and birth rates, as each have potential longer-term implications for youth themselves and, when relevant, their offspring. First, we first report on youth’s sexual activity and affiliated risk behaviors, followed by statistics on adolescent pregnancy and parenthood in MA.

III.K.1. Sexual Engagement

In 2017, 2.4% of MA high schoolers reported to have had sexual intercourse before the age of 13, with a higher prevalence among males (3.4%) and Hispanic students (4.8%) in comparison to females (1.3%) and White non-Hispanic students (1.3%).³⁰ In 2015, students who identified as LGB reported a higher prevalence of having sex prior to the age of 13 (4.7%) in comparison to their peers who identified as heterosexual (2.7%).³¹ A quarter of MA high schoolers reported to have had sexual intercourse within the past 3 months, with prevalence increasing across high school;³⁰ there was also a higher prevalence among females (26.3%) versus males (23.7%), and in comparison to White non-Hispanic students (25.5%), Hispanic (29.6%) had a slightly higher prevalence of recent sexual intercourse.³⁰

III.K.2. Sexual Health Education

Most MA high schoolers reported to have received sexual health education at school, including information on the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS;77.2%), condom use (57%), and birth control (65.5%).³⁰ Yet, most students (61.1%) reported that they did not talk to their parents about sexuality, prevention of HIV or sexually transmitted infections (STIs), or pregnancy in the past year.³⁰ Black non-Hispanic (71.4%), Hispanic (73.5%), and other/multiracial non-Hispanic (71.1%) students were less likely to report learning information about HIV/AIDS at school than White non-Hispanic (79.5%) and Asian (77.8%) students.³⁰ Hispanic students were the most likely to report learning about condoms (63.3%) and birth control (67.9%) at school.³⁰

Finally, White non-Hispanic students were the most likely to report that they had talked to their parents about sexuality, prevention of HIV or STDs, or pregnancy within the past year.

III.K.3. Risky Sexual Behaviors

Risky sexual behavior can be defined as engaging in sexual activity that increases the chances of an unplanned pregnancy or contracting HIV or STIs.⁵² During their last sexual intercourse, 57.8% of high schoolers reported using condoms, 18.2% drank alcohol or used drugs, and 9.6% did not use any method to prevent pregnancy.³⁰ Males (61.7%) and White non-Hispanic students (60.3%) were more likely to use condoms in comparison to females (54.6%) and Hispanic students (51.1%).³⁰ Students in the 9th grade and Hispanic students were the least likely to use any protection against pregnancy, with 26.9% of 9th graders and 15.8% of Hispanic students reporting no protection against pregnancy relative to 11.5% of 10th graders, 8.9% of 11th graders, and 6.8% of White non-Hispanic students.³⁰ Survey findings from an assessment in Southeast MA noted disparities in condom use between urban and suburban youth, with only 54.2% of urban youth vs. 76.6% of suburban youth using condoms during their last sexual encounter.¹⁷ Relatedly, focus group participants in Hampden County, Western MA noted that rates of STIs were particularly high among youth.²⁸

III.K.4. Pregnancy and Birth Rates

Among MA high schoolers, few reported to have been or gotten someone pregnant (2.8%), with this prevalence being higher for males (3.7%) and Hispanic students (3%) in comparison to females (1.9%) and White non-Hispanic students (2.1%).³⁰ Focusing on official statistics, teenage birth rates across the Commonwealth significantly decreased across the past several years, dropping from 19.5 births per 1,000 women aged 15-19 in 2009 to 8.5 births per 1,000 women aged 15-19 in 2016. Yet, inequities by race and ethnicity, as well as region continue to persist,^{53,54} Black non-Hispanic (11.7 births per 1,000 females aged 15-19) and Hispanic teens (29.9 births per 1,000 females aged 15-19) had higher rates than White non-Hispanic teens (3.8 births per 1,000 females aged 15-19).² Community assessments in Hampden County, Western MA¹² and Central MA²⁵ echoed these findings, reporting the highest teen birth rates among Hispanic women. The following MA communities had relatively high teenage birth rates: Lawrence (34.5 births per 1,000 females aged 15-19), Chelsea (32.6 births per 1,000 females aged 15-19), Holyoke (31.9 births per 1,000 females aged 15-19), New Bedford (31.6 births per 1,000 females aged 15-19), Southbridge (29.8), and Lynn (29.2 births per 1,000 females aged 15-19).⁵³ Overall, the need for more expansive education on sexual health for youth, especially LGBTQ youth, and family planning was reported across the Commonwealth in both the community and government assessments.^{4,8,13}

III.K.5. Key Findings

- *Recent sexual engagement was prevalent among high schoolers, particularly for males and Hispanic students.*
- *Although most MA high schoolers reported to have ever received sexual health education at school, most also reported that they did not talk to their parents about sexuality, prevention of HIV or STDs, or pregnancy.*

- *Males and White non-Hispanic high school youth were more likely to use condoms in comparison to females and their Hispanic peers, and 9th graders and Hispanic students were the least likely to use any protection against pregnancy.*
- *The teenage birth rate is highest among Hispanic and Black non-Hispanic teens. High teenage birth rates were observed in the communities of Chelsea, Holyoke, Lawrence, Lynn, New Bedford, and Southbridge.*
- *More expansive youth sexual education and family planning is needed across MA.*

Section IV. Resources and Strengths of Communities and Health Care

In the previous sections, we summarized some of the challenges, barriers, and core needs that MA residents experienced, with a focus on mothers and children. Residents also reported on the strengths and resources present in their communities. In this section, we first summarize these community strengths, followed by a more focused summary of high-quality health care.

IV.A. Community

IV.A.1. Sense of Community

Across the Commonwealth, several focus group participants and key informant interviewees reported that one of the biggest strengths of the communities they lived and worked in was the sense of community among residents.^{15,17,18,24,25} For example, in North Central MA, focus group participants reported how residents were always willing to help each other,²⁵ and in Boston, the relationships among community members were considered important community resources.²⁴ Relatedly, in Northeast MA, Greater Lowell, focus group participants and key informant interviewees reported how family and community bonds among residents were key strengths of their community, with residents coming together when needed.¹⁸ A similar sentiment was found in both Southeast and Western MA (i.e., Berkshire County), as focus group participants and key informant interviewees mentioned that residents had a desire to make a difference within their communities,¹⁵ and work together to create positive change, even when resources are limited.¹⁷

IV.A.2. Cultural Diversity

As reported in Section 3.1, pockets of racial and ethnic diversity exist across the Commonwealth, and focus group participants from those areas reported that cultural diversity was one of their communities' biggest strengths.^{8,16-18,23} In the Greater Lowell area, residents noted diversity as being one of their community's top strengths, mentioning how they appreciate their community's history and culture.¹⁸ In the Greater Lawrence area, focus group participants perceived their community to be racially diverse, and valued the sense of cohesion among different racial and ethnic groups.⁸ In Southeast MA, key informant interviewees reported a sense of community among residents of different cultures and how they worked together to better their community.¹⁷ Finally, focus group participants in Boston also noted

diversity, both culturally and linguistically as a strength of their communities,^{16,23,24} with residents mentioning that Boston’s neighborhoods are vibrant, filled with rich cultures.¹⁶

IV.A.3. Community Organizations and Programming

Throughout the community and government assessments, focus group participants and key informant interviewees reported the need for increased resources within their communities, including opportunities to receive social support,^{4,12,21,22} participation in programs that are focused on physical activity,^{7,8,16,18} and after school programs that are inclusive of CYSHCN;²⁴ yet, across several regions, residents highlighted the existing community organizations in their neighborhoods, rather than the gaps.^{8,15,16,23,25} For example, in North Central MA, residents valued places where community members are able to come together, including youth, senior, and veterans centers, as well as faith-based organizations.²⁵ Similarly, residents from Western MA (i.e., Berkshire County) reported several community resources, including programs that encouraged physical activity and wellness along with community suppers,¹⁵ and in Boston, residents valued youth centers (e.g., Boys and Girls Club) and faith-based organizations.²⁴ Overall, in regions across the Commonwealth, community organizations were seen as strengths of one’s community and were valuable resources^{8,22,24,25} with key informant interviewees from Boston mentioning that even with limited funds, these organizations do incredible work.²⁴

IV.A.4. Housing and Neighborhoods

Although community assessments in Boston,²⁴ Central MA,²⁵ and Western MA (i.e., Hampden County)²² reported concerns over poor housing conditions, focus group participants from both Northeast (i.e., Greater Lowell),⁷ and North Central MA²⁵ reported that since 2015, anti-smoking policies have gone into effect in many communities making public units and privately-owned properties smoke-free. Moreover, focus group participants in Greater Lowell¹⁸ reported that one of the biggest strengths of their communities was quiet and safe neighborhoods.

IV.A.5. Educational Institutions

Given that MA tops the U.S. educational rankings,¹ it was not surprising that several residents reported a strength of their communities to be number of educational institutions available to residents, including universities²³ and community colleges.²⁵ Moreover, focus group participants from Northeast MA (i.e., Greater Lowell) reported that one of their community’s strengths was “good schools.”¹⁸

IV.A.6. Nutrition Resources

Through both community and government assessments, we found that several regions across the state had limited access to healthy foods and were deemed food deserts, including Boston,² Northeast MA,^{2,18} Central MA,⁹ Western MA,^{12,15,28,29} and Southeast MA.² Despite this, several residents reported that meal delivery programs (i.e., Meals on Wheels),^{13,15,25} food pantries and community kitchens,²⁵ as well as free summer lunch programs for youth¹³ were valuable resources in their communities. Key informant interviewees in both Southeast MA and Boston reported an increase in the number of local farmers’ markets^{17,24} and in Boston specifically, that the number of community gardens increased with food pantries offering more produce to residents.²⁴ Finally, in several communities, fruits and vegetables

have been made more accessible to those living on low-income as purchases can be made with food stamps and WIC at several local farmers' markets throughout the Commonwealth.^{24,55}

IV.A.7. Outdoor Space

Across multiple regions, Commonwealth residents reported that a strength of their communities was the natural beauty of the region in which they lived attracting them to be outside and promoting engagement in outdoor recreation activities.^{17,24,25} For example, residents from North Central MA valued the accessibility of green spaces and outdoor recreational opportunities, such as trails and bike lanes,²⁵ and in the Southeast,¹⁷ key informant interviewees remarked on the positive influence that the ocean has on residents who live close by. Similarly, in Boston, residents valued the increasing greenspace in several neighborhoods, including Hyde Park, Mattapan, South Boston, and Dorchester with youth focus group participants mentioning that several local parks were within walking distance to where they lived.²⁴

IV.A.8. Key Findings

- *Focus group participants and key informant interviewees across MA reported that one of the biggest strengths of the communities they lived and worked in, was the sense of community among residents themselves. In more racially and ethnic diverse communities, focus group participants reported that cultural diversity was one of their communities' biggest strengths.*
- *Across MA, residents reported that the existing community organizations within their neighborhoods were valued and seen as resources to their communities. Educational institutions and nutrition resources including meal delivery programs, food pantries, community kitchens, community gardens, and local farmers' markets were noted as particular strengths.*
- *The natural beauty of MA, including the increasing amount of greenspace in some urban areas was an important feature of the community, attracting residents to be outside.*

IV.B. Health Care

IV.B.1. Greater Access, High-Quality Services, and Collaboration

As reported in Section 3.4., both residents and key informant interviewees mentioned that lack of coverage,^{2,7,12,14} as well as provider and service shortages,^{2,8,9,12,13,15,24,25} were barriers to residents receiving health care for MA residents. Despite these barriers and needs, several residents across the state reported on the strengths of receiving health care in MA, including greater accessibility to health care services,^{7,25} high-quality services,^{7,16,21,23-25} and collaboration between hospitals.^{7,21} For example, in North Central MA, focus group participants and key informant interviewees reported an improvement in dental services noting easier access and more coverage.²⁵ In Northeast MA, residents noted improved access to insurance, as well as greater accessibility to health care services for individuals who have MassHealth.⁷ Residents of Boston, North Central MA, Western MA (i.e., Berkshire County and Springfield), and Greater Lowell valued the high-quality health care services they received at hospitals^{7,23-25} and community health care centers,^{21,23,24} with residents in Western MA (i.e., Berkshire County) reporting that they received compassionate care, making them feel like a person instead of a number.¹⁵ Moreover, focus group participants in Greater Lowell reported collaboration, including communication between community hospitals, providers, and residents to be a top strength of receiving

health care in Northeast MA.⁷ Finally, Western MA focus group participants were grateful for quality EI services, stating that EI was “more helpful than the doctors’ offices.”²²

IV.B.2. Culturally Competent Care

Through the community assessments, we learned that increased culturally competent care was identified as a need across the Commonwealth overall,^{7,9,12,14,18,25,27,28} yet existing culturally competent care was noted as a strength of the MA health care system, particularly in specific regions, including Barnstable County,¹³ Springfield in Western MA,²¹ and Greater Lowell in Northeast MA.⁷ MA deploys public health workers known as Community Health Workers (CHWs) across the state to apply their understanding of the experience, language, and/or culture of the populations they serve to aid navigation and use of the health care system for residents across the Commonwealth.² CHWs are trained to provide culturally competent care to populations who experience the greatest health inequities; thus, their goal is to bridge some of the cultural, and oftentimes language gaps, that may prevent MA residents from receiving health care.² Relatedly, in Greater Lowell, residents noted an increase in diversity among providers, as well as improved translation and interpreter services.⁷ In Springfield, residents reported that community and faith-based organizations supported refugees by helping connect immigrants to health services, including providing health care services at both churches and shelters.²¹ Finally, tribal members of the Mashpee Wampanoag Tribe receive culturally competent care at no charge through the full service health care center that is located in Mashpee.¹³

IV.B.3. Health-Related Education and Training

Overall, focus group participants and key informant interviewees reported the need for increased health-related educational and training opportunities among communities with respect to making healthy food choices,⁴ sexual health education for youth,^{4,8,13} and substance prevention education for youth;¹³ however, focus group participants of Berkshire County in Western MA, as well as of North Central MA, valued the substance use trainings they attended, which included a training on substance abuse held in Boston and a NARCAN training to prevent overdoses, respectively.^{15,25} Moreover, focus group participants of North Central MA appreciated the health fairs that were offered throughout their communities.²⁵

IV.B.4. Key Findings

- *Across the Commonwealth, residents reported on the strengths and resources of the health care services they received and provided, including greater access to health care services, high-quality services, and collaboration between hospitals.*
- *Culturally competent care was noted as a strength of the MA health care system, particularly in Barnstable County, Western MA, and Northeast MA.*
- *Focus group participants from Berkshire County and Central MA valued the substance use trainings they attended, with residents from North Central MA appreciating the health fairs that were offered throughout their communities.*

Section V. Next Steps

In this section, we provide recommendations for topical areas of focus for the Title V and MIECHV needs assessments that are underway. Recommendations are based on key themes that emerged from the needs assessment review that would benefit from further exploration with the Title V and MIECHV target populations.

- Homelessness among Families and Children – Massachusetts lacks affordable housing, and ensuring families have a safe and stable place to live is critical to their health and well-being.
- Provider Training – Moving forward with a racial equity lens, providers would benefit from training on how racism and oppression affects families, how to promote racial equity in their everyday work, and how to ensure they are delivering culturally competent care not only to participants from diverse cultures and racial and ethnic backgrounds, but also different abilities and disabilities, sexual orientation, and gender identities. Training on how providers can incorporate trauma-informed care with substance use disorder patients is also needed. Tailoring trainings to specific communities' needs would ensure that providers can best serve their communities and the families that live there.
- Maternal Postpartum Support and Guidance – Increased programming focused on providing new mothers with support and guidance, especially for young mothers of color and mothers living on low-income was needed. Taking a closer look to determine whether existing programs that target these populations are rooted within a culturally competent framework, may be helpful to understanding the variation in these vulnerable mothers' access to and participation in programs, as well as their health-related outcomes and overall well-being.
- EI and Infants Diagnosed with NAS – It may be useful to take a closer look at variation in EI referrals to maximize take-up for these vulnerable infants without increasing out-of-pocket expenses for their families.
- Nutrition Resources – Ensuring equitable access to affordable fresh foods across the state is important for families' health and well-being.
- Community Programming for Children and Youth – Increased programming focused on providing children, youth, and families with low cost and safe opportunities to be physically active, as well as structured out-of-school time activities for youth, including CYSHCN was needed. Taking stock of the existing programs that target these populations to better understand accessibility and patterns of use across the state may be a helpful next step.
- EL Students – Students who are ELs struggle in school and have a higher prevalence of academic failure. Taking a closer look at the services that are available and accessible to this population, focusing on EI, Head Start, and other early childhood care and education programs, as well as programs for school-age children to continue to support their learning needs is critical for their future success.
- Community Diversity and Sense of Community – To bolster community cohesion among MA residents, programs should encourage and harness the celebrated racial and ethnic diversity and strong sense of community that exists in neighborhoods across the Commonwealth.

In this needs assessment review, we aimed to understand the health-related needs and barriers that MA residents encountered. A critical piece of this review was highlighting, as relevant, how racial and ethnic,

regional, and socioeconomic disparities are differentially linked to residents' health and well-being with a focus on mothers and children and youth, including CYSHCN. This review provides useful information and context for the next stages of the Title V and MIECHV needs assessments.

References

To access references, use this link: <https://tufts.box.com/v/TuftsMANeedsAssessmentReview>

1. The Annie E. Casey Foundation. 2019 Kids Count Data Book | State Trends in Child Well-Being. <https://www.aecf.org/m/resourcedoc/aecf-2019kidscountdatabook-2019.pdf>. Accessed June 1, 2019.
2. Massachusetts Department of Public Health. 2017 Massachusetts State Health Assessment. <https://www.mass.gov/files/documents/2017/11/03/2017%20MA%20SHA%20final%20compressed.pdf>. Accessed June 1, 2019.
3. National Institute on Drug Abuse. Opioid Summaries by State. 2018 Opioid-Involved Overdose Death Rates (per 100,000 people) - Massachusetts. <https://www.drugabuse.gov/drugs-abuse/opioids/opioid-summaries-by-state>. Accessed July 1, 2019.
4. Massachusetts Department of Public Health | Executive Office of Health and Human Services. Maternal and Child Health Services Title V Block Grant: Massachusetts - FY 2016 Application/FY 2014 Annual Report. 2016. <https://tufts.box.com/s/d3vbj1fpvkzp9guk4zcxxd09477aum9>.
5. Mass.gov. Massachusetts Home Visiting Initiative (MHVI). 2019; <https://www.mass.gov/massachusetts-home-visiting-initiative-mhvi>.
6. U.S. Census Bureau. Age and Sex | 2013-2017 American Community Survey 5-Year Estimates. 2017. <https://tufts.box.com/s/sd1swriv60vfv75tgmo2rb4vhgiwvv4n>.
7. Lowell General Hospital. Greater Lowell Community Health Needs Assessment. 2016. <https://tufts.box.com/s/y87hb9lqh4bcezv4ejvtgh2cy9knjy67>.
8. Lawrence General Hospital, Greater Lawrence Family Health Center. Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment. 2016. <https://tufts.box.com/s/ugy99ln6n50vnqdy3st9avu091i15n3y>.
9. City of Worcester Division of Public Health, Fallon Health, UMass Memorial Medical Center. Greater Worcester Community Health Assessment | 2018 CHA. 2018. <https://tufts.box.com/s/qfue515sydi51txilqzdpsvs3cbbzwx1>.
10. Boston Public Health Commission Research and Evaluation Office. Health of Boston Report | 2016-2017. 2016-2017. <https://tufts.box.com/s/puf3s98q21vt877l63jnfq1kvs9p42f7>.
11. U.S. Census Bureau. ACS Demographic and Housing Estimates | New Bedford, MA. 2013-2017. <https://tufts.box.com/s/0kkcil0hdaejktszeykr9qfzw14s7odv>.
12. Partners for a Healthier Community, Collaborative for Educational Services, Pioneer Valley Planning Commission. Holyoke Medical Center Community Health Needs Assessment | 2016. 2016. <https://tufts.box.com/s/311i1yxqcisoyxuulo182wwyta4t1wdl>.
13. Cape Cod Hospital, Falmouth Hospital. Community Health Needs Assessment Report and Implementation Plan | 2017-2019. 2016. <https://tufts.box.com/s/vfpm6w7lyd2cclx033f4pwuxmipws1f4>.
14. Borges DR, DeArruda J, McCarthy MP. Saint Anne's Hospital Community Health Needs Assessment | 2018. 2018. <https://tufts.box.com/s/we1dljghcdxsk03xngotl233qpr71wvm>.
15. Berkshire Health Systems. Berkshire County Community Health Needs Assessment. 2018. <https://tufts.box.com/s/bilj8x8y7wjhzekgy3jtdrgr8kjfrd4y>.

16. Boston Medical Center, Health Resources in Action. Boston Medical Center Community Health Needs Assessment Final Report | July 2016. 2016. <https://tufts.box.com/s/wh09rdrrnif6kj7kevsj7y3vsvy54m6mg>.
17. Borges DR, Marini AM, McCarthy MP. Southcoast Health Community Needs Assessment. 2016. <https://tufts.box.com/s/vtyo1z7gitdukvmm2c71ueptq7q235gu>.
18. Community Teamwork. Community Needs Assessment. 2017. <https://tufts.box.com/s/k4uqzvo3p1ewztd8wsxpzdx2xrzp76t8>.
19. University of Massachusetts Donahue Institute and Massachusetts Department of Public Health. Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Initiative 2016 Needs Assessment. 2016. <https://tufts.box.com/s/ivximys6w5i5km492iq4fd68iyovtfyz>.
20. U.S. Department of Housing and Urban Development. Affordable Housing. 2019; https://www.hud.gov/program_offices/comm_planning/affordablehousing/.
21. Partners for a Healthier Community, Collaborative for Educational Services, Pioneer Valley Planning Commission. Shriners Hospitals for Children Springfield Community Health Needs Assessment | 2016. 2016. <https://tufts.box.com/s/t0rhzxmdunn6sca17g609sroj28dxji4>.
22. Partners for a Healthier Community, Collaborative for Educational Services, Pioneer Valley Planning Commission. Baystate Medical Center Community Health Needs Assessment | 2016. 2016. <https://tufts.box.com/s/icd4xwqwt62smqfg2zsvmm88y6yqsap4>.
23. Boston Public Health Commission, Boston Alliance for Community Health. Boston Community Health Assessment. 2016. <https://tufts.box.com/s/ynpat358cjt4m9n3mci0w3mqibrah87>.
24. Health Resources in Action, Boston Children's Hospital. Boston Children's Hospital 2016 Community Health Needs Assessment Final Report. 2016. <https://tufts.box.com/s/99ep2kfqehseddsr9wc4kolwcy2oozke>.
25. Heywood Hospital, Athol Hospital, HealthAlliance Hospital, Joint Coalition on Health. Community Health Assessment of North Central Massachusetts. 2015. <https://tufts.box.com/s/7mu268kixqbx40vgxt6hkzyw9igvvun>.
26. Head Start State Collaboration Offices. Massachusetts Head Start State Collaboration Office | Annual needs Assessment Survey (2018-2019). 2019. <https://tufts.box.com/s/zquusoy4dxseskj18i0zgm9fs0cp82>.
27. The Fenway Institute, Boston Indicators. Equality and Equity Advancing the LGBT Community in Massachusetts. 2018. <https://tufts.box.com/s/vtzpu8qvn1x9o8vvovxqbfzgn6d2wfcc>.
28. Partners for a Healthier Community, Collaborative for Educational Services, Pioneer Valley Planning Commission. Community Health Needs Assessment Regional Executive Summary | 2016. 2016. <https://tufts.box.com/s/iksv81cbdg0b656ltpu7fhjvd88rss0u>.
29. Partners for a Healthier Community, Collaborative for Educational Services, Pioneer Valley Planning Commission. Health New England Community Health Needs Assessment | 2016. 2016. <https://tufts.box.com/s/9b10d7q79jongpu3cbje2jdvluozltox>.
30. Mass.gov. 2017 Report - Health & Risk Behaviors of Massachusetts Youth | Executive Summary. 2017; <https://www.mass.gov/files/documents/2019/01/09/health-and-risk-behaviors-mass-youth-2017.pdf>.
31. Mass.gov. 2015 Report - Health & Risk Behaviors of Massachusetts Youth | Executive Summary 2015; <https://www.mass.gov/files/documents/2016/09/vp/youth-health-risk-report-2015.pdf>.

32. Boustan LP. National Bureau of Economic Research Working Paper Series | Racial Residential Segregation in American Cities. 2013.
<https://tufts.box.com/s/x4mfti7zy1yhmp5xwbod4t7ipnsqv8fh>.
33. Executive Office of Health and Human Services, Massachusetts Department of Public Health. Maternal and Child Health Services Title V Block Grant: Massachusetts - FY 2019 Application/FY 2017 Annual Report. 2018. <https://tufts.box.com/s/54a82tw9far66a6vozajb11xnrxp86sv>.
34. MassHealth. MassHealth: Roadmap to 2014 | Affordable Care Transition Plan (Revised). 2013;
<https://www.mass.gov/files/documents/2017/12/18/aca-transition-plan-draft-05-01-13.pdf>.
Accessed May 1, 2019.
35. U.S. Census Bureau. 2018: American Community Survey 1-year Estimate Subject Tables. Selected characteristics of health insurance coverage in the United States. | TableID: S2701.
https://data.census.gov/cedsci/table?q=S2701&g=0400000US25_0100000US&tid=ACSST1Y2018.S2701&hidePreview=true. Accessed December 1, 2019.
36. Massachusetts Department of Public Health, Morely J. Scan of Community Health & Health Needs Assessment from Across Massachusetts, 2012-2017. 2017.
<https://tufts.box.com/s/fbfkwjnhup21wakok93ikf71x8hc5rqa>.
37. Kilpatrick SK, Ecker JL, Obstetricians ACo, Gynecologists. Severe maternal morbidity: screening and review. *American journal of obstetrics and gynecology*. 2016;215(3):B17-B22.
<https://tufts.box.com/s/r994mh6s4jnl1dylcuqu3a713f4n16sp>.
38. Centers for Disease Control and Prevention. Preterm Birth. 2019;
<https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm>.
39. Centers for Disease Control and Prevention. Birthweight and Gestation. 2019;
<https://www.cdc.gov/nchs/fastats/birthweight.htm>.
40. Centers for Disease Control and Prevention. Infant Mortality. 2019;
<https://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm>.
41. Centers for Disease Control and Prevention. National Center for Health Statistics | Stats of the State of Massachusetts. 2017;
<https://www.cdc.gov/nchs/pressroom/states/massachusetts/massachusetts.htm>.
42. Centers for Disease Control and Prevention. Childhood Lead Poisoning Prevention | Blood Lead Levels in Children. 2019; <https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm>.
43. Centers for Disease Control and Prevention. Defining Childhood Obesity. 2018;
<https://www.cdc.gov/obesity/childhood/defining.html>.
44. The U.S. Department of Health and Human Services. Executive Summary | Physical Activity Guidelines for Americans 2nd Edition. 2018.
<https://tufts.box.com/s/c60jlabvwf11vqor2xqjjuywf4xgyp84>.
45. Economic Policy Institute. The cost of child care in Massachusetts. . 2019;
<https://www.epi.org/child-care-costs-in-the-united-states/#/MA>.
46. Sugarman J, Geary C. English Learners in Massachusetts - Demographics, Outcomes, and State Accountability Policies. 2018. <https://tufts.box.com/s/n59ut9pws3fjin50qwgz8oeuf0w7jlu>.
47. Massachusetts Department of Elementary & Secondary Education. Special Education | Disability Definitions and Related Links. 2018; <http://www.doe.mass.edu/sped/definitions.html>.
48. Massachusetts Department of Education. IEP Process Guide. 2001.
<https://tufts.box.com/s/7wdz27kurpmwteaethqwzuwfd8zi5tj4>.

49. Massachusetts Department of Elementary & Secondary Education. 2017-2018 Dropout Report (District) All Students. 2019; <http://profiles.doe.mass.edu/statereport/dropout.aspx>.
50. Stanford Children's Health. Teen Suicide. 2019; <https://www.stanfordchildrens.org/en/topic/default?id=teen-suicide-90-P02584>.
51. Partners for a Healthier Community I. Baystate Health - Public Health Issue Brief - Opioid Overdose in Western Massachusetts | Springfield and Western Counties compared to statewide data. 2015. <https://tufts.box.com/s/0k4gfy5p1w349xop6cy8j2cuxo0w2fdg>.
52. Taylor-Seehafer M, Rew L. Risky sexual behavior among adolescent women. *Journal for Specialists in Pediatric Nursing*. 2000;5(1):15-25. <https://tufts.box.com/s/02rx7hgiup9oq4n5zjg9crws3mkwz3r0>.
53. Massachusetts Department of Public Health. Massachusetts Births 2016. 2018; <https://www.mass.gov/files/documents/2018/06/01/birth-report-2016.pdf#page=18&zoom=100,0,86>.
54. Massachusetts Department of Public Health. Massachusetts Births 2009. 2011; <https://www.mass.gov/files/documents/2016/07/up/birth-report-2009.pdf>.
55. Mass.gov. SNAP Benefits Welcome at Many Massachusetts Farmers' Markets. 2016; <https://blog.mass.gov/blog/food-and-drink/snap-benefits-welcome-at-many-massachusetts-farmers-markets/>.
56. Mass.gov. Bureau of Family Health and Nutrition (BFHN). 2019; <https://www.mass.gov/orgs/bureau-of-family-health-and-nutrition>.
57. McPherson M, Arango P, Fox H, et al. A new definition of children with special health care needs. *Pediatrics*. 1998;102(1):137-139. <https://tufts.box.com/s/7by2qkuk13i2wbun6x1n4m4o6chom3oz>.
58. Mass.gov. What is a Community Health Worker? 2019; <https://www.mass.gov/service-details/what-is-a-community-health-worker>.
59. Mass.gov. Massachusetts Department of Children & Families. 2019; <https://www.mass.gov/orgs/massachusetts-department-of-children-families>.
60. Mass.gov. Department of Transitional Assistance. 2019; <https://www.mass.gov/orgs/department-of-transitional-assistance>.
61. Mass.gov. Early Intervention Division (EI). 2019; <https://www.mass.gov/orgs/early-intervention-division>.
62. Mass.gov. Environmental Justice Communities in Massachusetts. 2019; <https://www.mass.gov/info-details/environmental-justice-communities-in-massachusetts>.
63. Boston Public Health Commission. Health Disparities vs. Health Inequities. . 2019; <https://www.bphc.org/whatwedo/health-equity-social-justice/what-is-health-equity/Pages/Health-Disparities-vs.-Health-Inequities.aspx>.
64. Mass.gov. Department of Public Health. 2019; <https://www.mass.gov/orgs/department-of-public-health>.
65. Health Resources & Services Administration | Maternal & Child Health. Home Visiting. 2019; <https://mchb.hrsa.gov/maternal-child-health-initiatives/home-visiting-overview>.
66. Mass.gov. Overdose Prevention and Naloxone Access. 2019; <https://www.mass.gov/overdose-prevention-and-naloxone-access>.

67. Stanford Children's Health. Neonatal Absitence Syndrome. 2019; <https://www.stanfordchildrens.org/en/topic/default?id=neonatal-abstinence-syndrome-90-P02387>.
68. Lawrence K, Sutton S, Kubisch A, Susi G, &, Fullbright-Anderson K. Structural Racism and Community Building. 2004. <https://tufts.box.com/s/nge7320mtbdwbiqzcn8e3juc7x1nlgoh>.
69. Centers for Disease Control and Prevention. About SUID and SIDS. 2018; https://www.cdc.gov/sids/about/index.htm?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fsids%2FAboutSUIDandSIDS.htm.
70. U.S. Department of Agriculture | Food and Nutrition Service. Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). 2019; <https://www.fns.usda.gov/wic>.

Appendix A—Acronyms

BMI: Body mass index

BFHN: Bureau of Family Health and Nutrition

CDC: Centers for Disease Control and Prevention

CYSHCN: Children and Youth with Special Health Care Needs

CHWs: Community Health Workers

DCF: Department of Children and Families

DTA: Department of Transitional Assistance

EI: Early Intervention

EBLLs: Elevated Blood Lead Levels

ELA: English Language Arts

ELs: English Learners

EJ: Environmental Justice

ED: Emergency Department

HHI: Household Income

HIV/AIDS: Human Immunodeficiency Virus/ Acquired Immunodeficiency Virus

IEP: Individualized Education Program

IMR: Infant Mortality Rate

LGB: Lesbian, Gay, and Bisexual

LGBTQ: Lesbian, Gay, Bisexual, Transgender, and Queer/Questioning

MCAS: Massachusetts Comprehensive Assessment System

MDPH: Massachusetts Department of Public Health

MHVI: Massachusetts Home Visiting Initiative

MIECHV: Maternal, Infant, and Early Childhood Home Visiting Program

MAT: Medication Assisted Treatment

NAS: Neonatal Abstinence Syndrome

PPD: Postpartum Depression

SES: Socioeconomic Status

SMM: Severe Maternal Morbidity

SNAP: Supplemental Nutrition Assistance Program

SUID: Sudden Unexpected Infant Death

HUD: United States Department of Housing and Urban Development

YSHCN: Youth with Special Health Care Needs

WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children

Appendix B—Glossary

Adequate physical activity for children and adolescents: The CDC recommends that children and youth engage in moderate-to-vigorous physical activity for 60 minutes daily.⁴⁴

Body mass index: As defined by the CDC,⁴³ BMI is calculated by dividing a person’s weight in kilograms by the square of height in meters. For children and teens, BMI is age- and sex-specific and is often referred to as BMI-for-age. A child’s weight status is determined using an age- and sex-specific percentile for BMI rather than the BMI categories used for adults.

Bureau of Family Health and Nutrition: BFHN provides programs and services ensuring the health of the Commonwealth’s mothers, infants, children and youth, including CYSHCN and their families.⁵⁶

Childhood Obesity: As defined by the CDC,⁴³ when a children’s BMI is at the 95th percentile or greater, they are considered obese.

Children and Youth with Special Health Care Needs: As defined by McPherson et al.,⁵⁷ “children with special health care needs are those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally.”

Community Health Workers: CHWs are public health workers who apply their unique understanding of the experience, language and/or culture of the populations they serve in order to carry out one or more of the following roles: 1) Providing culturally appropriate health education, information and outreach in community-based settings, such as homes, schools, clinics, shelters, local businesses and community centers; 2) Bridging and/or culturally mediating between individuals, communities and health and human services, including actively building individual and community capacity; 3) Assisting people to access the services they need; 4) Providing direct services, such as informal counseling, social support, care coordination and health screenings; and 5) Advocating for individual and community needs.⁵⁸

Cost Burdened: As defined by HUD,²⁰ families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care.

Department of Children and Families: DCF works in partnership with families and communities to keep children safe from abuse and neglect. In most cases, DCF is able to provide supports and services to keep children safe with parents or family members. When necessary, DCF provides foster care or finds new permanent families for children through kinship, guardianship or adoption.⁵⁹

Department of Transitional Assistance: DTA assists and empowers low-income individuals and families to meet their basic needs, improve their quality of life, and achieve long term economic self-sufficiency. DTA serves one in nine residents of the Commonwealth with direct economic assistance (cash benefits) and food assistance (SNAP benefits), as well as workforce training opportunities.⁶⁰

Early Intervention: EI is a program for infants and toddlers (birth to 3 years old) who have developmental delays or are at risk of a developmental delay.⁶¹

Elevated Blood Lead Levels: As defined by the CDC,⁴² EBLs are blood levels equal to or above 5 µg/dl that are harmful to children.

Environmental Justice Communities: Based on U.S. census data, environmental justice communities are those where the annual median income is equal to or less than 65% of the statewide median, or 25% or more of its residents identify as race other than White, or 25% or more of its households have no one over 14 years who speaks English well.⁶²

Health Literacy: The degree to which individuals can obtain, process, and comprehend any relevant basic health information when making decisions about one's health and the care needed.⁹

Health Inequities vs. Health Disparities: Inequities are differences that are unnecessary and avoidable, rooted in social injustices (i.e., structural racism), resulting in some populations being more vulnerable than others with respect to experiencing negative health outcomes. Disparities are differences that are unavoidable (i.e., rooted in genetics), resulting in health outcome differences between populations.⁶³

Infant Mortality Rate: As defined by the CDC,⁴⁰ IMR is the number of infant deaths per 1,000 live births before their first birthday.

Low Birthweight: As defined by the CDC,³⁹ this is defined as an infant weighing less than 2,500 grams at birth.

Massachusetts Department of Public Health: MDPH promotes the health and well-being of all residents by ensuring access to high-quality public health and healthcare services, and by focusing on prevention, wellness, and health equity in all people.⁶⁴

Massachusetts Home Visiting Initiative: MHVI provides evidence-based home visiting services to families across the state through local service agencies. It is part of MIECHV.⁵

Maternal, Infant, and Early Childhood Home Visiting Program: MIECHV gives pregnant women and families, particularly those considered at-risk, necessary resources and skills to raise children who are physically, socially, and emotionally healthy and ready to learn.⁶⁵

NARCAN: the brand name of Naloxone, which blocks the effects of opioids such as heroin, fentanyl, oxycodone, hydrocodone, codeine, and methadone in the brain.⁶⁶

Neonatal Abstinence Syndrome: this indicates a host of problems that infants experience when withdrawing from exposure to narcotics.⁶⁷

Preterm Birth: As defined by the CDC,³⁸ this is defined as an infant being born prior to 37 weeks of gestation.

Racial Residential Segregation: Defined as the separation of racial groups in urban space.³²

Severe Maternal Morbidity: defined as significant unexpected (short- or long-term) consequences to a women's health resulting from giving birth.³⁷

Structural Racism: According to the Aspen institute,⁶⁸ structural refers to "a system in which public policies, institutional practices, cultural representations, and other norms work in various, often reinforcing ways to perpetuate racial group inequity. It identifies dimensions of our history and culture

that have allowed privileges associated with “whiteness” and disadvantages associated with “color” to endure and adapt over time.”

Sudden Unexpected Infant Death: According to the CDC,⁶⁹ this term used to describe the sudden and unexpected death of a baby less than 1 year old in which the cause was not obvious before investigation. These deaths often happen during sleep or in the baby’s sleep area.

The Special Supplemental Nutrition Program for Women, Infants, and Children: According to the USDA,⁷⁰ WIC provides federal grants to states for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk.

Appendix C—Assessments by Region^c

To access references, you will need this link: <https://tufts.box.com/v/TuftsMANeedsAssessmentReview>

Massachusetts

Massachusetts Department of Public Health. Massachusetts State Health Assessment. 2017. <https://tufts.app.box.com/s/h8xkz64bxwikat2x6b0qg0dtizfaiklc>.

Executive Office of Health and Human Services, Massachusetts Department of Public Health. Maternal and Child Health Services Title V Block Grant: Massachusetts - FY 2016 Application/FY 2014 Annual Report. 2016. <https://tufts.app.box.com/s/42u9uzcprmp73gjippbebs7y8bvwsz47>.

University of Massachusetts Donahue Institute, Massachusetts Department of Public Health. Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Initiative 2016 Needs Assessment. 2016. <https://tufts.box.com/s/xmtp0g3fo18zyjx2dq7030z0ch55v9g>.

Head Start State Collaboration Offices. Massachusetts Head Start State Collaboration Office | Annual needs Assessment Survey (2018-2019). 2019. <https://tufts.box.com/s/3vnanwjysro3xm52qfdm9r162l555tds>.

The Fenway Institute, Boston Indicators. Equality and Equity Advancing the LGBT Community in Massachusetts. 2018. <https://tufts.app.box.com/s/pg4ba457twewyjsikclqte7opj9ylh>.

Executive Office of Health and Human Services, Massachusetts Department of Public Health. Maternal and Child Health Services Title V Block Grant: Massachusetts - FY 2019 Application/FY 2017 Annual Report. 2018. <https://tufts.app.box.com/file/510931009372>.

Massachusetts Department of Public Health, Morely J. Scan of Community Health & Health Needs Assessment from Across Massachusetts, 2012-2017. 2017. <https://tufts.box.com/s/kdw4nk11rr5ghb6co0y74q365vuq2d92>.

Barnstable County

Cape Cod Hospital, Falmouth Hospital. Community Health Needs Assessment Report and Implementation Plan | 2017-2019. 2016. <https://tufts.box.com/s/s8vxxzs2lgll49eyjlnomp5gcxp2tkh0>.

^c Assessments are listed in the order they appear in the review.

Boston

Boston Public Health Commission Research and Evaluation Office. Health of Boston Report | 2016-2017. 2016-2017. <https://tufts.box.com/s/3pnb0rton9kugzzmcwg7arbxro9qodtp>.

Boston Medical Center, Health Resources in Action. Boston Medical Center Community Health Needs Assessment Final Report | July 2016. 2016. <https://tufts.box.com/s/zw5kciyedmsbajct2spoz3iqs0iehg4v>.

Boston Public Health Commission, Boston Alliance for Community Health. Boston Community Health Assessment. 2016. <https://tufts.box.com/s/fkngv0z5zphs3ty0euhzfbvcg9jpv5vb>.

Health Resources in Action, Boston Children's Hospital. Boston Children's Hospital 2016 Community Health Needs Assessment Final Report. 2016. <https://tufts.box.com/s/4d6lzapzqv53zyj592y69a0d1ihxbefm>.

Central Massachusetts

City of Worcester Division of Public Health, Fallon Health, UMass Memorial Medical Center. Greater Worcester Community Health Assessment | 2018 CHA. 2018. <https://tufts.box.com/s/3a4bsd4cdasd6i62f7osqitj0jpuwaa>.

Heywood Hospital, Athol Hospital, HealthAlliance Hospital, Joint Coalition on Health. Community Health Assessment of North Central Massachusetts. 2015. <https://tufts.box.com/s/zk7vwizociu2zq2agwkax20ngn1qqwyw>.

Northeast Massachusetts

Lowell General Hospital. Greater Lowell Community Health Needs Assessment. 2016. <https://tufts.box.com/s/eesyamxoiixsd68xpxukr28rebqq2rat>.

Lawrence General Hospital, Greater Lawrence Family Health Center. Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment. 2016. <https://tufts.box.com/s/0x3ykrpgzvo4xt8l8f7f5evr1ezept>.

Community Teamwork. Community Needs Assessment. 2017. <https://tufts.box.com/s/wd3j6zqo11d3btex2t6pawxoggs23tuo>.

Southeast Massachusetts

Borges DR, DeArruda J, McCarthy MP. Saint Anne's Hospital Community Health Needs Assessment | 2018. 2018. <https://tufts.box.com/s/0bra0iffkhn2led88rx9skuomjuu5yco>.

Borges DR, Marini AM, McCarthy MP. Southcoast Health Community Needs Assessment. 2016. <https://tufts.box.com/s/v9c61t48nlehd623lrt773vu6uwxopet>.

Western Massachusetts

Partners for a Healthier Community, Collaborative for Educational Services, Pioneer Valley Planning Commission. Holyoke Medical Center Community Health Needs Assessment | 2016. 2016.
<https://tufts.box.com/s/xi6584s9txrfl35as6f9eepcurlf77ji>.

Berkshire Health Systems. Berkshire County Community Health Needs Assessment. 2018.
<https://tufts.box.com/s/qpzrfowsj7p89dbejdoxl8qdoeiaiz5t>.

Partners for a Healthier Community, Collaborative for Educational Services, Pioneer Valley Planning Commission. Shriners Hospitals for Children Springfield Community Health Needs Assessment | 2016. 2016. <https://tufts.box.com/s/mu5uad9am0vfo7hjvrbrlgggu64usskah>.

Partners for a Healthier Community, Collaborative for Educational Services, Pioneer Valley Planning Commission. Baystate Medical Center Community Health Needs Assessment | 2016. 2016.
<https://tufts.box.com/s/7fnf9wwfxs3ext8h5zrti26pxzie10rs>.

Partners for a Healthier Community, Collaborative for Educational Services, Pioneer Valley Planning Commission. Community Health Needs Assessment Regional Executive Summary | 2016. 2016.
<https://tufts.box.com/s/po0d19xjp28qywxmhi1wgc9nzifq19gd>.

Partners for a Healthier Community, Collaborative for Educational Services, Pioneer Valley Planning Commission. Health New England Community Health Needs Assessment | 2016. 2016.
<https://tufts.box.com/s/pon3u8ol3dshfo93c24d5u12vs74isn6>.

Partners for a Healthier Community I. Baystate Health - Public Health Issue Brief - Opioid Overdose in Western Massachusetts | Springfield and Western Counties compared to statewide data. 2015.
<https://tufts.box.com/s/l1i3vj21bbjhww6zi8bxv4j08ieh555y>.

Appendix II.2—Domains and Sub-Domains

Domain	Sub-Domain
SES	Poverty
	Unemployment
	Educational Attainment Less than High School Graduate
	Income Inequality
	Single Parent-Headed Households
	Publicly-Funded Health Care
	Public Assistance
Housing	Residential Instability
	Renter-Occupied Housing
	Homelessness*
Populations of Special Interest	Non-US-Born Mothers
	Incarcerated Parents*
	Births to Mothers
	Veterans
SUD	Alcohol*
	Illicit Drugs*
	Opioid Deaths
	Enrollment in MDPH-funded Substance Use Treatment
Crime	Violent Crime
Child Unintentional Injuries	SUIDs*
	Emergency Department Visits for Unintentional Injuries
Child Maltreatment	Substantiated Maltreatment
Adverse Perinatal Outcomes	Preterm Birth
	Low Birth Weight
	Infant Mortality
	Less than Adequate Prenatal Care
	Breastfeeding
	Substance Use During Pregnancy
	NAS
Pregnancy-Associated Mortality*	

Domain	Sub-Domain
Adverse Perinatal Outcomes	Mothers' Mental Health*
	Maternal Overweight & Obesity
	Short Interpregnancy Intervals*
Child Development & Health and School Outcomes	EI Enrollment
	Quality of Child Care*
	Asthma
	BLLs
	Overweight & Obesity
	School Quality
	Kindergarten Enrollment*
	District Enrollment of Special Populations
	Truancy
	Chronic Absenteeism
	CMSP Caseload*
	Behavioral Health Screening*
	Mental Health*
Academic Achievement	

Note: *Sub-domains for which data were either not available or not reported at the city/town-level

Appendix II.3— Crosswalk of State- and City/Town-Level Data Indicators

Domain	Sub-Domain	Data Indicator	State-Level Data	City/Town-Level Data
SES	Poverty	Percent of individuals living below the FPL in the past 12 months	✓	✓
		Percent of children under the age of 5 living below the FPL in the past 12 months	✓	✓
	Unemployment	Percent of population 16 years of age and older who were unemployed	✓	✓
	Educational Attainment Less than High School Graduate	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	✓	✓
		Percent of students in grades 9–12 who stopped going to high school out of all students enrolled	✓	NR
		Percent of population aged 18–24 who did not graduate from high school	✓	NR
		Percent of persons 25 and older without a high school diploma	✓	NR
	Income Inequality	Gini coefficient of income inequality	✓	✓
	Single Parent-Headed Households	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	✓	✓
	Publicly-Funded Health Care	Percent of women giving birth who received publicly financed prenatal care out of all live births	✓	✓
		Percent of children with special health care needs, aged 0–17, who received coordinated, ongoing, comprehensive care within a medical home	✓	— ^a
		Percent of children without special health care needs, aged 0–17, who received coordinated, ongoing, comprehensive care within a medical home	✓	—
	Public Assistance	Percent of families who received cash assistance from TAFDC out of all families	✓	✓
Percent of students categorized as economically disadvantaged out of all students enrolled		✓	NR ^b	

^a— = data not available at this level.

^bNR = city/town-level data available, but not reported.

Domain	Sub-Domain	Data Indicator	State-Level Data	City/Town-Level Data
Housing	Residential Instability	Percent of residents who lived in the same residence as the previous year ^c	✓	✓
	Renter-Occupied Housing	Ratio of renter-occupied to every 1 owner-occupied residence	✓	✓
	Homelessness	Count of homeless children and youth enrolled in MA public schools	✓	—
		Count of families applying for emergency assistance	✓	—
		Count of families entering shelters and hotels	✓	—
		Count of homeless unaccompanied children under the age of 18	✓	—
		Count of sheltered homeless unaccompanied children under the age of 18	✓	—
Percent of children < 6 years of age experiencing homelessness who were served by Head Start/EHS or McKinney-Vento-funded ECE programs	✓	—		
Populations of Special Interest	Non-US-Born	Percent of all residents who were non-US-born	✓	NR
		Count of new refugees and individuals with other qualifying immigration statuses in MA	✓	—
	Incarcerated parents	Percent of children who ever had a parent or guardian who served time in jail during their lifetime	✓	—
	Births to Mothers	Percent of mothers who were less than 20 years of age out of all live births	✓	✓
		Percent of mothers who were non-US-born out of all live births	✓	✓
		Percent of mothers who did not complete high school out of all live births	—	✓
		Percent of BIPOC out of all live births	—	✓
	Veterans	Percent of residents 18 years of age and older who were veterans	✓	✓

^c Reverse-score presented.

Domain	Sub-Domain	Data Indicator	State-Level Data	City/Town-Level Data
SUD	Alcohol	Prevalence rate: Alcohol use disorder in the past year among 12 and older	✓	—
	Illicit Drugs	Prevalence rate: Marijuana use in the past month among 12 and older	✓	—
		Prevalence rate: Cocaine use in the past year among 12 and older	✓	—
		Prevalence rate: Heroin use in the past year among 12 and older	✓	—
		Prevalence rate: Pain reliever misuse in the past year among 12 and older	✓	—
	Opioid Deaths	Average annual rate of occurrence of opioid overdoses per 100,000 residents	✓	✓
Enrollment to MDPH funded programs	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	✓	✓	
Crime	Violent Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	✓	✓
Child Unintentional Injuries	SUIDs	Rate of SUIDs per 100,000 live births	✓	—
	Emergency Department Visits for Unintentional Injuries	Rate of emergency department visits for children aged 0–3 associated with unintentional injuries per 100,000 same age residents	✓	NR
		Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	✓	✓
Child Maltreatment	Substantiated Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	✓	✓
Adverse Perinatal Outcomes	Preterm Birth	Percent of all births that were preterm, or born before 37 weeks, out of all live births	✓	✓
	Low Birth Weight	Percent of all births that were low birth weight, less than 2500g, out of all live births	✓	✓
	Infant Mortality	Death rate of infants under the age of 1 per 1,000 live births	✓	✓
	Less than Adequate Prenatal Care	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	✓	✓

Domain	Sub-Domain	Data Indicator	State-Level Data	City/Town-Level Data
Adverse Perinatal Outcomes	Breastfeeding	Percent of women who breastfed their infants during the hospital stay out of all live births	✓	—
		Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	—	✓
	Substance Use During Pregnancy	Percent of mothers who reported smoking during pregnancy out of all live births	✓	✓
		Percent of women smoking cigarettes or e-cigarettes during the last 3 months of pregnancy	✓	—
		Percent of women drinking alcohol 3 months before their pregnancy	✓	—
		Percent of women drinking alcohol 3 months before their pregnancy (level of drinking = 4 or more drinks per week)	✓	—
		Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	—	✓
	NAS	Rate of infants with NAS per 1,000 live births	✓	✓
	Pregnancy-Associated Mortality	Rate of the death of a woman while pregnant or within one year of termination of pregnancy, irrespective of the cause per 100,000 live births	✓	—
		Percent of pregnancy-associated deaths in which acute or chronic substance use contributed directly to the death as indicated on the death certificate	✓	—
	Mothers' Mental Health	Percent of women reporting always or often experiencing postpartum depression symptoms	✓	—
	Maternal Overweight & Obesity	Percent of mothers who were overweight or obese prior to pregnancy	✓	—
		Percent of mothers who were overweight or obese prior to pregnancy out of all live births	—	✓
Short Interpregnancy Intervals	Percent of mothers with a short interpregnancy interval (< 12 months) for mothers < 20 years of age	✓	—	
	Percent of mothers with a short interpregnancy interval (< 12 months) for mothers 20–34 years of age	✓	—	
	Percent of mothers with a short interpregnancy interval (< 12 months) for mothers > 34 years of age	✓	—	

Domain	Sub-Domain	Data Indicator	State-Level Data	City/Town-Level Data
Child Development & Health and School Outcomes	EI Enrollment	Average percent of children less than 3 years of age enrolled in EI out of same age residents	✓	✓
	Quality of Child Care	Percent of EEC programs that received a QRIS level 1, 2, 3, or 4	✓	—
	Asthma	Average percent of children in elementary and middle school affected by asthma per 100 students	✓	✓
		Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	✓	✓
	BLLs	Rate of children aged 9 months to less than 4 years who had estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	✓	✓
		Rate of children aged 9 months to less than 4 years who had confirmed BLLs ≥ 10 $\mu\text{g}/\text{dL}$ (poisoned) out of children screened for lead per 1,000 children	✓	NR
	Overweight & Obesity	Percent of overweight and obese children (< 5 years of age) of active WIC participants	✓	—
		Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	✓	✓
	School Quality	Whether school district requires assistance or intervention with respect to improving student performance	✓	✓
	Kindergarten Enrollment	Percent of students who were enrolled in a full day kindergarten program	✓	NR
District Enrollment of Special Populations	Percent of students who were ELs out of all students enrolled	✓	✓	
	Percent of students whose first language is not English out of all students enrolled	✓	NR	
	Percent of students with disabilities out of all students enrolled	✓	✓	
	Percent of students who were high needs out of all students enrolled	✓	✓	
Truancy	Percent of students who were truant with more than 9 unexcused absences out of all students enrolled	✓	✓	
Chronic Absenteeism	Percent of students who were absent 10% or more of their total number of student days of membership in a school out of all students enrolled	✓	✓	

Domain	Sub-Domain	Data Indicator	State-Level Data	City/Town-Level Data
Child Development & Health and School Outcomes	CMSP Caseload	Average annual count of non-disabled child MassHealth members	✓	—
		Average annual count of disabled child MassHealth members	✓	—
	Behavioral Health Screening	Percent of the total number of EPSDT and PPHSD claims that included a behavioral health screen for children 1 to 6 months	✓	—
		Percent of the total number of EPSDT and PPHSD claims that included a behavioral health screen for children 6 months to 2 years	✓	—
		Percent of the total number of EPSDT and PPHSD claims that included a behavioral health screen for children 3 years to 6 years	✓	—
		Percent of the total number of EPSDT and PPHSD claims that included a behavioral health screen for children 7 years to 12 years	✓	—
	Mental Health	Percent of 0–5-year-old MA children who experienced two or more adverse childhood experiences from the list of 9 ACEs	✓	—
		Percent of 6–11-year-old MA children who experienced two or more adverse childhood experiences from the list of 9 ACEs	✓	—
		Percent of 12–17-year-old MA children who experienced two or more adverse childhood experiences from the list of 9 ACEs	✓	—
	Academic Achievement	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	✓	✓
		Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	✓	✓

Appendix II.4—MIECHV Home Visiting Capacity Survey

Non-MIECHV coordinators only

Non-MIECHV coordinators and MIECHV coordinators only

Non-MIECHV coordinators and MIECHV HVs only

MIECHV coordinators and HVs only

MIECHV HVs only

Introduction

Evaluators from Tufts Interdisciplinary Evaluation Research (TIER) are collaborating with the MA Department of Public Health (MDPH) to conduct a needs assessment for the federal home visiting program (Maternal, Infant, and Early Childhood Home Visiting program [MIECHV]). As part of that work, we are interested in learning about all the home visiting programs that are currently operating in the Commonwealth.

The survey takes approximately 30-40 minutes to complete. This survey asks about: (a) your program model and services, (b) the populations your program serves, and (c) how your program interacts with other programs in your area. Some questions ask for background and demographic information about the families your program served during Fiscal Year 2019 (July 1, 2018 - June 30, 2019), such as total families served, percent enrolled prenatally, race and ethnicity, language, percent foreign-born, and percent DCF-involved. For these questions it will be helpful to have FY19 data (or FY19 reports) accessible to you while taking the survey. We realize that not all programs track of these data; if that is the case for your program, please provide us with your best estimate. Feel free to check with others in your program if you need more information while you are completing the survey.

Upon survey completion, you will be sent a \$5 gift card to Dunkin' Donuts! You also will be given the opportunity to enter your email address into a raffle for one of two \$100 Amazon gift cards.

Your answers to the survey will be kept confidential. Survey findings will be presented as a group--across all respondents; individual responses will not be shared outside of the research team.

If you have any questions at all about this study and your participation, please feel free to email or call Jessica Goldberg (jessica.goldberg@tufts.edu or 617.627.0105). By starting the survey, you are agreeing to participate in this study. And thank you! Data from this survey will help MDPH understand the scope of home visiting services across Massachusetts, service gaps, and potential opportunities to enhance home visiting at the state and local levels.

Home Visiting Program Survey

I. General Program Information

1. What is the name of your home visiting program? _____

3. For how many years have you worked in home visiting?

- < 1 year
- 1-3 years
- 4-6 years
- 7-10 years
- 11-15 years
- 16-20 years
- 21-25 years
- > 25 years

4. Do you speak any languages other than English with the families you provide services to?

- Yes
- No

5. What are the main focus areas of your program? (check all that apply)

- Breastfeeding
- Child early learning (literacy and/or play development)
- Child physical development (physical therapy, occupational therapy, etc.)
- Child socioemotional development
- Child/family physical health concerns
- Child's/family's safety (includes domestic violence)
- Crisis management
- Economic stability
- Education/support around pregnancy and delivery
- Educational achievement
- Families' access to other services (i.e., filling out applications, taking them to appointments)
- Issues related to substance use/misuse
- Material support to families (e.g., clothes, money, diapers, books)
- Mental health counseling for child
- Mental health counseling for parent
- Parental isolation
- Parenting (including support around behavior management, parent-child interaction, etc.)
- Referrals to other services
- Other (please specify) _____

6. During state fiscal year 2019 (FY19: July 1, 2018 to June 30, 2019), how many families did your program serve? _____

7. At any point during FY19 was your program unable to enroll new families because of insufficient capacity?

- Yes
- No

8. When families cannot enroll in your program for some reason (e.g., ineligible, no capacity, etc.), is your staff generally able to find them a spot in another home visiting program in your catchment area?

- Yes
- No

If yes, proceed to question 8a. If no, skip to question 9.

8a. To which other home visiting programs does your program most often refer families? _____

II. Program Eligibility

9. From the list below, please check all eligibility criteria (other than catchment area) families **must meet** in order to enroll in your home visiting program:

- Child age
If yes, specify criteria _____
- Parent age
If yes, specify criteria _____
- Parenting status (check all that apply)
 - Prenatal
 - Parenting
 - First time parent only
 - Currently has custody
 - Foster parent
- Certain risk factors (if yes, check all that could apply)
 - Child developmental concern
 - Child maltreatment/DCF involvement
 - Child physical health concern
 - Court involvement
 - Domestic violence
 - Housing instability/homelessness
 - Mental health concerns
 - Parent developmental concern
 - Parent physical health concern
 - Poverty
 - Substance use
 - Other (please specify) _____

10. What is the maximum amount of time families can receive services from your program (e.g., three years from enrollment, when child enters kindergarten, after 12 sessions) _____

III. Population Served/Community Needs

11. In FY19, what percent of families enrolled prenatally?

- We don't serve families prenatally
- Less than 10%
- 10-25%
- 26-50%
- 51-75%
- 76-100%

12. In FY19, what percent of families who enrolled were pregnant with, or parenting, their *first* child (as opposed to already having had one or more child)?

- Less than 10%
- 10-25%
- 26-50%
- 51-75%
- 76-100%

13. In FY19, what percentage of the families served by your program identify as Hispanic?

- Less than 10%
- 11-25%
- 26-50%
- 51-75%
- 76-100%

14. In FY19, what percentage of the families served by your program self-identify as each of the following racial categories (note: percentages might not add up to 100)?

- African-American/Black _____ %
- Asian _____ %
- White _____ %
- Multiracial _____ %
- Other (please specify) _____ %

15. We know that, when asked about their race or ethnicity, many families would choose categories other than the ones listed above. Based on how participants choose to identify, what would you say were the most common racial and/or ethnic groups your program served in FY19 (choose up to 5)?

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____

16. In FY19, around what percentage of the families served by your program were foreign-born?

- None
- Less than 10%
- 11-25%
- 26-50%
- 51-75%
- 76-100%
- Don't know

17. In FY19, what percentage of the families served by your program were more comfortable speaking a language other than English?

- None
- Less than 10%
- 11-25%
- 26-50%
- 51-75%
- 76-100%
- Don't know

If any response other than “none” or “don’t know”, proceed to question 17a; if not, skip to question 18

17a. For those families who preferred a language other than English in FY19, what languages did they prefer? _____

17b. Generally speaking, did your program have home visiting staff that were able to provide services in families’ preferred languages?

- Yes
- Sometimes
- This is a challenge

18. In FY19, what percent of families enrolled in your program were involved with DCF?

- None
- Less than 10%
- 11-25%
- 26-50%
- 51-75%
- 76-100%
- Don't know

19. In FY19, about what percentage of the families enrolled in your program were on MassHealth?

- None
- Less than 10%
- 11-25%
- 26-50%
- 51-75%
- 76-100%
- Don't know

20. Generally speaking, what are the most pressing challenges the families that are enrolled in your program are currently facing (**choose the top five**)?

- | | |
|--|---|
| <input type="checkbox"/> Behavioral/mental health concerns | <input type="checkbox"/> Poverty |
| <input type="checkbox"/> Community violence | <input type="checkbox"/> Social isolation |
| <input type="checkbox"/> Domestic violence/sexual violence/intimate partner violence | <input type="checkbox"/> Stressors related to immigration/refugee/asylee status |
| <input type="checkbox"/> Lack of access to healthy foods | <input type="checkbox"/> Stressors related to racism |
| <input type="checkbox"/> Lack of adequate housing | <input type="checkbox"/> Substance use/misuse |
| <input type="checkbox"/> Lack of adequate transportation | <input type="checkbox"/> Underemployment (lack of employment that pays a living wage) |
| <input type="checkbox"/> Lack of affordable, quality child care | <input type="checkbox"/> Unemployment |
| <input type="checkbox"/> Lack of education | <input type="checkbox"/> Other (please specify)_____ |
| <input type="checkbox"/> Parenting concerns | |
| <input type="checkbox"/> Physical health/medical issues | |

21. Assuming there were no restrictions or barriers (i.e., unlimited funds, no model or funder requirements), what changes, if any, would most improve your program?

- No change
- Expand or change eligibility requirements
- Expand or change catchment area
- Add home visitors to your staff
- Add staff with particular expertise (e.g., nurse, case manager)
- Expand services offered (e.g., add financial literacy, counseling, recovery coaching)
- Change model requirements around program length
- Change model requirements around visit or session frequency
- Change model requirements around children needing to be present for visit
- Change mode of service delivery
- Some other change(please specify)_____

If any response other than “no change” proceed to question 21a.

21a. You indicated you would xxx, xxx, and xxxx [populate with answers from previous questions]. Can you provide a bit more detail about these changes?_____

IV. Community Engagement

22. Is your home visiting program co-located with any other services/programs/department (i.e., shares office space or building).

- Yes
- No

If “yes”, proceed to question 22a; if “no”, skip to question 23.

22a. What services/programs is your program co-located with? (check all that apply)

- Behavioral health
- Child care
- Community health center/clinic
- DCF
- DMH
- DTA
- Early Intervention
- Home visiting or other family support program
- Hospital
- Housing authority
- Place of worship (e.g, mosque, church)
- Prison/court
- School
- Shelter
- Substance use treatment
- WIC
- VNA
- Other (please specify)_____

22b. What are the benefits, if any, of being co-located?_____

22c. What are the *disadvantages*, if any, of being co-located?_____

23. Do you think it would be beneficial to your program to be co-located with another program/service/department/etc.?

- Yes
- No
- Don't Know

If “yes”, proceed to question 23a; if “no” or “don’t know”, skip to question 24.

23a. With which program/service/department/etc. would you like your program to be co-located? _____

24. Please list the names of the three programs with which your program has the *closest working relationships*. (note this question is specifically about individual programs rather than agency-level collaborations)

1. _____ 2. _____ 3. _____ 4. _____
5. _____

25. Please list up to five organizations in your catchment area with which you wish your program had a better working relationship 1. _____ 2. _____ 3. _____ 4. _____
5. _____

V. Program Services

26. Are your services voluntary (i.e., as opposed to mandated)?

- Yes
- No
- It Depends (please explain): _____

27. Overall, which of the following *best describes* your program service modality? (please select one of the following)

- Home visiting is primary (*most or all of the program services are delivered via home visits*)
- Home visiting is secondary (*most or all of the program services are delivered through non-visit activities [e.g., play groups, parenting classes]; home visits are supplemental, or only done with some families*)
- Mix of home visiting and non-visiting (*relatively even distribution between services offered via home visits, and those offered through non-visit program activities*)

28. According to your home visiting model, how frequently is your program expected to visit families?

- One time only
- 2-3 times total
- Weekly
- Twice a month
- Monthly
- Quarterly
- As needed
- Varies, depending on service level (please explain) _____

29. Does your home visiting program conduct any formal screens or assessments with parents and/or children?

- Yes
- No
- Don't Know

If yes, proceed to question 29a. If no or don't know, skip to question 30.

29a. Which of the following does your program your screen for (check all that apply)?

- Alcohol use/misuse
- Child cognitive development
- Child physical development

- Child socioemotional development
- Domestic/intimate partner violence
- Early literacy
- Medical home
- Parent mental health concern (e.g., depression, anxiety)
- Parent-child interaction
- Safe sleep
- Social isolation
- Substance use/misuse
- Tobacco use
- Other (please specify) _____

30. Does your program offer education or support groups? (e.g., parenting, child development)

- Yes
- No
- Don't Know

31. Does your program offer groups specifically for any of the following populations? (check all that apply)

- Fathers
- Grandparents
- Families in recovery
- Immigrants
- Foster parents
- Language-specific groups
- LGBTQ+
- Other (specify) _____

VI. Staffing

32. How many home visitors does your program have on staff? _____

33. Who provides services to families enrolled in your home visiting program? (check all that apply)

- Case manager
- Child development specialist
- Lactation consultant
- Mental health clinician (e.g., psychologist, LICMSW),
- Nurse
- Occupational/speech,/physical therapist
- Paraprofessional
- Recovery coach
- Other (please specify) _____

34. What is the *minimum* education requirement for someone to be home visitor in your program?

- No minimum
- High school diploma/GED/HiSET
- No degree but certified in relevant field (e.g., community health worker, Early Intervention specialist)
- 2 year college degree (e.g., Associate's, technical training)

- Bachelor's degree (B.A., B.S.)
- Master's degree (M.A., M.S.W.)
- RN
- PhD
- MD
- Other (please specify) _____

35. Do home visitors at your program have opportunities for career advancement within your program or agency?

- Yes
- No, not really

36. What unmet training and/or professional development needs does your program have? _____

37. How much of a problem does your program have with home visiting staff retention?

- It is a huge problem
- It is somewhat of a problem
- It is not much of a problem
- It is no problem at all

38. What would say are the most common reasons staff leave the program (please check all that apply)?

- Insufficient salary/benefits
- Insufficient opportunities for career advancement
- Insufficient opportunities for professional development/training
- Lack of high quality supervision
- No/insufficient reimbursement for mileage/out-of-pocket expenses
- Not enough opportunity/support for self-care (access to counseling/vacation time)
- Data entry responsibilities
- Caseloads too large
- Burn-out, or "compassion fatigue"
- Pursuing further education
- Pursuing career better aligned with training/certification
- Other (please specify) _____

39. How often do home visitors receive formal supervision?

- more than once per week
- once per week
- every other week
- monthly
- less than monthly
- our program doesn't provide formal supervision

If any response other than "no formal supervision," proceed to 39a; otherwise, skip to 40

39a. What is the educational level of your program's primary supervisor?

- High school diploma/GED/HiSET
- 2 year college degree (e.g., Associate's, technical training)

- Bachelor's degree (B.A., B.S.)
- Master's degree (M.A., M.S.W.)
- RN
- PhD
- MD
- Other (please specify) _____

40. What is the salary range of your home visitors? \$_____ to \$_____

41. How is your home visiting program funded? (enter % of total budget for each source; approximate is fine)

- State _____ %
- Federal _____ % (please specify which program [e.g., MIECHV, Head Start]) _____
- City _____ %
- Third-party billing _____ %
- Client self-pay _____ %
- Foundation grants _____ %
- Private donation _____ %
- Other (specify) _____ %
- Not sure _____ %

42. How confident are you that your program will have at least level funding over the next three years?

- Very confident
- Somewhat confident
- Not really confident
- Not at all confident

43. Has your program ever been evaluated by an outside evaluator/researcher?

- Yes
- No
- Don't Know

Thank you so much for your responses!

Would you like ... (choose all that apply)

- receive a \$5 gift card to DD?
- be entered into a raffle for one of two Amazon gift cards?

Please enter your email address if you would like to be entered into a raffle for a \$100 gift card to a store of your choice. _____

Would you be willing to be contacted to provide additional input to the MIECHV Needs Assessment?

- Sure
- No thanks

Appendix II.5—Local Implementing Agency (LIA) by Home Visiting Model

Home Visiting Model	Local Implementing Agency (LIA)	Town	Response
Early Connections/Conexiones Tempranas	Jewish Family & Children’s Services (JFCS)	Waltham	Yes
Early Head Start	Action for Boston Community Development, Inc. (ABCD)	Boston	Yes
	Associates for Human Services, Inc.	Taunton	Yes
	Citizens for Citizens, Inc. (CFC)	Fall River	Yes
	Communities United, Inc. (CUI)	Watertown	No
	Community Action Pioneer Valley	Northampton	No
	Community Action, Inc. (CAI)	Haverhill	Yes
	Community Teamwork, Inc. (CTI)	Lowell	Yes
	Holyoke Chicopee Springfield Head Start	Springfield	No
	Lynn Economic Opportunity, Inc. (LEO)	Lynn	No
	Martha’s Vineyard Community Services	Martha’s Vineyard	No
	Meeting Street	New Bedford	Yes
	Montachusett Opportunity Council, Inc. (MOC)	Fitchburg	No
	PACE Head Start	New Bedford	Yes
	Quincy Community Action Programs, Inc. (QCAP)	Quincy	No
	Riverside Community Care	Somerville	No
	South Middlesex Opportunity Council	Framingham	Yes
	South Shore Community Action Council, Inc. (SSCAC)	Plymouth	No
	South Shore Stars, Inc.	Weymouth	Yes
	The Dimock Center	Roxbury	Yes
	Triumph, Inc.	Taunton	Yes
Worcester Community Action Council, Inc.	Worcester	No	
Early Intervention	Arc of the South Shore	Weymouth	No
	Aspire Developmental Services	Lynn	No
	Aspire Health Alliance Step One	Quincy	No
	Associates for Human Services, Inc.	Taunton	No
	Bay Cove Human Services, Inc.	Dorchester	Yes
	Behavioral Health Network (BHN)	Springfield	No

Home Visiting Model	Local Implementing Agency (LIA)	Town	Response
Early Intervention	Billerica Early Assistance Model (BEAM)	Billerica	No
	Boston Children's Hospital	Jamaica Plain	Yes
	Brockton Area Multiservices, Inc. (BAMSI)	Brockton	Yes
	Center for Human Development (CHD)	Springfield	No
	Community Healthlink (CHL)	Leominster	No
	Criterion Child Enrichment Boston	West Roxbury	No
	Criterion Child Enrichment Heritage	South Hadley	No
	Criterion Child Enrichment Medford	Malden	No
	Criterion Child Enrichment Middlesex	Framingham	Yes
	Criterion Child Enrichment Riverway	Northampton	No
	Criterion Child Enrichment Stoneham	Woburn	No
	Criterion Child Enrichment Valley	Milford	No
	Criterion Child Enrichment Wachusett	Gardner	No
	Criterion Child Enrichment Worcester	Worcester	No
	Eliot Community Human Services	Somerville	Yes
	Eliot Community Human Services	Malden	Yes
	Enable, Inc.	Norwood	No
	Kennedy-Donovan Center (KDC)	Attleboro	No
	Kennedy-Donovan Center (KDC)	Kingston	Yes
	Kennedy-Donovan Center (KDC)	New Bedford	No
	Kennedy-Donovan Center (KDC)	Southbridge	Yes
	Kennedy-Donovan Center (KDC)	West Yarmouth	No
	May Center	West Springfield	No
	Meeting Street	New Bedford	No
	Minute Man Arc	Concord	No
	North Suffolk Mental Health Association's Harbor Area Early Childhood Services	East Boston	No
	Northeast Arc-Cape Ann	Beverly	No
	Northeast Arc-Northshore	Danvers	Yes
	Pediatric Development Center South	Great Barrington	No
	Pediatric Development Center-Pittsfield	Pittsfield	Yes
People, Incorporated	Fall River	No	
Pernet Family Health Service	Worcester	Yes	

Home Visiting Model	Local Implementing Agency (LIA)	Town	Response
Early Intervention	Riverside Community Care	Somerville	No
	Riverside Community Care	Needham	Yes
	South Bay Community Services, Early Childhood, Brockton	Brockton	Yes
	South Bay Community Services - Early Childhood, Fall River/Swansea	Swansea	No
	South Bay Community Services - Early Childhood, Framingham	Framingham	Yes
	South Bay Community Services - Early Childhood, Lawrence	Lawrence	Yes
	South Bay Community Services - Early Childhood, Lowell	Lowell	No
	South Bay Community Services - Early Childhood, Worcester	Worcester	Yes
	The Dimock Center	Roxbury	No
	The Professional Center for Child Development	Andover	Yes
	The REACH Program of ServiceNet	Northampton	Yes
	Thom Anne Sullivan Center	Lowell	No
	Thom Boston Metro	Jamaica Plain	No
	Thom Charles River	Waltham	No
	Thom Marlboro Area	Marlborough	Yes
	Thom Mystic Valley	Woburn	No
	Thom Neponset Valley	Norwood	No
	Thom Pentucket	West Newbury	Yes
	Thom Springfield Infant Toddler Services	Springfield	No
	Thom Westfield Infant Toddler Services	Westfield	No
Thom Worcester Area	Worcester	Yes	
United Cerebral Palsy (UCP) of Western Massachusetts	North Adams	No	
Early Intervention Parenting Partnership	People, Inc.	Fall River	No
	Riverside Community Care	Somerville	No
	Thom Anne Sullivan Center	Lowell	Yes
	Thom Springfield Infant Toddler Services	Springfield	No
Early Support Program	Aspire Developmental Services	Lynn	No
F.O.R. Families (Follow-Up Outreach Referral)	Casa Nueva Vida	Lawrence	Yes
	Centerboard	Lynn	No
	Children’s Services of Roxbury	Roxbury	Yes
	Massachusetts Dept. of Public Health (MDPH)	Malden	No
	Massachusetts Dept. of Public Health (MDPH)	Springfield	Yes

Home Visiting Model	Local Implementing Agency (LIA)	Town	Response
F.O.R. Families (Follow-Up Outreach Referral)	Massachusetts Dept. of Public Health (MDPH)	Canton	Yes
Family Engagement Project	Institute for Health and Recovery (IHR)	Boston	No
	Institute for Health and Recovery (IHR)	Holyoke/Springfield	No
	Institute for Health and Recovery (IHR)	Northeast	No
	Institute for Health and Recovery (IHR)	Southeast	No
First Connections	Justice Resource Institute	Acton	Yes
FIRST Steps Together	Bay State Community Services	Quincy	Yes
	Cape Cod Children's Place	Eastham	No
	Center for Human Development (CHD)	Easthampton	No
	Center for Human Development (CHD)	Pittsfield	Yes
	Jewish Family & Children's Services (JFCS)	Waltham	Yes
	Montachusett Opportunity Council, Inc. (MOC)	Fitchburg	Yes
	Square One/Springfield Day Nursery	Springfield	Yes
Healthy Baby Healthy Child	Boston Public Health Commission	Boston	Yes
Healthy Families America	MGH Chelsea Health Center	Chelsea	Yes
Healthy Families MA	Catholic Charities Merrimack Valley	Haverhill	Yes
	Catholic Charities North	Lynn	Yes
	Child Care of the Berkshires	Berkshires	Yes
	Community Action Pioneer Valley	Franklin	Yes
	Community Action Pioneer Valley	Hampshire	Yes
	Criterion Child Enrichment	Framingham, Milford	Yes
	Family & Children's Services of Greater Lynn	Chelsea	No
	Care Central VNA & Hospice (formerly GVNA)	Fitchburg	Yes
	Hallmark Health System	Everett	Yes
	Health Imperatives	Blue Hills	Yes
	Health Imperatives	Cape Cod	Yes
	Jewish Family & Children's Services (JFCS)	Middlesex	No
	Kennedy-Donovan Center (KDC)	New Bedford	No
	Kennedy-Donovan Center (KDC)	Plymouth	No
	MSPCC- Boston	Boston	Yes
	MSPCC- Holyoke	Holyoke	Yes

Home Visiting Model	Local Implementing Agency (LIA)	Town	Response
Healthy Families MA	MSPCC- Lawrence	Lawrence	Yes
	MSPCC- Lowell	Lowell	Yes
	MSPCC- Worcester	Worcester	No
	People, Incorporated	Fall River	No
	Southeast Family Services, Inc.	Brockton	Yes
	Southeast Family Services, Inc.	Taunton	No
	Square One	Springfield	Yes
	Worcester Community Action Council, Inc.	Southbridge	Yes
Lauren & Mark Rubin Visiting Moms	Jewish Family & Children’s Services (JFCS)	Brighton	No
	Jewish Family & Children’s Services (JFCS)	Cambridge, Somerville	No
	Jewish Family & Children’s Services (JFCS)	Wakefield	No
	Jewish Family & Children’s Services (JFCS)	Worcester	No
Madres y Niños en Proceso	La Alianza Hispana	Boston	No
Maternity & Child Nursing Program	Pernet Family Health Service	Worcester	No
Newborn Visiting Program	Plymouth Family Network	Plymouth	No
Oliver, Ian and Serenity Wolk Fragile Beginnings	Jewish Family & Children’s Services (JFCS)	Waltham	Yes
Parent Aide Program	Bay State Community Services	Quincy	No
	Catholic Charities North	Lynn	No
	Catholic Charities South	Brockton	No
	North American Family Institute, Danvers	Danvers	No
	Pernet Family Health Service	Worcester	No
Parent and Family Support	Hilltown Community Health Center	Hilltown, Huntington	No
Parent Child+	Ayer/Shirley Public Schools, Page Hilltop Elementary School	Ayer, Shirley	No
	Brockton Coordinated Family & Community Engagement (CFCE)	Brockton	No
	Brookline Early Education Program	Chestnut Hill	No
	Cambridge Public Schools Haggerty School	Cambridge	No
	Child Care of the Berkshires	North Adams	Yes
	Child Care of the Berkshires	Pittsfield	No
	Clinton Public Schools	Clinton	No
	Collaborative for Educational Services	Ware	No
	Community Action Pioneer Valley	Greenfield	No

Home Visiting Model	Local Implementing Agency (LIA)	Town	Response
Parent Child+	Community Health Program	Barrington	No
	Early Childhood Alliance of Framingham	Framingham	Yes
	Fall River Public Schools	Fall River	Yes
	Family & Children's Services of Greater Lynn	Lynn	Yes
	Family Access of Newton	Newton	Yes
	Family Nurturing Center of Massachusetts	Dorchester	No
	Greater Lawrence Community Action Council, Inc.	Lawrence	No
	Holyoke Public Schools, Morgan School	Holyoke	No
	Leominster Public Schools	Leominster	Yes
	Lowell Public Schools	Lowell	Yes
	Malden Public Schools	Malden	No
	Medford Public Schools Early Childhood	Medford	No
	Montachusett Opportunity Council, Inc. (MOC)	Barre	No
	Montachusett Opportunity Council, Inc. (MOC)	Fitchburg	No
	Montachusett Opportunity Council, Inc. (MOC)	Gardner	No
	Northampton Public Schools Early Childhood Information	Northampton	No
	PACE Child Care Works	New Bedford	No
	Plymouth Family Network	Plymouth	Yes
	Quincy Commission on the Family	Quincy	Yes
	Revere Public Schools	Revere	Yes
	Salem Public Schools	Salem	No
	Somerville Public Schools/ Somerville Family Learning Collaborative (SFLC)	Somerville	No
	Springfield Family Support Program	Springfield	No
	Stoughton Schools District Office	Stoughton	No
	Valuing Our Children	Athol	No
	Wareham Middle Schools	Wareham	Yes
	Watertown Public Schools	Watertown	No
Worcester Public Schools	Worcester	Yes	
Parents as Teachers	18 Degrees (formally Berkshire Children and Families)	Berkshires	Yes
	Child & Family Services	Fall River	Yes
	Child & Family Services	New Bedford	Yes
	Family & Children's Services of Greater Lynn	Chelsea	Yes

Home Visiting Model	Local Implementing Agency (LIA)	Town	Response
Parents as Teachers	Justice Resource Institute (JRI), Children's Friend and Family Services	Lawrence	No
	MGH Revere Health Center	Revere	No
	Montachusett Opportunity Council, Inc. (MOC)	Fitchburg	Yes
	Square One/Springfield Day Nursery	Springfield	Yes
Parents as Teachers (curriculum)	Attleboro Public Schools/Project Connect Family Network	Attleboro	Yes
	PACE Child Care Works/The Family Center	New Bedford	No
Pregnant and Parenting Teen Initiative (PPTI)	Family Services of the Merrimack Valley	Lawrence	No
	Meeting Street	Dartmouth	No
	ROCA	Chelsea	No
	ROCA	Springfield	No
Project NESST	Jewish Family & Children's Services (JFCS)	Waltham	No
ROCA Young Mothers Program	ROCA	Chelsea	Yes
SomerBaby/ Welcome Baby	Somerville Family Learning Collaborative	Somerville	No
Visiting Moms Program	Medford Family Network	Medford	No
	North Shore Mother Visiting Partnership	Beverly	Yes
Welcome Baby	Collaborative for Educational Services	Northampton	No
	Family Nurturing Center	Dorchester	No
	Combined Jewish Philanthropies of Greater Boston, JCC North Shore	Marblehead	No
	Smart from the Start	Boston	Yes
Welcome Family	Thom Infant Toddler Services	Springfield	Yes
	Boston Public Health Commission	Boston	Yes
	Criterion Child Enrichment	Holyoke	Yes
	People, Incorporated	Fall River	Yes
	Thom Anne Sullivan Center	Lowell	No
Young Parent Support Program	18 Degrees (formally Berkshire Children and Families)	Pittsfield	No
	Cambridge Family and Children's Services	Cambridge	No
	Child & Family Services	Fall River	No
	Justice Resource Institute (JRI), Children's Friend and Family Services	Chelmsford	No
	Justice Resource Institute (JRI), Children's Friend and Family Services	Lynn	No
	Family & Children's Services of Greater Lynn	Chelsea	No
	Family Access of Newton	Newton	Yes
Family Services of the Merrimack Valley	Lawrence	No	

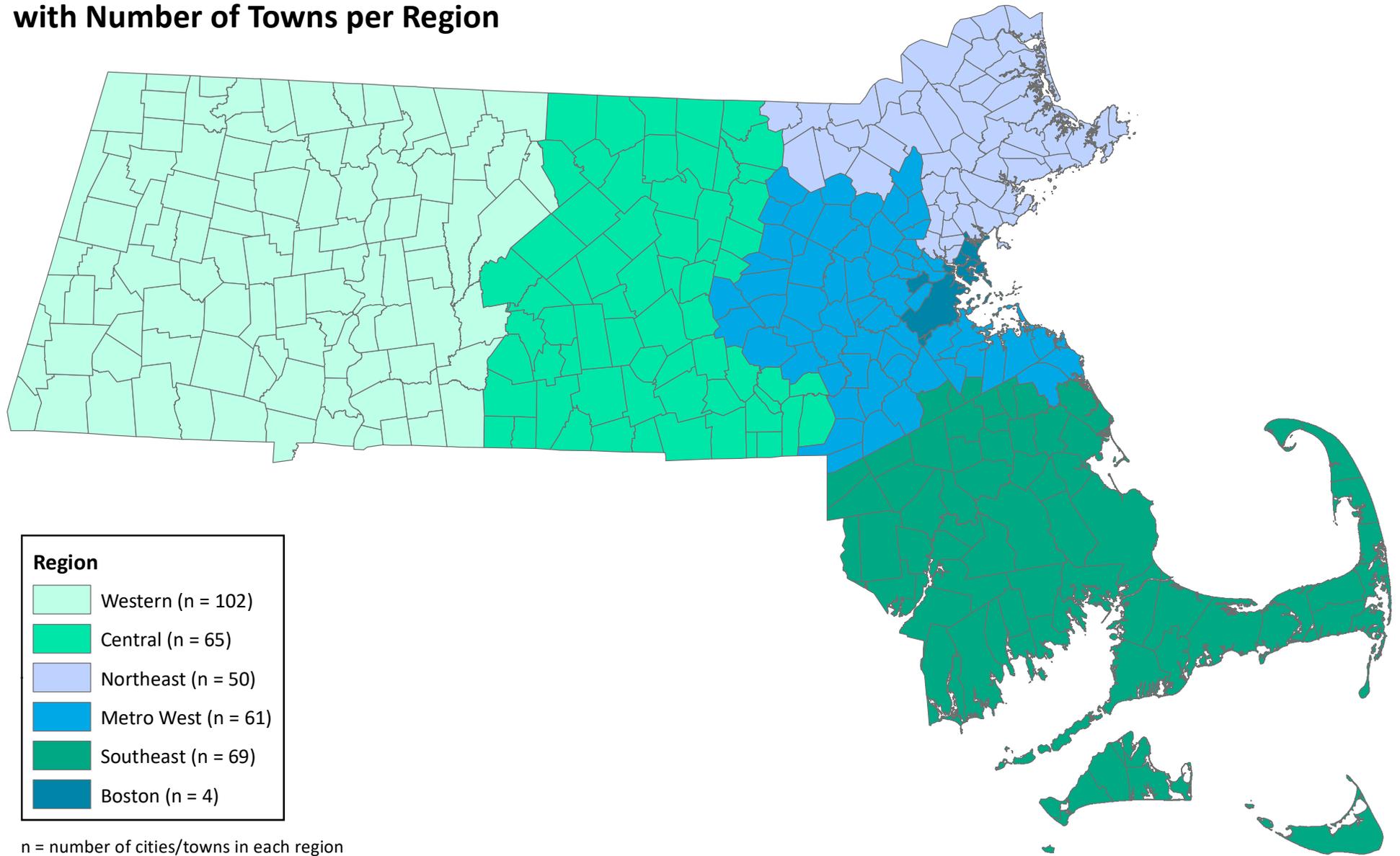
Home Visiting Model	Local Implementing Agency (LIA)	Town	Response
Young Parent Support Program	Health Imperatives	Brockton	No
	Justice Resource Institute	Attleboro	No
	LUK, Inc.	Fitchburg	No
	LUK, Inc.	Worcester	Yes
	ROCA	Chelsea	No
	YOU, Inc.	Southbridge	No
	YOU, Inc.	Worcester	No
	YWCA	Springfield	No

Appendix II.6—Massachusetts EOHHS Geographic Regions

Contents

Map One— Massachusetts Executive Office of Health and Human Services Geographic Regions, with
Number of Towns per Region 2

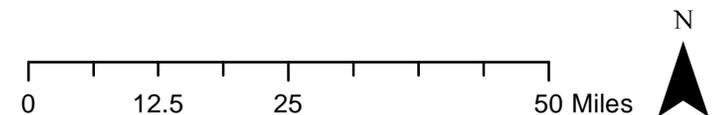
Massachusetts Executive Office of Health and Human Services Geographic Regions, with Number of Towns per Region



n = number of cities/towns in each region

Authors: Danyel Vargas Moosmann & Jessica Goldberg,
Tufts Interdisciplinary Evaluation Research (TIER) | Tufts University

Date: 9/30/2020



Appendix II.7—Focus Groups Populations, Community and Language

Project	Population	Community	Language	<i>n</i>
MIECHV	African American Mothers*	Somerville	English	6
	Families in Shelters*	Worcester	English	7
	Fathers and the Healthcare System*	Roxbury	English	7
	Survivors of Intimate Partner Violence*	Greenfield	English	4
	Mothers with OUD*	Pittsfield	English	2
	Parents with Disabilities*	Braintree	English	3
	Prenatal and Parenting Women of Color*	Springfield	English	2
	Vietnamese Parents of CYSHCN*	Lowell	English/Vietnamese	5
	Women of Color and Unhealthy Relationships*	Jamaica Plain	English	3
	Mothers with OUD participating in FIRST Steps Together**	Pittsfield	English	13
	Young Parents*	Fall River	English	5
Title V	Young Immigrant Men	Chelsea	Spanish	8
	Grandparents Raising Grandchildren	Swampscott	English	12
	Foster Parents	Holyoke	English	12
	Somali Families	Jamaica Plain	Somali/English	9
	Fathers	Fall River	English	11
	Immigrant Families	Somerville	Spanish/English	4
	Immigrant Families	Somerville	Hindi/English	4
	Spanish-Speaking Parents of CYSHCN*	Lawrence	Spanish	5
	Black or African American Parents of CYSHCN	Springfield	English	5
	Young Adults with Special Health Needs	Medford	English	3
	LGBTQ+ Young Adults	Framingham	English	5
Doulas*	Roxbury	English	5	

Note. *Community evaluators were the lead facilitators for these focus groups; **FIRST Steps Together is a homegrown home visiting program administered by MDPH that provides services to families impacted by OUD.

Appendix III.1—Massachusetts’ Data for the Nine Domains

Domain	Sub-Domain	Data Indicator	Statistic
SES	Poverty	Percent of individuals living below the FPL in the past 12 months	10.5%
		Percent of children under the age of 5 living below the FPL in the past 12 months	14.6%
	Unemployment	Percent of population 16 years of age and older who were unemployed	4.6%
	Educational Attainment Less than High School Graduate	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	3.1%
		Percent of students in grades 9–12 who stopped going to high school out of all students enrolled	1.9%
		Percent of population aged 18–24 who did not graduate from high school	10.9%
		Percent of persons 25 and older without a high school diploma	9.2%
	Income Inequality	Gini coefficient of income inequality	0.48
	Single Parent-Headed Households	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	31.1%
	Publicly-Funded Health Care	Percent of women giving birth who received publicly financed prenatal care out of all live births	38.4%
Percent of children with special health care needs, aged 0–17, who received coordinated, ongoing, comprehensive care within a medical home		51.8%	
Public Assistance	Percent of children without special health care needs, aged 0–17, who received coordinated, ongoing, comprehensive care within a medical home	60.7%	
	Percent of families who received cash assistance from TAFDC out of all families	8.6%	
Housing	Residential Instability	Percent of students categorized as economically disadvantaged out of all students enrolled	31.2%
		Percent of residents who lived in the same residence as the previous year ^a	12.0%

^aReverse-score presented.

Domain	Sub-Domain	Data Indicator	Statistic
Housing	Renter-Occupied Housing	Ratio of renter-occupied to every 1 owner-occupied residence	0.60
	Homelessness	Count of homeless children and youth enrolled in MA public schools	24,071
		Count of families applying for emergency assistance	7,355
		Count of families entering shelters and hotels	3,787
		Count of homeless unaccompanied children under the age of 18	57
		Count of sheltered homeless unaccompanied children under the age of 18	54
		Percent of children < 6 years of age experiencing homelessness who were served by Head Start/EHS or McKinney-Vento-funded ECE programs	12.0%
Populations of Special Interest	Non-US-Born	Percent of all residents who were non-US-born	16.9%
		Count of new refugees and individuals with other qualifying immigration statuses in MA	1,993
	Incarcerated parents	Percent of children who ever had a parent or guardian who served time in jail during their lifetime	4.0%
	Births to Mothers	Percent of mothers who were less than 20 years of age out of all live births	2.7%
		Percent of mothers who were non-US-born out of all live births	30.3%
	Veterans	Percent of residents 18 years of age and older who were veterans	5.5%
SUD	Alcohol	Prevalence rate: Alcohol use disorder in the past year among 12 and older	7.1%
	Illicit Drugs	Prevalence rate: Marijuana use in the past month among 12 and older	13.4%
		Prevalence rate: Cocaine use in the past year among 12 and older	3.1%
		Prevalence rate: Heroin use in the past year among 12 and older	0.4%
		Prevalence rate: Pain reliever misuse in the past year among 12 and older	3.6%
	Opioid Deaths	Average annual rate of occurrence of opioid overdoses per 100,000 residents	23.91
Enrollment to MDPH Funded Programs	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	1,596.14	

Domain	Sub-Domain	Data Indicator	Statistic	
Crime	Violent Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	358.00	
Child Unintentional Injuries	SUIDs	Rate of SUIDs per 100,000 live births	53.80	
	Emergency Department Visits for Unintentional Injuries	Rate of emergency department visits for children aged 0–3 associated with unintentional injuries per 100,000 same age residents	11,632.33	
		Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	9,988.88	
Child Maltreatment	Substantiated Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	21.78	
Adverse Perinatal Outcomes	Preterm Birth	Percent of all births that were preterm, or born before 37 weeks, out of all live births	8.7%	
	Low Birth Weight	Percent of all births that were low birth weight, less than 2500g, out of all live births	7.5%	
	Infant Mortality	Rate of infant (under 1 year) deaths per 1,000 live births	3.71	
	Less than Adequate Prenatal Care	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	17.7%	
	Breastfeeding	Percent of women who breastfed their infants during the hospital stay out of all live births	85.9%	
	Substance Use During Pregnancy	Percent of mothers who reported smoking during pregnancy out of all live births	Percent of women smoking cigarettes or e-cigarettes during the last 3 months of pregnancy	5.3%
			Percent of women smoking cigarettes or e-cigarettes during the last 3 months of pregnancy	4.6%
			Percent of women drinking alcohol 3 months before their pregnancy	67.1%
			Percent of women drinking alcohol 3 months before their pregnancy (level of drinking = 4 or more drinks per week)	14.0%
	NAS	Rate of infants with NAS per 1,000 live births	13.82	
Pregnancy-Associated Mortality	Rate of the death of a woman while pregnant or within one year of termination of pregnancy, irrespective of the cause per 100,000 live births	40.4		
	Percent of pregnancy-associated deaths in which acute or chronic substance use contributed directly to the death as indicated on the death certificate	41.4%		
Mothers' Mental Health	Percent of women reporting always or often experiencing postpartum depression symptoms	10.2%		

Domain	Sub-Domain	Data Indicator	Statistic
Adverse Perinatal Outcomes	Maternal Overweight & Obesity	Percent of mothers who were overweight or obese prior to pregnancy	48.0%
	Short Interpregnancy Intervals	Percent of mothers with a short interpregnancy interval (< 12 months) for mothers < 20 years of age	39.0%
		Percent of mothers with a short interpregnancy interval (< 12 months) for mothers 20–34 years of age	16.0%
		Percent of mothers with a short interpregnancy interval (< 12 months) for mothers > 34 years of age	11.0%
Child Development & Health and School Outcomes	EI Enrollment	Average percent of children less than 3 years of age enrolled in EI out of all same age residents	18.5%
	Quality of Child Care	Percent of MA EEC programs that received a QRIS level 1	66.0%
		Percent of MA EEC programs that received a QRIS level 2	29.0%
		Percent of MA EEC programs that received a QRIS level 3	4.4%
		Percent of MA EEC programs that received a QRIS level 4	0.6%
	Asthma	Average percent of children in elementary and middle school affected by asthma per 100 students	12.1%
		Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	163.84
	BLLs	Rate of children aged 9 months to less than 4 years who had estimated confirmed BLLs $\geq 5 \mu\text{g/dL}$ (elevated) out of children screened for lead per 1,000 children	15.4
		Rate of children aged 9 months to less than 4 years who had confirmed BLLs $\geq 10 \mu\text{g/dL}$ (poisoned) out of children screened for lead per 1,000 children	3.1
	Overweight & Obesity	Percent of overweight and obese children (< 5 years of age) of active WIC participants	28.0%
Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened		31.3%	
School quality	Percentage of school districts in MA that require assistance or intervention with respect to improving student performance	5.4%	
Kindergarten Enrollment	Percent of students who were enrolled in a full day kindergarten program	96.4%	
District Enrollment of Special Populations	Percent of students who were ELs out of all students enrolled	10.5%	
	Percent of students whose first language is not English out of all students enrolled	21.9%	

Domain	Sub-Domain	Data Indicator	Statistic
Child Development & Health and School Outcomes	District Enrollment of Special Populations	Percent of students with disabilities out of all students enrolled	18.1%
		Percent of students who were high needs out of all students enrolled	47.6%
	Truancy	Percent of students who were truant with more than 9 unexcused absences out of all students enrolled	16.7%
	Chronic Absenteeism	Percent of students who were absent 10% or more of their total number of student days of membership in a school out of all students enrolled	12.9%
	CMSP Caseload	Average annual count of non-disabled child MassHealth members	651,261
		Average annual count of disabled child MassHealth members	39,306
	Behavioral Health Screening	Percent of the total number of EPSDT and PPHSD claims that included a behavioral health screen for children 1 to 6 months	44.9%
		Percent of the total number of EPSDT and PPHSD claims that included a behavioral health screen for children 6 months to 2 years	76.7%
		Percent of the total number of EPSDT and PPHSD claims that included a behavioral health screen for children 3 years to 6 years	76.9%
		Percent of the total number of EPSDT and PPHSD claims that included a behavioral health screen for children 7 years to 12 years	75.9%
	Mental Health	Percent of 0–5-year-old MA children who experienced two or more adverse childhood experiences from the list of 9 ACEs	8.3%
		Percent of 6–11-year-old MA children who experienced two or more adverse childhood experiences from the list of 9 ACEs	17.2%
Percent of 12–17-year-old MA children who experienced two or more adverse childhood experiences from the list of 9 ACEs		20.8%	
Academic Achievement	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	504.1	
	Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	499.4	

Appendix III.2—Massachusetts’ Data for the SES Domain by Race and Ethnicity

Sub-Domain	Data Indicator	Total	White alone	Hispanic or Latino Origin (any race)	Black or African American alone	Asian alone	American Indian and Alaska Native alone	Native Hawaiian and Other Pacific Islander alone	Some Other Race alone	Two or More Races
Poverty	Percent of individuals living below the FPL in the past 12 months	10.5%	8.3%	25.2%	17.9%	15.7%	20.3%	N ^a	24.6%	17.9%
	Percent of children under the age of 5 living below the FPL in the past 12 months	14.6%	10.6%	31.7%	24.8%	16.4%	— ^b	—	31.4%	18.4%
Unemployment	Percent of population 16 years of age and older who were unemployed	4.6%	4.1%	7.1%	7.9%	4.1%	N	N	6.3%	6.6%
Educational Attainment Less than High School Graduate	Percent of persons 25 and older without a high school diploma	9.2%	7.3%	27.5%	14.7%	14.2%	20.4%		29.3%	17.4%
Publicly Funded Health Care	Percent of mothers receiving publicly financed prenatal care out of all live births	Total	White Non-Hispanic	Hispanic	Black Non-Hispanic	Asian Non-Hispanic			Other Non-Hispanic	
		38.4%	24.7%	73.1%	64.5%	28.4%		49.9%		
Educational Attainment Less than High School Graduate	Percent of students in grades 9–12 who stopped going to high school out of all students enrolled	Total	White	Hispanic	Black	Asian	Native American	Native Hawaiian		Multi-Race, Non-Hispanic
		1.9%	1.0%	4.5%	2.9%	0.6%	2.6%	0.0%		1.9%

^aAn 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.

^bData not provided.

Appendix III.3—Massachusetts’ Data for the Housing Domain by Race and Ethnicity

Sub-Domain	Data Indicator	Total	White alone	Hispanic or Latino Origin (any race)	Black or African American alone	Asian alone	American Indian and Alaska Native alone	Some Other Race alone	Two or More Races
Renter-Occupied Housing	Ratio of renter-occupied to every 1 owner-occupied residence	0.60	0.48	2.85	2.09	0.87	2.05	2.87	1.44

Appendix III.4—Massachusetts’ Data for the Special Populations of Interest Domain by Race and Ethnicity

Sub-Domain	Data Indicator	Total	White Non-Hispanic	Hispanic	Black Non-Hispanic	Asian Non-Hispanic	American Indian Non-Hispanic ^a	Other Non-Hispanic ^b	
Non-US-Born	Percent of mothers who were non-US-born out of all live births	30.3%	11.2%	48.7%	58.6%	82.5%	Data excluded ^c	74.0%	
	Percent of all residents who were non-US-born	Total	White alone	Hispanic or Latino Origin (any race)	Black or African American alone	Asian alone	American Indian and Alaska Native alone	Some other Race alone	Two or More Races
		16.9%	9.3%	30.0%	35.7%	69.3%	15.0%	41.0%	20.3%
Veterans	Percent of residents 18 years of age and older who were veterans	5.5%	6.3%	2.0%	3.8%	1.1%		2.3%	4.0%
Births to Mothers	Percent of mothers who were less than 20 years of age out of all live births	Total	White Non-Hispanic	Hispanic	Black Non-Hispanic	Asian Non-Hispanic	American Indian Non-Hispanic	Other Non-Hispanic	Unknown
		2.7%	1.4%	7.7%	3.3%	0.6%	6.0%	2.3%	2.1%

^aMothers who selected American Indian/Alaska Native as their race.

^bMothers who indicated “Other” as their race.

^cCalculations based on 1–4 events are excluded.

Appendix III.5—Massachusetts’ Data for the Adverse Perinatal Outcomes Domain by Race and Ethnicity

Sub-Domain	Data Indicator	Total	White Non-Hispanic	Hispanic	Black Non-Hispanic	Asian Non-Hispanic		Other Non-Hispanic ^a	
Preterm Birth	Percent of all births that were preterm, or born before 37 weeks, out of all live births	8.7%	8.0%	9.6%	11.2%	7.5%		9.5%	
Low Birth Weight	Percent of all births that were low birth weight, less than 2500g, out of all live births	Total	White Non-Hispanic	Hispanic	Black Non-Hispanic	Asian Non-Hispanic	American Indian Non-Hispanic ^b	Other Non-Hispanic ^c	Unknown
		7.5%	6.4%	8.3%	11.3%	8.0%	6.8%	9.8%	11.3%
Infant Mortality	Rate of infant (under 1 year) deaths per 1,000 live births	3.71	2.91	5.22	6.82				
Less than Adequate Prenatal Care	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	17.7%	14.3%	21.2%	30.2%	17.1%	21.6%	24.4%	17.6%
Breastfeeding	Percent of women who breastfed their infants during the hospital stay out of all live births	85.9%	84.7%	85.9%	89.0%	92.0%	81.1%	77.6%	83.7%
Substance Use During Pregnancy	Percent of mothers who reported smoking during pregnancy out of all live births	Total	White Non-Hispanic	Hispanic	Black Non-Hispanic	Asian Non-Hispanic		Other Non-Hispanic ^d	
		5.3%	6.9%	3.4%	3.4%	0.9%		9.6%	

^aOther races include American Indian and others not specified.

^bMothers who selected American Indian/Alaska Native as their race.

^cMothers who indicated “Other” as their race.

^dMothers who designated their race as American Indian or “Other”.

Indicator	Indicator Definition	Total	White Non-Hispanic	Hispanic	Black Non-Hispanic	Asian Non-Hispanic		Other Non-Hispanic	
Substance Use During Pregnancy	Percent of women smoking cigarettes or e-cigarettes during the last 3 months of pregnancy	4.6%	6.0%	2.0%	3.0%	ID ^e		ID	
	Percent of women drinking alcohol 3 months before their pregnancy	67.1%	84.5%	48.4%	36.7%	35.4%		56.2%	
	Percent of women drinking alcohol 3 months before their pregnancy (level of drinking = 4 or more drinks per week)	14.0%	19.9%	6.8%	6.1%	2.8%		5.0%	
Mothers' Mental Health	Percent of women reporting always or often experiencing postpartum depression symptoms	10.2%	7.9%	11.7%	19.1%	14.2%		7.1%	
Maternal Overweight & Obesity	Percent of mothers who were overweight or obese prior to pregnancy	48.0%	44.9%	58.9%	60.3%	31.4%		50.8%	

^eInsufficient data to report.

Appendix III.6—Massachusetts’ Data for the Child Development and Health and School Outcomes Domain by Race and Ethnicity

Sub-Domain	Data Indicator	Total	White Non-Hispanic	Hispanic	Black or African American Non-Hispanic	Asian Non-Hispanic	American Indian or Alaska Native non-Hispanic	Native Hawaiian or Other Pacific Islander Non-Hispanic	Multiple Races Non-Hispanic
Overweight & Obesity	Percent of overweight and obese children (< 5 years of age) of active WIC participants	13.7%	13.7%	14.6%	13.1%	7.9%	11.4%	10.5%	14.6%
District Enrollment of Special Populations	Percent of students with disabilities out of all students enrolled	Total	White	Hispanic	Black	Asian	Native American	Native Hawaiian or Pacific Islander	Multiracial
		18.1%	17.9%	21.1%	20.8%	9.4%	24.2%	21.7%	18.4%
Kindergarten Enrollment	Percent of students who were enrolled in a full day kindergarten program	Total	White	Hispanic or Latino	African American/ Black	Asian	American Indian or Alaska Native	Native Hawaiian or Pacific Islander	Multi-Race, Non-Hispanic
		96.4%	95.4%	98.8%	98.7%	93.8%	91.9%	97.5%	96.5%
Truancy	Percent of students who were truant with more than 9 unexcused absences out of all students enrolled	16.7%	13.4%	27.0%	19.4%	8.8%	23.7%	17.8%	17.3%
Chronic Absenteeism	Percent of students who were absent 10% or more of their total number of student days of membership in a school out of all students enrolled	12.9%	9.7%	21.7%	16.2%	7.5%	18.9%	14.7%	13.7%

Sub-Domain	Data Indicator	Total	White	Hispanic or Latino	African American/ Black	Asian	American Indian or Alaska Native	Native Hawaiian or Pacific Islander	Multi-Race, Non-Hispanic
Academic Achievement	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	504.1	507.5	494.8	495.2	513.3	499.4	507.4	507.0
	Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	499.4	503.0	488.8	488.2	514.2	495.4	501.0	501.9

Appendix III.7—Profiles for the 17 Massachusetts Communities Experiencing the Greatest Challenges

Contents

List of Acronyms Used in Profiles

Rank 1. Holyoke

Rank 2. Southbridge

Rank 3. New Bedford

Rank 4. Fall River

Rank 5. Springfield

Rank 6. Lawrence

Rank 7. Chelsea

Rank 8. Worcester

Rank 9. North Adams

Rank 10. Brockton

Rank 11. Fitchburg

Rank 12. Lowell

Rank 13. Lynn

Rank 14. Boston

Rank 15. Pittsfield

Rank 16. Webster

Rank 17. Everett

Table 1. City/Town-Level Data Indicators Sources

Reference List for City/Town-Level Data Indicators

List of Acronyms Used in Profiles

APNCU: Adequacy of Prenatal Care Utilization

BIPOC: Black, Indigenous, people of color

BLLs: blood lead levels

BSAS: Bureau of Substance Addiction Services

EBLLs: elevated blood lead levels

EI: early intervention

ELA: English language arts

ELs: English learners

FPL: federal poverty level

MA: Massachusetts

MCAS: Massachusetts Comprehensive Assessment System

MDPH: Massachusetts Department of Public Health

NAS: neonatal abstinence syndrome

SES: socioeconomic status

SUD: substance use disorder

TAFDC: Transitional Aid to Families with Dependent Children

µg/dL: microgram per deciliter

US: United States

HOLYOKE

Hampden County, Western Massachusetts

Holyoke is historically known for producing paper and being one of the first planned industrial cities in the US. Today, it is known as a "Green Community," as renewable sources generate two-thirds of its electricity. Holyoke's current population is 40,362, with 51.2% of residents identifying as Hispanic or Latino of any race and 43.0% identifying as White alone. According to the 2010 census, Holyoke had the largest Puerto Rican population (44.7%), per capita, of any US city outside of Puerto Rico proper. Nearly a quarter of residents (23.4%) are 0–18 years of age, and 7.2% are under the age of 5. Holyoke residents are especially vulnerable to SES-related challenges, including the highest rates of child poverty and family cash assistance receipt in the state. Holyoke also struggles with teenage pregnancy, low educational attainment among mothers, and violent crime. Relative to Massachusetts overall, fewer infants are born with NAS and fewer children and youth experience asthma-related hospitalizations.

RANK: FIRST

Holyoke residents experience the greatest SES-related challenges in Massachusetts.



- **28.6%** of residents live below the FPL (**1.72 times more than the state average**), **the third highest rate in MA.**
- **49.8%** of children under the age of 5 live below the FPL (**2.41 times more than the state average**), **the highest rate in MA.**
- **10.2%** of residents aged 16 and older are unemployed (**1.22 times more than the state average**), **the fourth highest rate in MA.**
- **9.9%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, **2.19 times more than the state average.**
- The Gini coefficient of **0.50** suggests a sizable income gap between residents with greater vs. lower income, **4% more than the state coefficient.**
- **64.5%** of children live in a single parent-headed household (**1.07 times more than the state average**), **the third highest rate in MA.**
- **71.1%** of mothers received publicly financed prenatal care (85% more than the state average), **the seventh highest rate in MA.**
- **50.9%** of families receive cash assistance from TAFDC (**4.92 times more than the state average**), **the highest rate in MA.**

Nearly one-fifth of Holyoke residents experience residential instability and overall are more likely to rent.



- **17.5%** of residents moved at least once within the past year, **46% more than the state average.**
- Residents are more likely to be renters vs. owners with a ratio of **1.46** renter-occupied residences for each owner-occupied residence (**1.43 times more than the state ratio**), **the seventh highest ratio in MA.**

Holyoke residents experience one of the highest teen birth rates in Massachusetts.



- **11.5%** of mothers are less than 20 years of age, (**3.26 times more than the state average**), **the second highest rate in MA.**
- **31.2%** of mothers did not complete high school, **the second highest rate in MA.***
- **5.4%** of mothers are non-US-born, **82% less than the state average.**
- **71.4%** of mothers are BIPOC, **the seventh highest rate in MA.***
- **5.5%** of residents 18 years of age and older are veterans, in line with the state average.^a

Holyoke residents experience some of the greatest SUD-related challenges in Massachusetts.

- The average annual rate of opioid overdose deaths is **37.16** per 100,000 residents, **55% more than the state rate.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **3,587.36** per 100,000 residents (**1.25 times more than the state rate**), **the fourth highest rate in MA.**



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. ^a "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less; * state-level data unavailable.

Holyoke has one of the highest violent crime rates in Massachusetts.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **1,082.79** per 100,000 residents (**2.02 times more than the state rate**), **the second highest rate in MA.**

Holyoke children experience unintentional injuries at a relatively higher rate than Massachusetts children overall.



- The rate of emergency department visit for children aged 0–9 associated with unintentional injuries is **16,151.32** per 100,000 same age residents, **62% more than the state rate.**

Holyoke children and youth have one of the highest maltreatment rates in Massachusetts.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **59.88** per 1,000 same age residents (**1.75 times more than the state rate**), **the seventh highest rate in MA.**

Relative to Massachusetts residents overall, Holyoke residents experience several adverse perinatal outcomes at higher rates.



- 9.0%** of all births are preterm, which is in line with the state average.
- 8.4%** of all births are low birth weight, **12% more than the state average.**
- The rate of infant mortality is **5.64** per 1,000 live births, **52% more than the state rate.**
- 22.9%** of women received less than adequate prenatal care, **29% more than the state average.**
- 20.1%** of women do not intend to breastfeed.*
- 8.4%** of mothers smoke during pregnancy, **58% more than the state average.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **52.21** per 100,000 female residents.*
- The rate of infant NAS is **13.13** per 1,000 live births, **5% less than the state rate.**
- 51.4%** of women are overweight or obese during pregnancy.*

Holyoke children and youth experience some of the greatest challenges related to development, health, and school in Massachusetts.



- The average percent of children less than 3 years of age enrolled in EI services is **27.6**, **49% more than the state average.**
- The average percent of children in elementary and middle school affected by asthma is **24.7** (**1.04 times more than the state average**), **the second highest rate in MA.**
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **155.76** per 100,000 same age residents, **5% less than the state rate.**
- The rate of EBLLs for children aged 9 months to less than 4 years of age is **23.0** per 1,000 same age children who were screened, **49% more than the state rate.**
- 37.3%** of students in grades 1, 4, 7, and 10 are overweight or obese, **19% more than the state average.**
- The school district in this community requires assistance or intervention from the state.
- 22.4%** of students are ELs, **1.13 times more than the state average.**
- 24.8%** of students have disabilities (**37% more than the state average**), **the seventh highest rate in MA.**
- 83.8%** of students have high needs (**76% more than the state average**), **the second highest rate in MA.**
- 36.6%** of students experience truancy (**1.19 times more than the state average**), **the ninth highest rate in MA.**
- 26.6%** of students experience chronic absenteeism (**1.06 times more than the state average**), **the fifth highest rate in MA.**
- Third graders' average scaled scores for the MCAS test are **486.9** for ELA (in line with the state average) and **475.7** for math (**5% lower than the state average**), **these are the third and second lowest scores in MA, respectively.**

Community Profile Data for the 9 Domains – Holyoke: Rank First

Domain	Data Indicator	Holyoke	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	28.6%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	49.8%	14.6%
	Percent of population 16 years of age and older who are unemployed	10.2%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	9.9%	3.1%
	Gini coefficient of income inequality	0.50	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	64.5%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	71.1%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	50.9%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	17.5%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	1.46	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	11.5%	2.7%
	Percent of mothers who did not complete high school out of all live births	31.2%	—
	Percent of mothers who are non-US-born out of all live births	5.4%	30.3%
	Percent of BIPOC mothers out of all live births	71.4%	—
	Percent of residents 18 years of age and older who are veterans	5.5%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	37.16	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	3,587.36	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	1082.79	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	16,151.32	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Holyoke	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	59.88	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	9.0%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	8.4%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	5.64	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	22.9%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	20.1%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	8.4%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	52.21	—
	Rate of infants with NAS per 1,000 live births	13.13	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	51.4%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	27.6%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	24.7%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	155.76	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	23.0	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	37.3%	31.3%
	Whether school district in this community requires assistance or intervention from the state	Yes	—
	Percent of students who are ELs out of all students enrolled	22.4%	10.5%
	Percent of students with disabilities out of all students enrolled	24.8%	18.1%
	Percent of students who are high needs out of all students enrolled	83.8%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	36.6%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	26.6%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	486.9	504.1
	Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	475.7	499.4

SOUTHBRIDGE

Worcester County, Central Massachusetts

Bordering Connecticut, Southbridge was once a top manufacturer of optical products, earning the small town its unofficial title of "Eye of the Commonwealth." Southbridge's current population is 16,858, with 62.4% of residents identifying as White alone and 34.0% identifying as Hispanic or Latino of any race (predominately Puerto Rican). Twenty-two percent of residents are 0–18 years of age, and 5.3% are under the age of 5. Children and youth living in Southbridge experience a range of challenges, including the highest rates of asthma-related hospitalizations, truancy, and chronic absenteeism in the state, with third graders obtaining the lowest ELA and math MCAS scores. Relative to Massachusetts overall, fewer mothers received less than adequate prenatal care and fewer young children have EBLLs.

RANK: SECOND

Southbridge residents experience several SES-related challenges at relatively higher rates than Massachusetts residents overall.



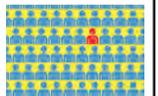
- **18.5%** of residents live below the FPL, 76% more than the state average.
- **40.3%** of children under the age of 5 live below the FPL (**1.76 times more than the state average**), **the seventh highest rate in MA.**
- **8.3%** of residents aged 16 and older are unemployed, 80% more than the state average.
- **4.3%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, 39% more than the state average.
- The Gini coefficient of **0.43** suggests a sizable income gap between residents with greater vs. lower income, 12% less than the state coefficient.
- **44.4%** of children live in a single parent-headed household, 43% more than the state average.
- **60.8%** of mothers received publicly financed prenatal care, 58% more than the state average.
- **24.7%** of families receive cash assistance from TAFDC (**1.87 times more than the state average**), **the seventh highest rate in MA.**

A little more than one-fifth of Southbridge residents experience residential instability and overall are more likely to rent.



- **21.0%** of residents moved at least once within the past year, 75% more than the state average.
- Residents are more likely to be renters vs. owners with a ratio of **1.31** renter-occupied residences for each owner-occupied residence, **1.18 times more than the state ratio.**

Southbridge residents experience one of the highest teen birth rates in Massachusetts.



- **10.0%** of mothers are less than 20 years of age (**2.69 times more than the state average**), **the fourth highest rate in MA.**
- **16.7%** of mothers did not complete high school.*
- **6.9%** of mothers are non-US-born, 77% less than the state average.
- **44.4%** of mothers are BIPOC.*
- **9.3%** of residents 18 years of age and older are veterans, 69% more than the state average.

Southbridge residents experience SUD-related challenges at relatively higher rates than Massachusetts residents overall.

- The average annual rate of opioid overdose deaths is **39.15** per 100,000 residents, 64% more than the state rate.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **2,384.87** per 100,000 residents, 49% more than the state rate.



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. * State-level data unavailable.

Southbridge has a relatively higher violent crime rate than Massachusetts overall.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **521.95** per 100,000 residents, 46% more than the state rate.

Southbridge children have one of the highest unintentional injury rates in Massachusetts.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **18,991.10** per 100,000 same age residents (90% more than the state rate), **the fourth highest rate in MA.**

Southbridge children and youth have one of the highest maltreatment rates in Massachusetts.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **64.02** per 1,000 same age residents (**1.94 times more than the state rate**), **the fourth highest rate in MA.**

Southbridge residents experience some of the most adverse perinatal outcomes in Massachusetts.



- 11.1%** of all births are preterm, 27% more than the state average.
- 9.8%** of all births are low birth weight, 31% more than the state average.
- The rate of infant mortality is **10.59** per 1,000 live births (**1.86 times more than the state rate**), **the fourth highest rate in MA.**
- 11.5%** of women received less than adequate prenatal care, 35% less than the state average.
- 30.0%** of women do not intend to breastfeed.*
- 18.3%** of mothers smoke during pregnancy, **2.45 times more than the state average.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **27.63** per 100,000 female residents.*
- The rate of infant NAS is **23.27** per 1,000 live births, 69% more than the state rate.
- 51.5%** of women are overweight or obese during pregnancy.*

Southbridge children and youth experience the greatest challenges related to development, health, and school in Massachusetts.



- The average percent of children less than 3 years of age enrolled in EI services is **34.8**, 88% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **24.2** (**100% more than the state average**), **the third highest rate in MA.**
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **706.16** per 100,000 same age residents (**3.31 times more than the state rate**), **the highest rate in MA.**
- The rate of EBLLs for children aged 9 months to less than 4 years of age is **14.5** per 1,000 same age children who were screened, 6% less than the state rate.
- 38.1%** of students in grades 1, 4, 7, and 10 are overweight or obese, 22% more than the state average.
- The school district in this community requires assistance or intervention from the state.
- 24.3%** of students are ELs (**1.31 times more than the state average**), **the eighth highest rate in MA.**
- 21.2%** of students have disabilities, 17% more than the state average.
- 79.3%** of students have high needs (67% more than the state average), **the seventh highest rate in MA.**
- 44.6%** of students experience truancy (**1.67 times more than the state average**), **the highest rate in MA.**
- 29.8%** of students experience chronic absenteeism (**1.31 times more than the state average**), **the highest rate in MA.**
- Third graders' average scaled scores for the MCAS test are **480.2** for ELA and **474.5** for math. Both scores are 5% lower than the state's average scores and are **the lowest scores in MA.**

Community Profile Data for the 9 Domains – Southbridge: Rank Second

Domain	Data Indicator	Southbridge	Massachusetts ^a
SES	Percent of individuals living below the FPL in the past 12 months	18.5%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	40.3%	14.6%
	Percent of population 16 years of age and older who are unemployed	8.3%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	4.3%	3.1%
	Gini coefficient of income inequality	0.43	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	44.4%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	60.8%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	24.7%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^b	21.0%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	1.31	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	10.0%	2.7%
	Percent of mothers who did not complete high school out of all live births	16.7%	—
	Percent of mothers who are non-US-born out of all live births	6.9%	30.3%
	Percent of BIPOC mothers out of all live births	44.4%	—
	Percent of residents 18 years of age and older who are veterans	9.3%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	39.15	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	2,384.87	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	521.95	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	18,991.10	9,988.88

^aProvided when state-level data are available.

^bReverse-score presented.

Domain	Data Indicator	Southbridge	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	64.02	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	11.1%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	9.8%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	10.59	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	11.5%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	30.0%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	18.3%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	27.63	—
	Rate of infants with NAS per 1,000 live births	23.27	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	51.5%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	34.8%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	24.2%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	706.16	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	14.5	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	38.1%	31.3%
	Whether school district in this community requires assistance or intervention from the state	Yes	—
	Percent of students who are ELs out of all students enrolled	24.3%	10.5%
	Percent of students with disabilities out of all students enrolled	21.2%	18.1%
	Percent of students who are high needs out of all students enrolled	79.3%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	44.6%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	29.8%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	480.2	504.1
Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	474.5	499.4	

NEW BEDFORD

Bristol County, Southeast Massachusetts

New Bedford was once one of the world's most prominent whaling ports and remains one of the top US fishing ports today. It is also home to a large, vibrant Portuguese American community. New Bedford's current population is 95,125, with 63.4% of residents identifying as White alone, 20.0% identifying as Hispanic or Latino of any race (predominately Puerto Rican), and 5.4% identifying as Black/African American alone. Slightly more than one-fifth of residents are 0–18 years of age (22.2%), and 6.2% are under the age of 5. New Bedford residents are especially vulnerable to SES- and SUD-related challenges, including high rates of publicly financed prenatal care, family cash assistance receipt, and enrollment in substance addiction service programs. New Bedford also struggles with child and youth maltreatment and adverse perinatal outcomes.

RANK: THIRD

New Bedford residents experience some of the greatest SES-related challenges in Massachusetts.



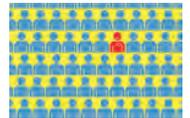
- **23.1%** of residents live below the FPL (1.20 times more than the state average), **the fifth highest rate in MA.**
- **37.6%** of children under the age of 5 live below the FPL (1.58 times more than the state average), **the tenth highest rate in MA.**
- **9.1%** of residents aged 16 and older are unemployed, 98% more than the state average.
- **8.5%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, **1.75 times more than the state average.**
- The Gini coefficient of **0.47** suggests a sizable income gap between residents with greater vs. lower income, 3% less than the state coefficient.
- **55.7%** of children live in a single parent-headed household (79% more than the state average), **the ninth highest rate in MA.**
- **71.9%** of mothers received publicly financed health care (87% more than the state average), **the fourth highest rate in MA.**
- **29.5%** of families receive cash assistance from TAFDC (2.43 times more than the state average), **the fourth highest rate in MA.**

Nearly one-fifth of New Bedford residents experience residential instability and overall are more likely to rent.



- **15.8%** of residents moved at least once within the past year, 32% more than the state average.
- Residents are more likely to be renters vs. owners with a ratio of **1.44** renter-occupied residences for each owner-occupied residence (1.40 times more than the state ratio), **the eighth highest rate in MA.**

New Bedford residents experience one of the highest teen birth rates in Massachusetts.



- **8.6%** of mothers are less than 20 years of age (2.19 times more than the state average), **the eighth highest rate in MA.**
- **23.2%** of mothers did not complete high school, **the seventh highest rate in MA.***
- **21.8%** of mothers are non-US-born, 28% less than the state average.
- **46.1%** of mothers are BIPOC.*
- **5.2%** of residents 18 years of age and older are veterans, 5% less than the state average.

New Bedford residents experience some of the greatest SUD-related challenges in Massachusetts.

- The average annual rate of opioid overdose deaths is **53.82** per 100,000 residents (1.25 times more than the state rate), **the tenth highest rate in MA.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **3,873.95** per 100,000 residents (1.43 times more than the state rate), **the third highest rate in MA.**



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. * State-level data unavailable.

New Bedford has a relatively higher violent crime rate than Massachusetts overall.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **665.57** per 100,000 residents, 86% more than the state rate.

New Bedford children experience unintentional injuries at a relatively higher rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **13,887.37** per 100,000 same age residents, 39% more than the state rate.

New Bedford children and youth have one of the highest rates of maltreatment in Massachusetts.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **64.19** per 1,000 same age residents (**1.95 times more than the state rate**), **the third highest rate in MA.**

New Bedford residents experience some of the most adverse perinatal outcomes in Massachusetts.



- 9.1%** of all births are preterm, 5% more than the state average.
- 8.9%** of all births are low birth weight, 19% more than the state average.
- The rate of infant mortality is **5.42** per 1,000 live births, 46% more than the state rate.
- 22.1%** of women received less than adequate prenatal care, 25% more than the state average.
- 42.2%** of women do not intend to breastfeed, **the fifth highest rate in MA.***
- 15.8%** of mothers smoke during pregnancy, **1.99 times more than the state average.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **75.42** per 100,000 female residents, **the fifth highest rate in MA.***
- The rate of infant NAS is **39.18** per 1,000 live births (**1.84 times more than the state rate**), **the sixth highest rate in MA.**
- 53.1%** of women are overweight or obese during pregnancy.*

New Bedford children and youth experience some of the greatest challenges related to development, health, and school in Massachusetts.



- The average percent of children less than 3 years of age enrolled in EI services is **21.1**, 14% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **16.7**, 38% more than the state average.
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **274.68** per 100,000 same age residents (68% more than the state rate), **the ninth highest rate in MA.**
- The rate of EBLs for children aged 9 months to less than 4 years of age is **34.9** per 1,000 same age children who were screened (**1.27 times more than the state rate**), **the ninth highest rate in MA.**
- 40.9%** of students in grades 1, 4, 7, and 10 are overweight or obese (31% more than the state average), **the tenth highest rate in MA.**
- The school district in this community requires assistance or intervention from the state.
- 28.7%** of students are ELs (**1.73 times more than the state average**), **the fifth highest rate in MA.**
- 20.9%** of students have disabilities, 15% more than the state average.
- 80.3%** of students have high needs (69% more than the state average), **the fifth highest rate in MA.**
- 38.0%** of students experience truancy (**1.28 times more than the state average**), **the fourth highest rate in MA.**
- 23.4%** of students experience chronic absenteeism (81% more than the state average), **the ninth highest rate in MA.**
- Third graders' average scaled scores for the MCAS test are **499.7** for ELA and **494.7** for math, both scores are in line with the state's average scores.^a

Note. ^a "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less.

Community Profile Data for the 9 Domains – New Bedford: Rank Third

Domain	Data Indicator	New Bedford	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	23.1%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	37.6%	14.6%
	Percent of population 16 years of age and older who are unemployed	9.1%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	8.5%	3.1%
	Gini coefficient of income inequality	0.47	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	55.7%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	71.9%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	29.5%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	15.8%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	1.44	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	8.6%	2.7%
	Percent of mothers who did not complete high school out of all live births	23.2%	—
	Percent of mothers who are non-US-born out of all live births	21.8%	30.3%
	Percent of BIPOC mothers out of all live births	46.1%	—
	Percent of residents 18 years of age and older who are veterans	5.2%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	53.82	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	3,873.95	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	665.57	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	13,887.37	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	New Bedford	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	64.19	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	9.1%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	8.9%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	5.42	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	22.1%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	42.2%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	15.8%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	75.42	—
	Rate of infants with NAS per 1,000 live births	39.18	13.82
Child Development & Health and School Outcomes	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	53.1%	—
	Average percent of children less than 3 years of age enrolled in EI out of same age residents	21.1%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	16.7%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	274.68	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	34.9	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	40.9%	31.3%
	Whether school district in this community requires assistance or intervention from the state	Yes	—
	Percent of students who are ELs out of all students enrolled	28.7%	10.5%
	Percent of students with disabilities out of all students enrolled	20.9%	18.1%
	Percent of students who are high needs out of all students enrolled	80.3%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	38.0%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	23.4%	12.9%
Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	499.7	504.1	
Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	494.7	499.4	

FALL RIVER

Bristol County, Southeast Massachusetts

Before the Great Depression, Fall River was a bustling textile industry. Today, it houses the world's most extensive collection of World War II naval vessels. It is also home to a large, vibrant Portuguese American community. Fall River's current population is 89,258, with 78.0% of residents identifying as White alone, 9.8% identifying as Hispanic or Latino of any race, 4.9% identifying as Black/African American alone, and 4.2% identifying as multiracial. About one-fifth of residents are 0–18 years of age (20.5%), and 6.5% are children under the age of 5. Fall River residents are especially vulnerable to SES- and SUD-related challenges, including high rates of unemployment and deaths due to opioid overdoses, as well as the highest rate of enrollment in substance addiction service programs in the state. Fall River also struggles with violent crime and adverse perinatal outcomes. Relative to Massachusetts overall, fewer infants are born preterm and fewer youth leave high school without a diploma.

RANK: FOURTH

Fall River residents experience some of the greatest SES-related challenges in Massachusetts.



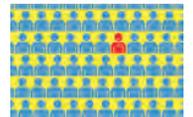
- **20.2%** of residents live below the FPL (92% more than the state average) **the tenth highest rate in MA.**
- **39.8%** of children under the age of 5 live below the FPL (**1.73 times more than the state average**), **the eighth highest rate in MA.**
- **10.2%** of residents aged 16 and older are unemployed (**1.22 times more than the state average**), **the fourth highest rate in MA.**
- **2.9%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, 6% less than the state average.
- The Gini coefficient of **0.46** suggests a sizable income gap between residents with greater vs. lower income, 4% less than the state coefficient.
- **51.7%** of children live in a single parent-headed household, 66% more than the state average.
- **71.7%** of mothers received publicly financed prenatal care (87% more than the state average), **the sixth highest rate in MA.**
- **27.1%** of families receive cash assistance from TAFDC (**2.15 times more than the state average**), **the fifth highest rate in MA.**

Fall River residents experience some of the greatest housing-related challenges in Massachusetts.



- **18.0%** of residents moved at least once within the past year, 50% more than the state average.
- Residents are more likely to be renters vs. owners with a ratio of **1.76** renter-occupied residences for each owner-occupied residence (**1.93 times more than the state ratio**), **the fifth highest ratio in MA.**

Relative to Massachusetts residents overall, Fall River residents experience teen births at a higher rate.



- **7.7%** of mothers are less than 20 years of age, **1.85 times more than the state average.**
- **19.7%** of mothers did not complete high school, **the ninth highest rate in MA.***
- **16.6%** of mothers are non-US-born, 45% less than the state average.
- **29.6%** of mothers are BIPOC.*
- **6.4%** of residents 18 years of age and older are veterans, 16% more than the state average.

Fall River experiences the greatest SUD-related challenges in Massachusetts.

- The average annual rate of opioid overdose deaths is **60.95** per 100,000 residents (**1.55 times more than the state rate**), **the fourth highest rate in MA.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **5,288.97** per 100,000 residents, **2.31 times more than the state rate, the highest rate in MA.**



Note. This color indicates city/town has one of the top ten highest rates in the state. This color indicates a relative difference between city/town and state of 100% more/less. * State-level data unavailable.

Fall River has one of the highest violent crime rates in Massachusetts.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **988.63** per 100,000 residents (**1.76 times more than the state rate**), **the third highest rate in MA.**

Fall River children have one of the highest unintentional injury rates in Massachusetts.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **16,977.27** per 100,000 same age residents (70% more than the state rate), **the ninth highest rate in MA.**

Fall River children and youth experience maltreatment at a relatively higher rate than their Massachusetts peers overall.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **52.25** per 1,000 same age residents, **1.40 times more than the state rate.**

Fall River residents experience the most adverse perinatal outcomes in Massachusetts.



- **8.1%** of all births are preterm, 7% less than the state average.
- **8.8%** of all births are low birth weight, 17% more than the state average.
- The rate of infant mortality is **5.63** per 1,000 live births, 52% more than the state rate.
- **20.9%** of women received less than adequate prenatal care, 18% more than the state average.
- **45.3%** of women do not intend to breastfeed, **the fourth highest rate in MA.***
- **19.8%** of mothers smoke during pregnancy, **2.74 times more than the state rate.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **98.27** per 100,000 female residents, **the third highest rate in MA.***
- The rate of infant NAS is **59.82** per 1,000 live births (**3.33 times more than the state rate**), **the highest rate in MA.**
- **53.1%** of women are overweight or obese during pregnancy.*

Fall River children and youth experience some of the greatest challenges related to development, health, and school in Massachusetts.



- The average percent of children less than 3 years of age enrolled in EI services is **30.0**, 62% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **18.0** (49% more than the state average), **the fifth highest rate in MA.**
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **257.09** per 100,000 same age residents, 57% more than the state rate.
- The rate of EBLLs for children aged 9 months to less than 4 years of age is **19.7** per 1,000 same age children who were screened, 28% more than the state rate.
- **40.3%** of students in grades 1, 4, 7, and 10 are overweight or obese, 29% more than the state average.
- The school district in this community does not require assistance or intervention from the state.
- **16.4%** of students are ELs, 56% more than the state average.
- **21.2%** of students have disabilities, 17% more than the state average.
- **76.4%** of students have high needs (61% more than the state average), **the eighth highest rate in MA.**
- **42.2%** of students experience truancy (**1.53 times more than the state average**), **the second highest rate in MA.**
- **27.5%** of students experience chronic absenteeism (**1.13 times more than the state average**), **the second highest rate in MA.**
- Third graders’ average scaled scores for the MCAS test are **494.6** for ELA and **490.4** for math, both scores are in line with the state’s average scores.^a

Note. ^a in line with the state” indicates a relative difference between city/town and state of 0–3% more/less.

Community Profile Data for the 9 Domains – Fall River: Rank Fourth

Domain	Data Indicator	Fall River	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	20.2%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	39.8%	14.6%
	Percent of population 16 years of age and older who are unemployed	10.2%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	2.9%	3.1%
	Gini coefficient of income inequality	0.46	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	51.7%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	71.7%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	27.1%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	18.0%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	1.76	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	7.7%	2.7%
	Percent of mothers who did not complete high school out of all live births	19.7%	—
	Percent of mothers who are non-US-born out of all live births	16.6%	30.3%
	Percent of BIPOC mothers out of all live births	29.6%	—
	Percent of residents 18 years of age and older who are veterans	6.4%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	60.95	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	5,288.97	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	988.63	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	16,977.27	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Fall River	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	52.25	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	8.1%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	8.8%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	5.63	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	20.9%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	45.3%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	19.8%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	98.27	—
	Rate of infants with NAS per 1,000 live births	59.82	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	53.1%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	30.0%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	18.0%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	257.09	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	19.7	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	40.3%	31.3%
	Whether school district in this community requires assistance or intervention from the state	No	—
	Percent of students who are ELs out of all students enrolled	16.4%	10.5%
	Percent of students with disabilities out of all students enrolled	21.2%	18.1%
	Percent of students who are high needs out of all students enrolled	76.4%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	42.2%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	27.5%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	494.6	504.1
	Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	490.4	499.4

SPRINGFIELD

Hampden County, Western Massachusetts

Springfield is known as the birthplace of both basketball and the first American gasoline car; it is also the third largest city in Massachusetts and the fourth largest city in New England. Springfield's current population is 154,613, with 43.8% of residents identifying as Hispanic or Latino of any race (predominately Puerto Rican), 32.6% identifying as White alone, and 18.9% identifying as Black/African American alone. A quarter of residents are 0–18 years of age, and 6.7% are under the age of 5. Springfield residents are especially vulnerable to SES-related challenges, including high rates of poverty, single parent-headed households, family cash assistance receipt, as well as having the highest rate of unemployment in the state. Springfield also struggles with teenage pregnancy, violent crime, and child and youth maltreatment.

RANK: FIFTH

Springfield residents experience some of the greatest SES-related challenges in Massachusetts.



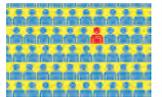
- **28.7%** of residents live below the FPL (**1.73 times more than the state average**), **the second highest rate in MA.**
- **42.8%** of children under the age of 5 live below the FPL (**1.93 times more than the state average**), **the fourth highest rate in MA.**
- **11.1%** of residents aged 16 and older are unemployed (**1.41 times more than the state average**), **the highest rate in MA.**
- **8.7%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, **1.81 times more than the state average.**
- The Gini coefficient of **0.48** suggests a sizable income gap between residents with greater vs. lower income, in line with the state coefficient.^a
- **65.1%** of children live in a single parent-headed household (**1.09 times more than the state average**), **the second highest rate in MA.**
- **76.5%** of mothers received publicly financed prenatal care (99% more than the state average), **the third highest rate in MA.**
- **39.2%** of families receive cash assistance from TAFDC (**3.56 times more than the state average**), **the second highest rate in MA.**

Nearly one-fifth of Springfield residents experience residential instability and overall are more likely to rent.



- **19.3%** of residents moved at least once within the past year, 61% more than the state average.
- Residents are more likely to be renters vs. owners with a ratio of **1.14** renter-occupied residences for each owner-occupied residence, 90% more than the state ratio.

Springfield residents experience one of the highest teen birth rates in Massachusetts.



- **11.5%** of mothers are less than 20 years of age, (**3.26 times more than the state average**), **the second highest rate in MA.**
- **28.2%** of mothers did not complete high school, **the fourth highest rate in MA.***
- **14.7%** of mothers are non-US-born, 51% less than the state average.
- **78.3%** of mothers are BIPOC, **the third highest rate in MA.***
- **5.1%** of residents 18 years of age and older are veterans, 7% less than the state average.

Springfield residents experience SUD-related challenges at relatively higher rates than Massachusetts residents overall.

- The average annual rate of opioid overdose deaths is **33.11** per 100,000 residents, 38% more than the state rate.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **3,370.33** per 100,000 residents (**1.11 times more than the state rate**), **the sixth highest rate in MA.**



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. * State-level data unavailable.

Springfield has one of the highest violent crime rates in Massachusetts.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **874.08** per 100,000 residents (**1.44 times more than the state rate**), **the sixth highest rate in MA.**

Springfield children experience unintentional injuries at a relatively higher rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **13,998.20** per 100,000 same age residents, 40% more than the state rate.

Springfield children and youth have one of the highest maltreatment rates in Massachusetts.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **67.73** per 1,000 same age residents (**2.11 times more than the state rate**), **the second highest rate in MA.**

Springfield residents experience adverse perinatal outcomes at relatively higher rates than Massachusetts residents overall.



- **10.4%** of all births are preterm, 20% more than the state average.
- **9.3%** of all births are low birth weight, 24% more than the state average.
- The rate of infant mortality is **6.45** per 1,000 live births, 74% more than the state rate.
- **20.0%** of women received less than adequate prenatal care, 13% more than the state average.
- **25.0%** of women do not intend to breastfeed.*
- **8.9%** of mothers smoke during pregnancy, 68% more than the state average.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **36.03** per 100,000 female residents.*
- The rate of infant NAS is **14.62** per 1,000 live births, 6% more than the state average.
- **57.9%** of women are overweight or obese during pregnancy.*

Relative to their Massachusetts peers overall, Springfield children and youth experience several challenges related to development, health, and school at higher rates.



- The average percent of children less than 3 years of age enrolled in EI services is **30.4**, 64% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **17.7** (46% more than the state average), **the eighth highest rate in MA.**
- The rate of hospitalizations for asthma or asthma related issues for children under 20 years of age is **160.75** per 100,000 same age residents, which is in line with the state rate.^a
- The rate of EBLLs for children aged 9 months to less than 4 years of age is **34.6** per 1,000 same age children who were screened, **1.25 times more than the state rate.**
- **41.0%** of students in grades 1, 4, 7, and 10 are overweight or obese (31% more than the state average), **the ninth highest rate in MA.**
- The school district in this community does not require assistance or intervention from the state.
- **17.3%** of students are ELs, 65% more than the state average.
- **23.5%** of students have disabilities, 30% more than the state average.
- **83.2%** of students have high needs (75% more than the state average), **the third highest rate in MA.**
- **6.8%** of students experience truancy, 59% less than the state average.
- **22.9%** of students experience chronic absenteeism, 78% more than the state average.
- Third graders' average scaled scores for the MCAS test are **497.1** for ELA and **489.4** for math, both scores are in line with the state's average scores.

Note. ^a "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less.

Community Profile Data for the 9 Domains – Springfield: Rank Fifth

Domain	Data Indicator	Springfield	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	28.7%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	42.8%	14.6%
	Percent of population 16 years of age and older who are unemployed	11.1%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	8.7%	3.1%
	Gini coefficient of income inequality	0.48	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	65.1%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	76.5%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	39.2%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	19.3%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	1.14	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	11.5%	2.7%
	Percent of mothers who did not complete high school out of all live births	28.2%	—
	Percent of mothers who are non-US-born out of all live births	14.7%	30.3%
	Percent of BIPOC mothers out of all live births	78.3%	—
	Percent of residents 18 years of age and older who are veterans	5.1%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	33.11	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	3,370.33	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	874.08	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	13,998.20	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Springfield	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	67.73	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	10.4%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	9.3%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	6.45	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	20.0%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	25.0%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	8.9%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	36.03	—
	Rate of infants with NAS per 1,000 live births	14.62	13.82
Child Development & Health and School Outcomes	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	57.9%	—
	Average percent of children less than 3 years of age enrolled in EI out of same age residents	30.4%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	17.7%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	160.75	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	34.6	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	41.0%	31.3%
	Whether school district in this community requires assistance or intervention from the state	No	—
	Percent of students who are ELs out of all students enrolled	17.3%	10.5%
	Percent of students with disabilities out of all students enrolled	23.5%	18.1%
	Percent of students who are high needs out of all students enrolled	83.2%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	6.8%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	22.9%	12.9%
Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	497.1	504.1	
Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	489.4	499.4	

Lawrence

Essex County, Northeast Massachusetts

Known as the "Immigrant City," since the late 1800s, Lawrence has been home to a large population of foreign-born residents and still is today. Lawrence's current population is 79,497, with 79.1% of residents identifying as Hispanic or Latino of any race (predominately Dominican) and 15.5% identifying as White alone. A little more than a quarter (26.5%) of residents are 0–18 years of age, and 7.6% are children under the age of 5. Lawrence residents are especially vulnerable to SES-related challenges, including high rates of poverty and unemployment, as well as the highest rate of publicly financed prenatal care in the state. Lawrence also has a high ratio of renter- vs. owner-occupied residences. Given its diverse population, a large proportion of Lawrence students are ELs. Relative to Massachusetts overall, fewer mothers smoke while pregnant, fewer infants are born with NAS, fewer young children have EBLLs, and fewer students experience truancy.

RANK: SIXTH

Lawrence residents experience some of the greatest SES-related challenges in Massachusetts.



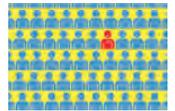
- **24.2%** of residents live below the FPL (**1.30 times more than the state average**) **the fourth highest rate in MA.**
- **30.6%** of children under the age of 5 live below the FPL, **1.10 times more than the state average.**
- **10.8%** of residents aged 16 and older are unemployed (**1.35 times more than the state average**), **the second highest rate in MA.**
- **6.2%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, 99% more than the state average.
- The Gini coefficient of **0.45** suggests a sizable income gap between residents with greater vs. lower income, 7% less than the state coefficient.
- **61.6%** of children live in a single parent-headed household (98% more than the state average), **the fifth highest rate in MA.**
- **80.9%** of mothers received publicly financed prenatal care (**1.11 times more than the state average**), **the highest rate in MA.**
- **21.8%** of families receive cash assistance from TAFDC (**1.53 times more than the state average**), **the ninth highest rate in MA.**

Lawrence residents experience some of the greatest housing-related challenges in Massachusetts.



- **14.8%** of residents moved at least once within the past year, 24% more than the state average.
- Residents are more likely to be renters vs. owners with a ratio of **2.52** renter-occupied residences for each owner-occupied residence (**3.20 times more than the state ratio**), **the second highest rate in MA.**

Lawrence residents experience one of the highest teen birth rates in Massachusetts.



- **9.9%** of mothers are less than 20 years of age (**2.66 times more than the state average**), **the fifth highest rate in MA.**
- **24.3%** of mothers did not complete high school, **the fifth highest rate in MA.***
- **54.7%** of mothers are non-US-born (80% more than the state average), **the sixth highest rate in MA.**
- **91.2%** of mothers are BIPOC, **the highest rate in MA.***
- **2.0%** of residents 18 years of age and older are veterans, 64% less than the state average.

Lawrence residents experience SUD-related challenges at relatively higher rates than Massachusetts residents overall.

- The average annual rate of opioid overdose deaths is **48.56** per 100,000 residents, **1.03 times more than the state rate.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **1,783.58** per 100,000 residents, 12% more than the state rate.



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. * State-level data unavailable.

Lawrence has a relatively higher violent crime rate than Massachusetts overall.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **723.20** per 100,000 residents, **1.02 times more than the state rate**.

Lawrence children experience unintentional injuries at a relatively higher rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **11,968.23** per 100,000 same age residents, 20% more than the state rate.

Lawrence children and youth experience maltreatment at a relatively higher rate than their Massachusetts peers overall.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **25.92** per 1,000 same age residents, 19% more than the state rate.

Relative to Massachusetts residents overall, Lawrence residents experience several adverse perinatal outcomes at higher rates.



- 9.7%** of all births are preterm, 11% more than the state average.
- 9.3%** of all births are low birth weight, 23% more than the state average.
- The rate of infant mortality is **5.88** per 1,000 live births, 59% more than the state rate.
- 26.0%** of women received less than adequate prenatal care, 47% more than the state average.
- 13.7%** of women do not intend to breastfeed.*
- 3.4%** of mothers smoke during pregnancy, 35% less than the state average.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **11.57** per 100,000 female residents.*
- The rate of infant NAS is **6.49** per 1,000 live births, 53% less than the state rate.
- 52.1%** of women are overweight or obese during pregnancy.*

Lawrence children and youth experience some of the greatest challenges related to development, health, and school in Massachusetts.^a



- The average percent of children less than 3 years of age enrolled in EI services is **24.2**, 31% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **17.6** (45% more than the state average), **the ninth highest rate in MA**.
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **280.81** per 100,000 same age residents (71% more than the state rate), **the seventh highest rate in MA**.
- The rate of EBLs for children aged 9 months to less than 4 years of age is **13.6** per 1,000 same age children who were screened, 12% less than the state rate.
- The school district in this community requires assistance or intervention from the state.
- 35.9%** of students are ELs (**2.42 times more than the state average**), **the second highest rate in MA**.
- 19.2%** of students have disabilities, 6% more than the state average.
- 84.4%** of students have high needs (77% more than the state average), **the highest rate in MA**.
- 0.1%** of students experience truancy, 99% less than the state average.
- 25.2%** of students experience chronic absenteeism (95% more than the state average), **the seventh highest rate in MA**.
- Third graders' average scaled scores for the MCAS test are **492.1** for ELA and **487.3** for math. Although both scores are in line with the state's average scores,^b the ELA score is **the eighth lowest score in MA**.

Note. ^a city/town data were unavailable for student obesity. ^b "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less.

Community Profile Data for the 9 Domains – Lawrence: Rank Sixth

Domain	Data Indicator	Lawrence	Massachusetts ^c
SES	Percent of individuals living below the FPL in the past 12 months	24.2%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	30.6%	14.6%
	Percent of population 16 years of age and older who are unemployed	10.8%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	6.2%	3.1%
	Gini coefficient of income inequality	0.45	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	61.6%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	80.9%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	21.8%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^d	14.8%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	2.52	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	9.9%	2.7%
	Percent of mothers who did not complete high school out of all live births	24.3%	—
	Percent of mothers who are non-US-born out of all live births	54.7%	30.3%
	Percent of BIPOC mothers out of all live births	91.2%	—
	Percent of residents 18 years of age and older who are veterans	2.0%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	48.56	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	1,783.58	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	723.20	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	11,968.23	9,988.88

^cProvided when state-level data are available.

^dReverse-score presented.

Domain	Data Indicator	Lawrence	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	25.92	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	9.7%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	9.3%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	5.88	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	26.0%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	13.7%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	3.4%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	11.57	—
	Rate of infants with NAS per 1,000 live births	6.49	13.82
Child Development & Health and School Outcomes	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	52.1%	—
	Average percent of children less than 3 years of age enrolled in EI out of same age residents	24.2%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	17.6%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	280.81	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	13.6	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	— ^e	31.3%
	Whether school district in this community requires assistance or intervention from the state	Yes	—
	Percent of students who are ELs out of all students enrolled	35.9%	10.5%
	Percent of students with disabilities out of all students enrolled	19.2%	18.1%
	Percent of students who are high needs out of all students enrolled	84.4%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	0.1%	16.7%
Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	25.2%	12.9%	
Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	492.1	504.1	
Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	487.3	499.4	

^eThese data were unavailable at the city/town-level for Lawrence.

CHELSEA

Suffolk County, Eastern Massachusetts

Chelsea is a neighboring suburb of Boston, located directly across the Mystic River. Although it occupies a land area of only 1.8 square miles, Chelsea is the second most densely populated city in Massachusetts. Chelsea's current population is 39,272, with 65.9% of residents identifying as Hispanic or Latino of any race (31% Salvadoran and 19% Puerto Rican), 21.9% identifying as White alone, and 5.9% identifying as Black/African American. About a quarter of residents are 0–18 years of age (26.4%), and 9.3% are under the age of 5. Chelsea residents are especially vulnerable to housing-related challenges, including having the highest ratio of renter- vs. owner-occupied residences in the state. Chelsea also has the highest proportions of mothers with low educational attainment and students who are ELs in the state. Relative to Massachusetts overall, fewer residents experience opioid overdose deaths, fewer mothers smoke while pregnant, and fewer infants are born preterm. Moreover, fewer children visit emergency departments due to unintentional injuries and enroll in EI services, and fewer students are affected by asthma and have disabilities.

RANK: SEVENTH

Chelsea residents experience some of the greatest SES-related challenges in Massachusetts.



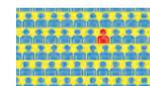
- **19.5%** of residents live below the FPL, 86% more than the state average.
- **28.4%** of children under the age of 5 live below the FPL, 95% more than the state average.
- **5.5%** of residents aged 16 and older are unemployed, 20% more than the state average.
- **10.8%** of 16–19 year olds are neither enrolled in school nor are high school graduates or the equivalent, **2.49 times more than the state average.**
- The Gini coefficient of **0.45** suggests a sizable income gap between residents with greater vs. lower income, 8% less than the state coefficient.
- **53.4%** of children live in a single parent-headed household, 72% more than the state average.
- **71.7%** of mothers receive publicly financed prenatal care (87% more than the state average), **the fifth highest rate in MA.**
- **26.8%** of families receive cash assistance from TAFDC (**2.11 times more than the state average**), **the sixth highest rate in MA.**

Chelsea residents experience some of the greatest housing-related challenges in Massachusetts.



- **17.9%** of residents moved at least once within the past year, 50% more than the state average.
- Residents are more likely to be renters vs. owners with a ratio of **2.88** renter-occupied residences for each owner-occupied residence (**3.80 times more than the state ratio**), **the highest ratio in MA.**

Chelsea residents experience one of the highest teen birth rates in Massachusetts.



- **7.7%** of mothers are less than 20 years of age (**1.86 times more than the state average**), **the tenth highest rate in MA.**
- **39.4%** of mothers did not complete high school, **the highest rate in MA.***
- **68.6%** of mothers are non-US-born (**1.27 times more than the state average**), **the second highest rate in MA.**
- **87.2%** of mothers are BIPOC, **the second highest rate in MA.***
- **2.6%** of residents 18 years of age and older are veterans, 53% less than the state average.

Relative to Massachusetts residents overall, Chelsea residents have a higher rate of enrollment to substance addiction service programs, but a lower rate of deaths due to opioid overdoses.

- The average annual rate of opioid overdose deaths is **21.39** per 100,000 residents, 11% less than the state rate.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **1,942.04** per 100,000 residents, 22% more than the state rate.



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. * State-level data unavailable.

Chelsea has one of the highest violent crime rates in Massachusetts.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **777.51** per 100,000 residents (**1.17 times more than the state rate**), **the eighth highest rate in MA.**

Chelsea children experience unintentional injuries at a relatively lower rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **7730.51** per 100,000 same age residents, 23% less than the state rate.

Chelsea children and youth experience maltreatment at a relatively higher rate than their Massachusetts peers overall.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **32.62** per 1,000 same age residents, 50% more than the state rate.

Relative to Massachusetts residents overall, Chelsea residents experience some adverse perinatal outcomes at higher rates.



- **8.1%** of all births are preterm, 7% less than the state average.
- **7.6%** of all births are low birth weight, in line with the state average.^a
- The rate of infant mortality is **5.06** per 1,000 live births, 37% more than the state rate.
- **18.6%** of women received less than adequate prenatal care, 5% more than the state average.
- **17.4%** of women do not intend to breastfeed.*
- **3.0%** of mothers smoke during pregnancy, 43% less than the state average.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **18.80** per 100,000 female residents.*
- The rate of infant NAS is **8.05** per 1,000 live births, 42% more than the state rate.
- **60.0%** of women are overweight or obese during pregnancy, **the fifth highest rate in MA.***

Chelsea children and youth experience some of the greatest challenges related to development, health, and school in Massachusetts.^b



- The average percent of children less than 3 years of age enrolled in EI services is **14.9**, 19% less than the state average.
- The average percent of children in elementary and middle school affected by asthma is **10.9**, 10% less than the state average.
- The rate of hospitalizations for asthma or asthma related issues for children under 20 years of age is **301.36** per 100,000 same age residents (84% more than the state rate), **the sixth highest rate in MA.**
- The rate of EBLs for children aged 9 months to less than 4 years of age is **21.0** per 1,000 same age children who were screened, 36% more than the state rate.
- The school district in this community requires assistance or intervention from the state.
- **37.8%** of students are ELs (**2.60 times more than the state average**), **the highest rate in MA.**
- **16.1%** of students have disabilities, 11% less than the state average.
- **82.1%** of students have high needs (72% more than the state average), **the fourth highest rate in MA.**
- **37.4%** of students experience truancy (**1.24 times more than the state average**), **the sixth highest rate in MA.**
- **22.1%** of students experience chronic absenteeism, 71% more than the state average.
- Third graders' average scaled scores for the MCAS test are **494.6** for ELA and **493.3** for math, both scores are in line with the state's average scores.

Note. ^a "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less; ^b city/town data were unavailable for student obesity.

Community Profile Data for the 9 Domains – Chelsea: Rank Seventh

Domain	Data Indicator	Chelsea	Massachusetts ^c
SES	Percent of individuals living below the FPL in the past 12 months	19.5%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	28.4%	14.6%
	Percent of population 16 years of age and older who are unemployed	5.5%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	10.8%	3.1%
	Gini coefficient of income inequality	0.45	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	53.4%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	71.7%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	26.8%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^d	17.9%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	2.88	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	7.7%	2.7%
	Percent of mothers who did not complete high school out of all live births	39.4%	—
	Percent of mothers who are non-US-born out of all live births	68.6%	30.3%
	Percent of BIPOC mothers out of all live births	87.2%	—
	Percent of residents 18 years of age and older who are veterans	2.6%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	21.39	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	1,942.04	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	777.51	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	7,730.51	9,988.88

^cProvided when state-level data are available.

^dReverse-score presented.

Domain	Data Indicator	Chelsea	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	32.62	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	8.1%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	7.6%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	5.06	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	18.6%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	17.4%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	3.0%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	18.80	—
	Rate of infants with NAS per 1,000 live births	8.05	13.82
Child Development & Health and School Outcomes	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	60.0%	—
	Average percent of children less than 3 years of age enrolled in EI out of same age residents	14.9%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	10.9%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	301.36	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	21.0	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	— ^e	31.3%
	Whether school district in this community requires assistance or intervention from the state	Yes	—
	Percent of students who are ELs out of all students enrolled	37.8%	10.5%
	Percent of students with disabilities out of all students enrolled	16.1%	18.1%
	Percent of students who are high needs out of all students enrolled	82.1%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	37.4%	16.7%
Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	22.1%	12.9%	
Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	494.6	504.1	
Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	493.3	499.4	

^eThese data were unavailable at the city/town-level for Chelsea.

WORCESTER

Worcester County, Central Massachusetts

Initially settled by the Nipmuc People, Worcester is the second largest city in New England, and is known to be the "Heart of the Commonwealth." Worcester's current population is 184,743, with 57.1% of residents identifying as White alone, 20.9% identifying as Hispanic or Latino of any race (predominately Puerto Rican), 11.8% identifying as Black/African American alone, and 7.3% identifying as Asian alone. About 20% of residents are 0–18 years of age, and 5.7% are under the age of 5. Worcester residents are especially vulnerable to both housing- and SUD-related challenges, including a high ratio of renter- vs. owner-occupied residences, and a high rate of enrollment in substance addiction service programs. Children and youth living in Worcester experience several challenges, including high rates of overweight and obesity and students who are ELs. Relative to Massachusetts overall, fewer youth leave high school without a diploma.

RANK: EIGHTH

Worcester residents experience several SES-related challenges at relatively higher rates than Massachusetts residents overall.



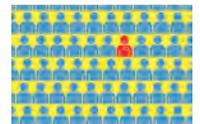
- **21.8%** of residents live below the FPL (**1.08 times more than the state average**), **the seventh highest rate in MA.**
- **31.4%** of children under the age of 5 live below the FPL, **1.15 times more than the state average.**
- **7.5%** of residents aged 16 and older are unemployed, **63% more than the state average.**
- **2.6%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, **16% less than the state average.**
- The Gini coefficient of **0.50** suggests a sizable income gap between residents with greater vs. lower income, **3% more than the state coefficient.**
- **47.7%** of children live in a single parent-headed household, **53% more than the state average.**
- **59.2%** of mothers received publicly financed prenatal care, **54% more than the state average.**
- **19.8%** of families receive cash assistance from TAFDC, **1.30 times more than the state average.**

Worcester residents experience some of the greatest housing-related challenges in Massachusetts.



- **20.2%** of residents moved at least once within the past year, **69% more than the state average.**
- Residents are more likely to be renters vs. owners with a ratio of **1.37** renter-occupied residences for each owner-occupied residence (**1.33 times more than the state ratio**), **the ninth highest rate in MA.**

Relative to Massachusetts residents overall, Worcester residents experience teen births at a higher rate.



- **6.0%** of mothers are less than 20 years of age, **1.21 times more than the state average.**
- **14.5%** of mothers did not complete high school.*
- **37.3%** of mothers are non-US-born, **23% more than the state average.**
- **54.6%** of mothers are BIPOC.*
- **5.1%** of residents 18 years of age and older are veterans, **7% less than the state average.**

Worcester residents experience some of the greatest SUD-related challenges in Massachusetts.

- The average annual rate of opioid overdose deaths is **53.15** per 100,000 residents, **1.23 times more than the state rate.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **3,257.08** per 100,000 residents (**1.04 times more than the state rate**), **the eighth highest rate in MA.**



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. * State-level data unavailable.

Worcester has a relatively higher violent crime rate than Massachusetts overall.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **726.61** per 100,000 residents, **1.03 times more than the state rate.**

Worcester children experience unintentional injuries at a relatively higher rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **11,748.19** per 100,000 same age residents, 18% more than the state rate.

Worcester children and youth experience maltreatment at a relatively higher rate than their Massachusetts peers overall.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **49.81** per 1,000 same age residents, **1.29 times more than the state rate.**

Worcester residents experience adverse perinatal outcomes at relatively higher rates than Massachusetts residents overall.



- **9.2%** of all births are preterm, 5% more than the state average.
- **8.3%** of all births are low birth weight, 10% more than the state average.
- The rate of infant mortality is **6.61** per 1,000 live births, 79% more than the state rate.
- **22.2%** of women received less than adequate prenatal care, 25% more than the state average.
- **18.1%** of women do not intend to breastfeed.*
- **10.8%** of mothers smoke during pregnancy, **1.03 times more than the state average.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **27.54** per 100,000 female residents.*
- The rate of infant NAS is **16.19** per 1,000 live births, 17% more than the state rate.
- **51.5%** of women are overweight or obese during pregnancy.*

Worcester children and youth experience some of the greatest challenges related to development, health, and school in Massachusetts.



- The average percent of children less than 3 years of age enrolled in EI services is **24.5**, 32% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **13.4**, 11% more than the state average.
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **202.02** per 100,000 same age residents, 23% more than the state rate.
- The rate of EBLLs for children aged 9 months to less than 4 years of age is **20.9** per 1,000 same age children who were screened, 36% more than the state rate.
- **41.3%** of students in grades 1, 4, 7, and 10 are overweight or obese (32% more than the state average), **the seventh highest rate in MA.**
- The school district in this community does not require assistance or intervention from the state.
- **32.8%** of students are ELs (**2.12 times more than the state average**), **the third highest rate in MA.**
- **19.4%** of students have disabilities, 7% higher than the state average.
- **79.4%** of students have high needs (67% more than the state average), **the sixth highest rate in MA.**
- **31.0%** of students experience truancy, 86% more than the state average.
- **15.0%** of students experience chronic absenteeism, 16% more than the state average.
- Third graders' average scaled scores for the MCAS test are **494.3** for ELA and **486.9** for math. Although both scores are in line with the state's average scores,^a **the math score is the tenth lowest in MA.**

Note. ^a "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less.

Community Profile Data for the 9 Domains – Worcester: Rank Eighth

Domain	Data Indicator	Worcester	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	21.8%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	31.4%	14.6%
	Percent of population 16 years of age and older who are unemployed	7.5%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	2.6%	3.1%
	Gini coefficient of income inequality	0.50	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	47.7%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	59.2%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	19.8%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	20.2%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	1.37	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	6.0%	2.7%
	Percent of mothers who did not complete high school out of all live births	14.5%	—
	Percent of mothers who are non-US-born out of all live births	37.3%	30.3%
	Percent of BIPOC mothers out of all live births	54.6%	—
	Percent of residents 18 years of age and older who are veterans	5.1%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	53.15	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	3,257.08	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	726.61	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	11,748.19	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Worcester	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	49.81	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	9.2%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	8.3%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	6.61	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	22.2%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	18.1%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	10.8%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	27.54	—
	Rate of infants with NAS per 1,000 live births	16.19	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	51.5%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	24.5%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	13.4%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	202.02	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	20.9	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	41.3%	31.3%
	Whether school district in this community requires assistance or intervention from the state	No	—
	Percent of students who are ELs out of all students enrolled	32.8%	10.5%
	Percent of students with disabilities out of all students enrolled	19.4%	18.1%
	Percent of students who are high needs out of all students enrolled	79.4%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	31.0%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	15.0%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	494.3	504.1
Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	486.9	499.4	

NORTH ADAMS

Berkshire County, Western Massachusetts

One of the smallest cities in Massachusetts, North Adams attracts tourists for its outdoor recreation, culture, and art; it also has one of the largest contemporary art museums in the US. North Adams' current population is 13,211, with 90.0% of residents identifying as White alone, 3.7% identifying as Hispanic or Latino of any race, and 4.1% identifying as multiracial. Sixteen percent of residents are 0–18 years of age and 4.2% are children under the age of 5. North Adams residents are especially vulnerable to SES-related challenges, including high rates of unemployment and single parent-headed households. North Adams also has the highest rates of violent crime and smoking among pregnant women in the state, as well as a high rate of infant NAS. Relative to Massachusetts overall, fewer infants are born preterm and of low birth weight, and fewer children and youth experience asthma-related hospitalizations. Moreover, fewer youth leave high school without a diploma and fewer students are ELs.

RANK: NINTH

North Adams residents experience some of the greatest SES-related challenges in Massachusetts.



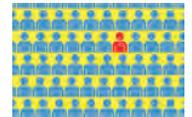
- **17.8%** of residents live below the FPL, 70% more than the state average.
- **33.7%** of children under the age of 5 live below the FPL, **1.31 times more than the state average**.
- **10.1%** of residents aged 16 and older are unemployed (**1.20 times more than the state average**), **the fifth highest rate in MA**.
- **1.7%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, 44% less than the state average.
- The Gini coefficient of **0.48** suggests a sizable income gap between residents with greater vs. lower income, in line with the state coefficient.^a
- **60.2%** of children live in a single parent-headed household (94% more than the state average), **the sixth highest rate in MA**.
- **58.9%** of mothers received publicly financed prenatal care, 53% more than the state average.
- **16.3%** of families receive cash assistance from TAFDC, 90% more than the state average.

About one-fifth of North Adams residents experience residential instability and overall are less likely to rent.



- **20.3%** of residents moved at least once within the past year, 69% more than the state average.
- Residents are less likely to be renters vs. owners with a ratio of **0.81** renter-occupied residences for each owner-occupied residence, 35% more than the state ratio.

North Adams residents experience one of the highest teen birth rates in Massachusetts.



- **8.7%** of mothers are less than 20 years of age (**2.24 times more than the state average**), **the seventh highest rate in MA**.
- **17.9%** of mothers did not complete high school.*
- **3.4%** of mothers are non-US-born, 89% less than the state average.
- **9.7%** of mothers are BIPOC.*
- **7.9%** of residents 18 years of age and older are veterans, 44% more than the state average.

North Adams residents experience SUD-related challenges at relatively higher rates than Massachusetts residents overall.

- The average annual rate of opioid overdose deaths is **36.33** per 100,000 residents, 52% more than the state rate.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **3,365.99** per 100,000 residents (**1.11 times more than the state rate**), **the seventh highest rate in MA**.



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. ^a “in line with the state” indicates a relative difference between city/town and state of 0–3% more/less;

* state-level data unavailable.

North Adams has the highest violent crime rate in Massachusetts.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **1,490.58** per 100,000 residents, **3.16 times more than the state rate**.

North Adams children experience one of the highest unintentional injury rates in Massachusetts.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **19,267.72** per 100,000 same age residents (93% more than the state rate), **the third highest rate in MA**.

North Adams children and youth have the highest rate of maltreatment in Massachusetts.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **82.99** per 1,000 same age residents, **2.81 times more than the state rate**.

North Adams residents experience some of the most adverse perinatal outcomes in Massachusetts.



- 7.6%** of all births are preterm, 13% less than the state average.
- 6.8%** of all births are low birth weight, 9% less than the state average.
- The rate of infant mortality is **0.00** per 1,000 live births.
- 22.2%** of women received less than adequate prenatal care, 26% more than the state average.
- 29.0%** of women do not intend to breastfeed.*
- 33.3%** of mothers smoke during pregnancy (**5.28 times more than the state rate**), **the highest rate in MA**.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **54.93** per 100,000 female residents, **the ninth highest rate in MA**.*
- The rate of infant NAS is **41.81** per 1,000 live births (**2.03 times more than the state rate**), **the fifth highest rate in MA**.
- 47.8%** of women are overweight or obese during pregnancy.*

Relative to their Massachusetts peers, North Adams children and youth experience several challenges related to development, health, and school at higher rates.



- The average percent of children less than 3 years of age enrolled in EI services is **35.5**, 92% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **13.0**, 7% more than the state average.
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **95.27** per 100,000 same age residents, 42% less than the state rate.
- The rate of EBLs for children aged 9 months to less than 4 years of age is **42.8** per 1,000 same age children who were screened (**1.78 times more than the state rate**), **the fourth highest rate in MA**.
- 36.2%** of students in grades 1, 4, 7, and 10 are overweight or obese, 16% more than the state average.
- The school district in this community does not require assistance or intervention from the state.
- 0.8%** of students are ELs, 92% less than the state average.
- 24.6%** of students have disabilities (36% more than the state average), **the sixth highest rate in MA**.
- 65.1%** of students have high needs, 37% more than the state average.
- 21.5%** of students experience truancy, 29% more than the state average.
- 16.6%** of students experience chronic absenteeism, 29% more than the state average.
- Third graders' average scaled scores for the MCAS test are **502.0** for ELA and **493.3** for math, both scores are in line with the state's average scores.

Community Profile Data for the 9 Domains – North Adams: Rank Ninth

Domain	Data Indicator	North Adams	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	17.8%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	33.7%	14.6%
	Percent of population 16 years of age and older who are unemployed	10.1%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	1.7%	3.1%
	Gini coefficient of income inequality	0.48	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	60.2%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	58.9%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	16.3%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	20.3%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	0.81	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	8.7%	2.7%
	Percent of mothers who did not complete high school out of all live births	17.9%	—
	Percent of mothers who are non-US-born out of all live births	3.4%	30.3%
	Percent of BIPOC mothers out of all live births	9.7%	—
	Percent of residents 18 years of age and older who are veterans	7.9%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	36.33	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	3,365.99	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	1,490.58	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	19,267.72	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	North Adams	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	82.99	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	7.6%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	6.8%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	0.00	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	22.2%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	29.0%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	33.3%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	54.93	—
	Rate of infants with NAS per 1,000 live births	41.81	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	47.8%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	35.5%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	13.0%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	95.27	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	42.8	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	36.2%	31.3%
	Whether school district in this community requires assistance or intervention from the state	No	—
	Percent of students who are ELs out of all students enrolled	0.8%	10.5%
	Percent of students with disabilities out of all students enrolled	24.6%	18.1%
	Percent of students who are high needs out of all students enrolled	65.1%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	21.5%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	16.6%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	502.0	504.1
Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	493.3	499.4	

BROCKTON

Plymouth County, Southeast Massachusetts

During the American Civil War, the city of Brockton was one of the nation's top producers of shoes. Today, Brockton is sometimes referred to as the "City of Champions" as it is the hometown of two prominent American boxers. Brockton's current population is 95,161, with slightly fewer than 40% of residents identifying as Black/African American alone, 36.6% identifying as White alone, and 10.6% identifying as Hispanic or Latino of any race. About a quarter of residents are 0–18 years of age, and 7.1% are children under the age of 5. Brockton residents are especially vulnerable to both SES- and SUD-related challenges, including high rates of unemployment, publicly financed prenatal care, and deaths due to opioid overdoses. Brockton also struggles with a high rate of violent crime. Children and youth living in Brockton have high rates of asthma-related hospitalizations and EBLLs, with third graders obtaining some of the lowest ELA and math MCAS scores in the state. Relative to Massachusetts students overall, fewer students have disabilities.

RANK: TENTH

Brockton residents experience some of the greatest SES-related challenges in Massachusetts.



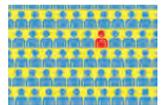
- **16.8%** of residents live below the FPL, 60% more than the state average.
- **28.3%** of children under the age of 5 live below the FPL, 94% more than the state average.
- **9.7%** of residents aged 16 and older are unemployed (**1.11 times more than the state average**), **the eighth highest rate in MA.**
- **4.8%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, 54% more than the state average.
- The Gini coefficient of **0.44** suggests a sizable income gap between residents with greater vs. lower income, 9% less than the state coefficient.
- **52.8%** of children live in a single parent-headed household, 70% more than the state average.
- **70.9%** of mothers received publicly financed prenatal care (85% more than the state average), **the eighth highest rate in MA.**
- **18.9%** of families receive cash assistance from TAFDC, **1.20 times more than the state average.**

About one-fifth of Brockton residents experience residential instability and overall are less likely to rent.



- **17.5%** of residents moved at least once within the past year, 46% more than the state average.
- Residents are less likely to be renters vs. owners with a ratio of **0.85** renter-occupied residences for each owner-occupied residence, 42% more than the state ratio.

Relative to Massachusetts residents overall, Brockton residents experience teen births at a higher rate.



- **6.2%** of mothers are less than 20 years of age, **1.29 times more than the state average.**
- **18.8%** of mothers did not complete high school, **the tenth highest rate in MA.***
- **50.2%** of mothers are non-US-born, 66% more than the state average.
- **75.2%** of mothers are BIPOC, **the fifth highest rate in MA.***
- **5.2%** of residents 18 years of age and older are veterans, 5% less than the state average.

Brockton residents experience some of the greatest SUD-related challenges in Massachusetts.

- The average annual rate of opioid overdose deaths is **65.15** per 100,000 residents (**1.72 times more than the state rate**), **the third highest rate in MA.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **2,252.99** per 100,000 residents, 41% more than the state rate.



Brockton has one of the highest violent crime rates in Massachusetts.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **955.05** per 100,000 residents (**1.67 times more than the state rate**), **the fourth highest rate in MA.**

Brockton children experience unintentional injuries at a relatively higher rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **12,662.53** per 100,000 same age residents, 27% more than the state rate.

Brockton children and youth experience maltreatment at a relatively higher rate than their Massachusetts peers overall.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **28.22** per 1,000 same age residents, 30% more than the state rate.

Brockton residents experience adverse perinatal outcomes at relatively higher rates than Massachusetts residents overall.



- 10.0%** of all births are preterm, 15% more than the state average.
- 9.5%** of all births are low birth weight, 26% more than the state average.
- The rate of infant mortality is **4.76** per 1,000 live births, 29% more than the state rate.
- 26.2%** of women received less than adequate prenatal care, 48% more than the state average.
- 13.3%** of women do not intend to breastfeed.*
- 7.1%** of mothers smoke during pregnancy, 34% more than the state average.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **28.20** per 100,000 female residents.*
- The rate of infant NAS is **14.99** per 1,000 live births, 9% more than the state rate.
- 54.0%** of women are overweight or obese during pregnancy.*

Brockton children and youth experience some of the greatest challenges related to development, health, and school in Massachusetts.



- The average percent of children less than 3 years of age enrolled in EI services is **24.4**, 32% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **16.2**, 33% more than the state average.
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **412.17** per 100,000 same age residents (**1.52 times more than the state rate**), **the second highest rate in MA.**
- The rate of EBLs for children aged 9 months to less than 4 years of age is **37.6** per 1,000 same age children who were screened (**1.44 times more than the state rate**), **the fifth highest rate in MA.**
- 35.8%** of students in grades 1, 4, 7, and 10 are overweight or obese, 14% more than the state average.
- The school district in this community does not require assistance or intervention from the state.
- 25.4%** of students are ELs (**1.42 times more than the state average**), **the sixth highest rate in MA.**
- 16.0%** of students have disabilities, 12% less than the state average.
- 71.5%** of students have high needs, 50% more than the state average.
- No students experience truancy.
- 22.5%** of students experience chronic absenteeism, 74% more than the state average.
- Third graders' average scaled scores for the MCAS test are **486.8** for ELA and **483.4** for math. Although both scores are in line with the state's average scores,^a **these are the second and third lowest scores in MA, respectively.**

Note. ^a "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less.

Community Profile Data for the 9 Domains – Brockton: Rank Tenth

Domain	Data Indicator	Brockton	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	16.8%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	28.3%	14.6%
	Percent of population 16 years of age and older who are unemployed	9.7%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	4.8%	3.1%
	Gini coefficient of income inequality	0.44	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	52.8%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	70.9%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	18.9%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	17.5%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	0.85	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	6.2%	2.7%
	Percent of mothers who did not complete high school out of all live births	18.8%	—
	Percent of mothers who are non-US-born out of all live births	50.2%	30.3%
	Percent of BIPOC mothers out of all live births	75.2%	—
	Percent of residents 18 years of age and older who are veterans	5.2%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	65.15	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	2,252.99	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	955.05	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	12,662.53	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Brockton	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	28.22	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	10.0%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	9.5%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	4.76	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	26.2%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	13.3%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	7.1%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	28.20	—
	Rate of infants with NAS per 1,000 live births	14.99	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	54.0%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	24.4%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	16.2%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	412.17	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	37.6	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	35.8%	31.3%
	Whether school district in this community requires assistance or intervention from the state	No	—
	Percent of students who are ELs out of all students enrolled	25.4%	10.5%
	Percent of students with disabilities out of all students enrolled	16.0%	18.1%
	Percent of students who are high needs out of all students enrolled	71.5%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	0.0%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	22.5%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	486.8	504.1
	Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	483.4	499.4

FITCHBURG

Worcester County, Central Massachusetts

Once a prospering mill town, Fitchburg is adjacent to the Nashua River and the railroad line. Fitchburg's current population is 40,666, with 64.3% of residents identifying as White alone, 26.5% identifying as Hispanic or Latino of any race (predominately Puerto Rican), 3.7% identifying as Asian alone, and 3.4% identifying as Black/African American alone. Twenty-three percent of residents are 0–18 years of age, and 7.2% are under the age of 5. Fitchburg residents are especially vulnerable to violent crime and child and youth maltreatment. Children and youth living in Fitchburg have high rates of infant mortality, overweight and obesity, and chronic absenteeism. Relative to Massachusetts overall, fewer residents experience opioid overdose deaths, fewer children visit emergency departments due to unintentional injuries and enroll in EI services, and fewer children and youth experience asthma-related hospitalizations.

RANK: ELEVENTH

Fitchburg residents experience several SES-related challenges at relatively higher rates than Massachusetts residents overall.



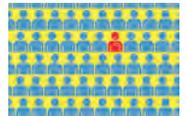
- **17.9%** of residents live below the FPL, 70% more than the state average.
- **29.6%** of children under the age of 5 live below the FPL, **1.03 times more than the state average**.
- **10.1%** of residents aged 16 and older are unemployed (**1.20 times more than the state average**), **the fifth highest rate in MA**.
- **3.8%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, 21% more than the state average.
- The Gini coefficient of **0.43** suggests a sizable income gap between residents with greater vs. lower income, 10% less than the state coefficient.
- **44.5%** of children live in a single parent-headed household, 43% more than the state average.
- **65.7%** of mothers received publicly financed prenatal care, 71% more than the state average.
- **20.6%** of families receive cash assistance from TAFDC, **1.40 times more than the state average**.

A little more than one-fifth of Fitchburg residents experience residential instability and overall are less likely to rent.



- **20.7%** of residents moved at least once within the past year, 72% more than the state average.
- Residents are less likely to be renters vs. owners with a ratio of **0.90** renter-occupied residences for each owner-occupied residence, 50% more than the state ratio.

Fitchburg residents experience one of the highest teen birth rates in Massachusetts.



- **8.6%** of mothers are less than 20 years of age (**2.17 times more than the state average**), **the eighth highest rate in MA**.
- **13.7%** of mothers did not complete high school.*
- **13.0%** of mothers are non-US-born, 57% less than the state average.
- **47.2%** of mothers are BIPOC.*
- **7.9%** of residents 18 years of age and older are veterans, 44% more than the state average.

Relative to Massachusetts residents overall, Fitchburg residents have a higher rate of enrollment to substance addiction service programs, but a lower rate of opioid overdose deaths.

- The average annual rate of opioid overdose deaths is **22.62** per 100,000 residents, 5% less than the state rate.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **2,210.04** per 100,000 residents, 38% more than the state rate.



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. * State-level data available.

Fitchburg has one of the highest violent crime rates in Massachusetts.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **739.28** per 100,000 residents (**1.07 times more than the state rate**), **the tenth highest rate in MA.**

Fitchburg children experience unintentional injuries at a relatively lower rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **9,424.49** per 100,000 same age residents, 6% less than the state rate.

Fitchburg children have one of the highest maltreatment rates in Massachusetts.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **58.53** per 1,000 same age residents (**1.69 times more than the state rate**), **the ninth highest rate in MA.**

Fitchburg residents experience adverse perinatal outcomes at relatively higher rates than Massachusetts residents overall.



- 9.2%** of all births are preterm, 6% more than the state average.
- 8.6%** of all births are low birth weight, 14% more than the state average.
- The rate of infant mortality is **9.35** per 1,000 live births (**1.54 times more than the state rate**), **the seventh highest rate in MA.**
- 18.1%** of women received less than adequate prenatal care, which is in line with the state average.^a
- 25.4%** of women do not intend to breastfeed.*
- 14.2%** of mothers smoke during pregnancy, **1.68 times more than the state rate.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **19.78** per 100,000 female residents.*
- The rate of infant NAS is **19.22** per 1,000 live births, 39% more than the state rate.
- 56.2%** of women are overweight or obese during pregnancy.*

Relative to their Massachusetts peers overall, Fitchburg children and youth experience several challenges related to development, health, and school at higher rates.



- The average percent of children less than 3 years of age enrolled in EI services is **14.6**, 21% less than the state average.
- The average percent of children in elementary and middle school affected by asthma is **16.3**, 35% more than the state average.
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **145.27** per 100,000 same age residents, 11% less than the state rate.
- The rate of EBLLs for children aged 9 months to less than 4 years of age is **18.6** per 1,000 same age children who were screened, 21% more than the state rate.
- 42.1%** of students in grades 1, 4, 7, and 10 are overweight or obese (35% more than the state average), **the fourth highest rate in MA.**
- The school district in this community does not require assistance or intervention from the state.
- 15.6%** of students are ELs, 49% more than the state average.
- 24.2%** of students have disabilities, 34% more than the state average.
- 72.4%** of students have high needs, 52% more than the state average.
- 32.1%** of students experience truancy, 92% more than the state average.
- 26.2%** of students experience chronic absenteeism (**1.03 times more than the state average**), **the fifth highest rate in MA.**
- Third graders' average scaled scores for the MCAS test are **502.9** for ELA and **495.9** for math, both scores are in line with the state's average scores.

Community Profile Data for the 9 Domains – Fitchburg: Rank Eleventh

Domain	Data Indicator	Fitchburg	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	17.9%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	29.6%	14.6%
	Percent of population 16 years of age and older who are unemployed	10.1%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	3.8%	3.1%
	Gini coefficient of income inequality	0.43	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	44.5%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	65.7%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	20.6%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	20.7%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	0.90	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	8.6%	2.7%
	Percent of mothers who did not complete high school out of all live births	13.7%	—
	Percent of mothers who are non-US-born out of all live births	13.0%	30.3%
	Percent of BIPOC mothers out of all live births	47.2%	—
	Percent of residents 18 years of age and older who are veterans	7.9%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	22.62	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	2,210.04	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	739.28	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	9,424.49	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Fitchburg	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	58.53	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	9.2%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	8.6%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	9.35	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	18.1%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	25.4%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	14.2%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	19.78	—
	Rate of infants with NAS per 1,000 live births	19.22	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	56.2%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	14.6%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	16.3%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	145.27	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	18.6	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	42.1%	31.3%
	Whether school district in this community requires assistance or intervention from the state	No	—
	Percent of students who are ELs out of all students enrolled	15.6%	10.5%
	Percent of students with disabilities out of all students enrolled	24.2%	18.1%
	Percent of students who are high needs out of all students enrolled	72.4%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	32.1%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	26.2%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	502.9	504.1
	Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	495.9	499.4

Lowell

Middlesex County, Northeast Massachusetts

Once home to several textile mills and factories, Lowell is known for welcoming immigrants and refugees, contributing to its diverse population today. Lowell's current population is 110,964, with 49.1% of residents identifying as White alone, 20.9% identifying as Asian alone, 20.3% identifying as Hispanic or Latino of any race (predominately Puerto Rican), and 6.7% identifying as Black/African American alone. Nearly a quarter of residents are 0–18 years of age (22.7%), and 6.9% are under the age of 5. Lowell residents are especially vulnerable to both SES- and housing-related challenges, including a high poverty rate and a high ratio of renter- vs. owner-occupied residences. Lowell also struggles with having high proportions of mothers with a low intention to breastfeed and students who are ELs. Relative to Massachusetts overall, fewer violent crimes occur and fewer students have disabilities.

RANK: TWELFTH

Lowell residents experience some of the greatest SES-related challenges in Massachusetts.



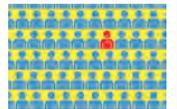
- **22.4%** of residents live below the FPL (**1.13 times more than the state average**), **the sixth highest rate in MA.**
- **34.3%** of children under the age of 5 live below the FPL, **1.35 times more than the state average.**
- **8.4%** of residents aged 16 and older are unemployed, **83% more than the state average.**
- **3.9%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, **25% more than the state average.**
- The Gini coefficient of **0.47** suggests a sizable income gap between residents with greater vs. lower income, which is in line with the state coefficient.^a
- **52.3%** of children live in a single parent-headed household, **68% more than the state average.**
- **60.8%** of mothers received publicly financed prenatal care, **58% more than the state average.**
- **18.5%** of families receive cash assistance from TAFDC, **1.15 times more than the state average.**

Lowell residents experience some of the greatest housing-related challenges in Massachusetts.



- **20.6%** of residents moved at least once within the past year, **71% more than the state average.**
- Residents are more likely to be renters vs. owners with a ratio of **1.37** renter-occupied residences for each owner-occupied residence (**1.28 times more than the state ratio**), **the ninth highest rate in MA.**

Relative to Massachusetts residents overall, Lowell residents experience teen births at a higher rate.



- **6.0%** of mothers are less than 20 years of age, **1.21 times more than the state average.**
- **16.8%** of mothers did not complete high school.*
- **37.6%** of mothers are non-US-born, **24% more than the state average.**
- **62.8%** of mothers are BIPOC, **the tenth highest rate in MA.***
- **4.0%** of residents 18 years of age and older are veterans, **27% less than the state average.**

Lowell residents experience SUD-related challenges at relatively higher rates than Massachusetts residents overall.

- The average annual rate of opioid overdose deaths is **51.55** per 100,000 residents, **1.16 times more than the state rate.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **2,530.80** per 100,000 residents, **59% more than the state rate.**



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. ^a "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less; * state-level data unavailable.

Lowell has a relatively lower violent crime rate than Massachusetts overall.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **289.32** per 100,000 residents, 19% less than the state rate.

Lowell children experience unintentional injuries at a relatively higher rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **11,519.97** per 100,000 same age residents, 15% more than the state rate.

Lowell children and youth experience maltreatment at a relatively higher rate than their Massachusetts peers overall.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **41.60** per 1,000 same age residents, 91% more than the state rate.

Lowell residents experience several adverse perinatal outcomes at relatively higher rates than Massachusetts residents overall.



- **8.9%** of all births are preterm, which is in line with the state average.
- **8.5%** of all births are low birth weight, 13% more than the state average.
- The rate of infant mortality is **4.71** per 1,000 live births, 27% more than the state rate.
- **21.2%** of women received less than adequate prenatal care, 20% more than the state average.
- **36.0%** of women do not intend to breastfeed, **the seventh highest rate in MA.***
- **10.6%** of mothers smoke during pregnancy, 99% more than the state average.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **24.43** per 100,000 female residents.*
- The rate of infant NAS is **14.65** per 1,000 live births, 6% more than the state rate.
- **48.9%** of women are overweight or obese during pregnancy.*

Relative to their Massachusetts peers overall, children and youth living in Lowell experience several challenges related to development, health, and school at higher rates.



- The average percent of children less than 3 years of age enrolled in EI services is **29.4**, 59% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **14.8**, 22% more than the state average.
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **277.35** per 100,000 same age residents (69% more than the state rate), **the eighth highest rate in MA.**
- The rate of EBLs for children aged 9 months to less than 4 years of age is **25.6** per 1,000 same age children who were screened, 66% more than the state rate.
- **35.3%** of students in grades 1, 4, 7, and 10 are overweight or obese, 13% more than the state average.
- The school district in this community does not require assistance or intervention from the state.
- **23.7%** of students are ELs (**1.26 times more than the state average**), **the ninth highest rate in MA.**
- **17.3%** of students have disabilities, 4% less than the state average.
- **72.4%** of students have high needs, 52% more than the state average.
- **26.3%** of students experience truancy, 57% more than the state average.
- **16.3%** of students experience chronic absenteeism, 26% more than the state average.
- Third graders' average scaled scores for the MCAS test are **499.3** for ELA and **494.2** for math, both scores are in line with the state's average scores.

Community Profile Data for the 9 Domains – Lowell: Rank Twelfth

Domain	Data Indicator	Lowell	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	22.4%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	34.3%	14.6%
	Percent of population 16 years of age and older who are unemployed	8.4%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	3.9%	3.1%
	Gini coefficient of income inequality	0.47	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	52.3%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	60.8%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	18.5%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	20.6%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	1.37	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	6.0%	2.7%
	Percent of mothers who did not complete high school out of all live births	16.8%	—
	Percent of mothers who are non-US-born out of all live births	37.6%	30.3%
	Percent of BIPOC mothers out of all live births	62.8%	—
	Percent of residents 18 years of age and older who are veterans	4.0%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	51.55	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	2,530.80	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	289.32	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	11,519.97	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Lowell	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	41.60	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	8.9%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	8.5%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	4.71	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	21.2%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	36.0%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	10.6%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	24.43	—
	Rate of infants with NAS per 1,000 live births	14.65	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	48.9%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	29.4%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	14.8%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	277.35	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	25.6	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	35.3%	31.3%
	Whether school district in this community requires assistance or intervention from the state	No	—
	Percent of students who are ELs out of all students enrolled	23.7%	10.5%
	Percent of students with disabilities out of all students enrolled	17.3%	18.1%
	Percent of students who are high needs out of all students enrolled	72.4%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	26.3%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	16.3%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	499.3	504.1
	Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	494.2	499.4

Lynn

Essex County, Northeast Massachusetts

Lynn was historically a mix of both agriculture and manufacturing but is now known for its many public parks and open spaces, including Lynn Woods Reservation, which was designed by the landscape architect Olmsted. Lynn's current population is 93,069, with 38.9% of residents identifying as Hispanic or Latino of any race (predominately Dominican), 37.9% identifying as White alone, 11.6% identifying as Black/African American alone, and 8.1% identifying as Asian alone. About a quarter of residents are 0–18 years of age (24.7%), and 7.8% are under the age of 5. Lynn residents are especially vulnerable to challenges related to special populations of interest, including high rates of teenage pregnancy and a high proportion of mothers with low educational attainment. Lynn also struggles with high rates of publicly financed prenatal care, violent crime, and asthma-related hospitalizations among children and youth. Relative to Massachusetts overall, fewer students have disabilities and none experience truancy.

RANK: THIRTEENTH

Lynn residents experience several SES-related challenges at relatively higher rates than Massachusetts residents overall.



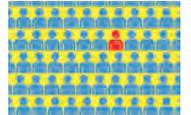
- **18.2%** of residents live below the FPL, 73% more than the state average.
- **30.3%** of children under the age of 5 live below the FPL, **1.08 times more than the state average**.
- **6.3%** of residents aged 16 and older are unemployed, 37% more than the state average.
- **5.2%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, 68% more than the state average.
- The Gini coefficient of **0.46** suggests a sizable income gap between residents with greater vs. lower income, 4% less than the state coefficient.
- **49.5%** of children live in a single parent-headed household, 59% more than the state average.
- **69.1%** of mothers received publicly financed prenatal care (80% more than the state average), **the ninth highest rate in MA**.
- **20.6%** of families receive cash assistance from TAFDC, **1.40 times more than the state average**.

Nearly one-sixth of Lynn residents experience residential instability and overall are more likely to rent.



- **15.3%** of residents moved at least once within the past year, 28% more than the state average.
- Residents are more likely to be renters vs. owners with a ratio of **1.25** renter-occupied residences for each owner-occupied residence, **1.08 times more than the state ratio**.

Relative to Massachusetts residents overall, Lynn residents experience teen births at a higher rate.



- **6.9%** of mothers are less than 20 years of age, **1.54 times more than the state average**.
- **29.5%** of mothers did not complete high school, **the third highest rate in MA.***
- **54.5%** of mothers are non-US-born (80% more than the state average), **the seventh highest rate in MA**.
- **73.3%** of mothers are BIPOC, **the sixth highest rate in MA.***
- **4.5%** of residents 18 years of age and older are veterans, 18% less than the state average.

Lynn residents experience SUD-related challenges at relatively higher rates than Massachusetts residents overall.

- The average annual rate of opioid overdose deaths is **47.49** per 100,000 residents, 99% more than the state rate.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **2,371.81** per 100,000 residents, 49% more than the state rate.



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. * State-level data unavailable.

Lynn has a relatively higher violent crime rate than Massachusetts overall.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **715.05** per 100,000 residents, **100% more than the state rate**.

Lynn children experience unintentional injuries at a relatively similar rate to Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **10,284.54** per 100,000 same age residents, which is in line with the state rate.^a

Lynn children and youth experience maltreatment at a relatively higher rate than their Massachusetts peers overall.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **32.80** per 1,000 same age residents, 51% more than the state rate.

Lynn residents experience several adverse perinatal outcomes at relatively higher rates than Massachusetts residents overall.



- **8.9%** of all births are preterm, which is in line with the state average.
- **8.2%** of all births are low birth weight, 9% more than the state average.
- The rate of infant mortality is **5.47** per 1,000 live births, 48% more than the state rate.
- **24.3%** of women received less than adequate prenatal care, 37% more than the state average.
- **14.4%** of women do not intend to breastfeed.*
- **6.0%** of mothers smoke during pregnancy, 13% more than the state average.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **44.45** per 100,000 female residents.*
- The rate of infant NAS is **16.58** per 1,000 live births, 20% more than the state rate.
- **50.0%** of women are overweight or obese during pregnancy.*

Relative to their Massachusetts peers overall, Lynn children and youth experience several challenges related to development, health, and school at higher rates.



- The average percent of children less than 3 years of age enrolled in EI services is **26.9**, 46% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **13.0**, 7% more than the state average.
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **339.68** per 100,000 same age residents (**1.07 times more than the state rate**), **the fourth highest rate in MA**.
- The rate of EBLLs for children aged 9 months to less than 4 years of age is **34.7** per 1,000 same age children who were screened (**1.25 times more than the state rate**), **the tenth highest rate in MA**.
- **39.3%** of students in grades 1, 4, 7, and 10 are overweight or obese, 26% more than the state average.
- The school district in this community does not require assistance or intervention from the state.
- **25.0%** of students are ELs (**1.38 times more than the state average**), **the seventh highest rate in MA**.
- **16.5%** of students have disabilities, 9% less than the state average.
- **73.7%** of students have high needs (55% more than the state average), **the tenth highest rate in MA**.
- No students experience truancy.
- **19.7%** of students experience chronic absenteeism, 53% more than the state average.
- Third graders' average scaled scores for the MCAS test are **496.5** for ELA and **494.2** for math, both of these scores are in line with the state's average scores.

Note. ^a "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less.

Community Profile Data for the 9 Domains – Lynn: Rank Thirteenth

Domain	Data Indicator	Lynn	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	18.2%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	30.3%	14.6%
	Percent of population 16 years of age and older who are unemployed	6.3%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	5.2%	3.1%
	Gini coefficient of income inequality	0.46	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	49.5%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	69.1%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	20.6%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	15.3%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	1.25	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	6.9%	2.7%
	Percent of mothers who did not complete high school out of all live births	29.5%	—
	Percent of mothers who are non-US-born out of all live births	54.5%	30.3%
	Percent of BIPOC mothers out of all live births	73.3%	—
	Percent of residents 18 years of age and older who are veterans	4.5%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	47.49	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	2,371.81	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	715.05	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	10,284.54	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Lynn	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	32.80	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	8.9%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	8.2%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	5.47	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	24.3%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	14.4%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	6.0%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	44.45	—
	Rate of infants with NAS per 1,000 live births	16.58	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	50.0%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	26.9%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	13.0%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	339.68	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	34.7	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	39.3%	31.3%
	Whether school district in this community requires assistance or intervention from the state	No	—
	Percent of students who are ELs out of all students enrolled	25.0%	10.5%
	Percent of students with disabilities out of all students enrolled	16.5%	18.1%
	Percent of students who are high needs out of all students enrolled	73.7%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	0.0%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	19.7%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	496.5	504.1
	Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	494.2	499.4

BOSTON

Suffolk County, Boston Massachusetts

Boston is the largest city in New England and the capital of Massachusetts. It is also home to a large number of universities and hospitals, making it a center for the advancement of science, medicine, and higher learning. Boston's current population is 669,158, with 44.9% of residents identifying as White alone, 22.7% identifying as Black/African American alone, 19.4% identifying as Hispanic or Latino of any race (30% Dominican and 26% Puerto Rican), and 9.4% identifying as Asian alone. Nearly one-fifth of residents are 0–18 years of age (16.0%), and 5.2% of children are under the age of 5. Boston children and youth are especially vulnerable to challenges, including high rates of asthma-related hospitalizations, chronic absenteeism, and students who are ELs. Boston also has a high ratio of renter- vs. owner-occupied residences. Relative to Massachusetts overall, fewer youth leave school without a high school diploma, fewer mothers smoke while pregnant, fewer infants are born with NAS, and fewer young children enroll in EI services.

RANK: FOURTEENTH

Boston residents experience several SES-related challenges at relatively higher rates than Massachusetts residents overall.



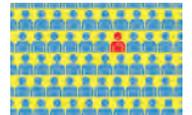
- **20.5%** of residents live below the FPL (95% more than the state average), **the ninth highest rate in MA.**
- **26.4%** of children under the age of 5 live below the FPL, 81% more than the state average.
- **7.3%** of residents aged 16 and older are unemployed, 59% more than the state average.
- **2.0%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, 35% less than the state average.
- The Gini coefficient of **0.54** suggests a sizable income gap between residents with greater vs. lower income, 12% more than the state coefficient.
- **50.3%** of children live in a single parent-headed household, 62% more than the state average.
- **44.8%** of mothers received publicly financed prenatal care, 17% more than the state average.
- **13.6%** of families receive cash assistance from TAFDC, 58% more than the state average.

Boston residents experience some of the greatest housing-related challenges in Massachusetts.



- **25.1%** of residents moved at least once within the past year, **1.09 times more than the state average.**
- Residents are more likely to be renters vs. owners with a ratio of **1.83** renter-occupied residences for each owner-occupied residence (**2.05 times more than the state ratio**), **the fourth highest ratio in MA.**

Relative to Massachusetts residents overall, Boston residents experience teen births at a higher rate.



- **3.6%** of mothers are less than 20 years of age, 34% more than the state average.
- **13.1%** of mothers did not complete high school.*
- **40.7%** of mothers are non-US-born, 34% more than the state average.
- **60.8%** of mothers are BIPOC.*
- **2.9%** of residents 18 years of age and older are veterans, 47% less than the state average.

Boston residents experience SUD-related challenges at relatively higher rates than Massachusetts residents overall.

- The average annual rate of opioid overdose deaths is **31.50** per 100,000 residents, 32% more than the state rate.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **2,435.28** per 100,000 residents, 53% more than the state rate.



Note. This color indicates city/town has one of the top ten highest rates in the state. This color indicates a relative difference between city/town and state of 100% more/less. * State-level data unavailable.

Boston has a relatively higher violent crime rate than Massachusetts overall.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **669.20** per 100,000 residents, 87% more than the state rate.

Boston children experience unintentional injuries at a relatively lower rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0-9 associated with unintentional injuries is **9,310.19** per 100,000 same age residents, 7% less than the state rate.

Boston children and youth experience maltreatment at a relatively higher rate than their Massachusetts peers overall.



- The average rate of substantiated maltreatment reports for children aged 0-17 is **28.79** per 1,000 same age residents, 32% more than the state rate.

Relative to Massachusetts residents overall, Boston residents experience some adverse perinatal outcomes at higher rates.



- **9.5%** of all births are preterm, 9% more than the state average.
- **8.7%** of all births are low birth weight, 16% more than the state average.
- The rate of infant mortality is **5.48** per 1,000 live births, 48% more than the state rate.
- **17.7%** of women received less than adequate prenatal care, which is in line with the state average.^a
- **10.0%** of women do not intend to breastfeed.*
- **2.4%** of mothers smoke during pregnancy, 55% less than the state average.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **25.14** per 100,000 female residents.*
- The rate of infant NAS is **7.91** per 1,000 live births, 43% less than the state rate.
- **41.5%** of women are overweight or obese during pregnancy.*

Boston children and youth experience some of the greatest challenges related to development, health, and school in Massachusetts.



- The average percent of children less than 3 years of age enrolled in EI services is **14.3**, 23% less than the state average.
- The average percent of children in elementary and middle school affected by asthma is **17.1**, 42% more than the state average.
- The rate of hospitalizations for asthma or asthma related issues for children under 20 years of age is **404.89** per 100,000 same age residents (**1.47 times more than the state rate**), **the third highest rate in MA**.
- The rate of EBLs for children aged 9 months to less than 4 years of age is **18.1** per 1,000 same age children who were screened, 18% more than the state rate.
- **39.4%** of students in grades 1, 4, 7, and 10 are overweight or obese, 26% more than the state average.
- The school district in this community does not require assistance or intervention from the state.
- **32.1%** of students are ELs (**2.06 times more than the state average**), **the fourth highest rate in MA**.
- **20.3%** of students have disabilities, 12% more than the state average.
- **76.2%** of students have high needs (60% more than the state average), **the ninth highest rate in MA**.
- **33.7%** of students experience truancy, **1.02 times more than the state average**.
- **25.5%** of students experience chronic absenteeism (98% more than the state average), **the sixth highest rate in MA**.
- Third graders' average scaled scores for the MCAS test are **495.4** for ELA and **490.4** for math, both scores are in line with the state's average scores.

Community Profile Data for the 9 Domains – Boston: Rank Fourteenth

Domain	Data Indicator	Boston	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	20.5%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	26.4%	14.6%
	Percent of population 16 years of age and older who are unemployed	7.3%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	2.0%	3.1%
	Gini coefficient of income inequality	0.54	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	50.3%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	44.8%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	13.6%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	25.1%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	1.83	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	3.6%	2.7%
	Percent of mothers who did not complete high school out of all live births	13.1%	—
	Percent of mothers who are non-US-born out of all live births	40.7%	30.3%
	Percent of BIPOC mothers out of all live births	60.8%	—
	Percent of residents 18 years of age and older who are veterans	2.9%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	31.50	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	2,435.28	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	669.20	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	9,310.19	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Boston	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	28.79	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	9.5%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	8.7%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	5.48	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	17.7%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	10.0%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	2.4%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	25.14	—
	Rate of infants with NAS per 1,000 live births	7.91	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	41.5%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	14.3%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	17.1%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	404.89	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	18.1	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	39.4%	31.3%
	Whether school district in this community requires assistance or intervention from the state	No	—
	Percent of students who are ELs out of all students enrolled	32.1%	10.5%
	Percent of students with disabilities out of all students enrolled	20.3%	18.1%
	Percent of students who are high needs out of all students enrolled	76.2%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	33.7%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	25.5%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	495.4	504.1
	Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	490.4	499.4

PITTSFIELD

Berkshire County, Western Massachusetts

Pittsfield is the largest city in Berkshire County and a commercial center for the area. Recently, Pittsfield has become a cultural hub for arts and music. Pittsfield's current population is 43,289, with 84.4% of residents identifying as White alone, 6.0% identifying as Hispanic or Latino of any race, and 4.4% identifying as Black/African American alone. Nearly one-fifth of residents are 0–18 years of age, and 5.5% are under the age of 5. Pittsfield residents are especially vulnerable to SUD-related challenges, including a high rate of enrollment in substance addiction service programs. Pittsfield also struggles with violent crime and adverse perinatal outcomes, including a high rate of enrollment in substance addiction service programs among pregnant women. Relative to Massachusetts overall, fewer infants are born preterm, fewer children and youth experience asthma-related hospitalizations, and fewer students are ELs.

RANK: FIFTEENTH

Pittsfield residents experience several SES-related challenges at relatively higher rates than Massachusetts residents overall.



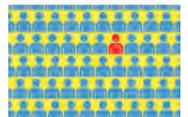
- **15.1%** of residents live below the FPL, 44% more than the state average.
- **24.5%** of children under the age of 5 live below the FPL, 68% more than the state average.
- **8.0%** of residents aged 16 and older are unemployed, 74% more than the state average.
- **4.5%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, 46% more than the state average.
- The Gini coefficient of **0.46** suggests a sizable income gap between residents with greater vs. lower income, 4% less than the state coefficient.
- **46.6%** of children live in a single parent-headed household, 50% more than the state average.
- **48.4%** of mothers received publicly financed prenatal care, 26% more than the state average.
- **13.9%** of families receive cash assistance from TAFDC, 62% more than the state average.

Nearly one-sixth of Pittsfield residents experience residential instability and overall are less likely to rent.



- **14.5%** of residents moved at least once within the past year, 21% more than the state average.
- Residents are less likely to be renters vs. owners with a ratio of **0.62** renter-occupied residences for each owner-occupied residence, which is in line with the state ratio.^a

Relative to Massachusetts residents overall, Pittsfield residents experience teen births at a higher rate.



- **6.1%** of mothers are less than 20 years of age, **1.26 times more than the state average.**
- **10.7%** of mothers did not complete high school.*
- **11.6%** of mothers are non-US-born, 62% less than the state average.
- **24.0%** of mothers are BIPOC.*
- **8.4%** of residents 18 years of age and older are veterans, 53% more than the state average.

Pittsfield residents experience some of the greatest SUD-related challenges in Massachusetts.

- The average annual rate of opioid overdose deaths is **39.73** per 100,000 residents, 66% more than the state rate.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **4,379.95** per 100,000 residents (**1.74 times more than the state rate**), **the second highest rate in MA.**



Note. This color indicates a relative difference between city/town and state of 100% more/less. This color indicates city/town has one of the top ten highest rates in the state. ^a "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less;

* state-level data unavailable.

Pittsfield has one of the highest violent crime rates in Massachusetts.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **881.40** per 100,000 residents (**1.46 times more than the state rate**), **the fifth highest rate in MA.**

Pittsfield children experience unintentional injuries at a relatively higher rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **16,818.68** per 100,000 same age residents, 68% more than the state rate.

Pittsfield children and youth have one of the highest maltreatment rates in Massachusetts.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **58.21** per 1,000 same age residents (**1.67 times more than the state rate**), **the tenth highest rate in MA.**

Pittsfield residents experience some of the most adverse perinatal outcomes in Massachusetts.



- **7.2%** of all births are preterm, 17% less than the state average.
- **7.9%** of all births are low birth weight, 5% more than the state average.
- The rate of infant mortality is **8.00** per 1,000 live births (**1.16 times more than the state rate**), **the tenth highest rate in MA.**
- **27.2%** of women received less than adequate prenatal care, 54% more than the state average.
- **22.1%** of women do not intend to breastfeed.*
- **21.6%** of mothers smoke during pregnancy (**3.08 times more than the state rate**), **the ninth highest rate in MA.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **96.24** per 100,000 female residents, **the fourth highest rate in MA.***
- The rate of infant NAS is **36.03** per 1,000 live births, **1.61 times more than the state rate.**
- **48.9%** of women are overweight or obese during pregnancy.*

Relative to their Massachusetts peers overall, Pittsfield children and youth experience several challenges related to development, health, and school at higher rates.



- The average percent of children less than 3 years of age enrolled in EI services is **23.1**, 25% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **15.1**, 25% more than the state average.
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **97.16** per 100,000 same age residents, 41% less than the state rate.
- The rate of EBLLs for children aged 9 months to less than 4 years of age is **24.0** per 1,000 same age children who were screened, 56% more than the state rate.
- **31.3%** of students in grades 1, 4, 7, and 10 are overweight or obese, which is in line with the state average.
- The school district in this community does not require assistance or intervention from the state.
- **4.4%** of students are ELs, 58% less than the state average.
- **21.9%** of students have disabilities, 21% more than the state average.
- **60.9%** of students have high needs, 28% more than the state average.
- **22.7%** of students experience truancy, 36% more than the state average.
- **23.1%** of students experience chronic absenteeism (79% more than the state average), **the tenth highest rate in MA.**
- Third graders' average scaled scores for the MCAS test are **501.1** for ELA and **493.2** for math, both scores are in line with the state's average scores.

Community Profile Data for the 9 Domains – Pittsfield: Rank Fifteenth

Domain	Data Indicator	Pittsfield	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	15.1%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	24.5%	14.6%
	Percent of population 16 years of age and older who are unemployed	8.0%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	4.5%	3.1%
	Gini coefficient of income inequality	0.46	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	46.6%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	48.4%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	13.9%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	14.5%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	0.62	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	6.1%	2.7%
	Percent of mothers who did not complete high school out of all live births	10.7%	—
	Percent of mothers who are non-US-born out of all live births	11.6%	30.3%
	Percent of BIPOC mothers out of all live births	24.0%	—
	Percent of residents 18 years of age and older who are veterans	8.4%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	39.73	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	4,379.95	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	881.40	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	16,818.68	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Pittsfield	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	58.21	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	7.2%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	7.9%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	8.00	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	27.2%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	22.1%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	21.6%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	96.24	—
	Rate of infants with NAS per 1,000 live births	36.03	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	48.9%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	23.1%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	15.1%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	97.16	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	24.0	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	31.3%	31.3%
	Whether school district in this community requires assistance or intervention from the state	No	—
	Percent of students who are ELs out of all students enrolled	4.4%	10.5%
	Percent of students with disabilities out of all students enrolled	21.9%	18.1%
	Percent of students who are high needs out of all students enrolled	60.9%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	22.7%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	23.1%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	501.1	504.1
Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	493.2	499.4	

WEBSTER

Worcester County, Central Massachusetts

Webster is home to Lake Chaubunagungamaug, the largest natural lake in Massachusetts, and within the lake's bounds is Chaubunagungamaug Reservation of the Nipmuc People. Webster's current population is 16,926, with 81.0% of residents identifying as White alone, 11.6% identifying as Hispanic or Latino of any race, and 4.3% identifying as Black/African American alone. Twenty percent of residents are 0–18 years of age, and 6.1% are under the age of 5. Webster residents are especially vulnerable to adverse perinatal outcomes, including high rates of mothers who smoke while pregnant and infant NAS. Webster also struggles with high rates of low educational attainment among youth, teenage pregnancy, and child and youth maltreatment. Relative to Massachusetts overall, fewer infants are born preterm, fewer children and youth experience hospitalizations due to asthma-related issues, and fewer students are affected by asthma, experience truancy, and are ELs.

RANK: SIXTEENTH

Webster residents experience several SES-related challenges at relatively higher rates than Massachusetts residents overall.



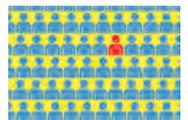
- **12.0%** of residents live below the FPL, 14% more than the state average.
- **14.9%** of children under the age of 5 live below the FPL, which is in line with the state average.^a
- **9.3%** of residents aged 16 and older are unemployed, **1.02 times more than the state average.**
- **11.6%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, **2.75 times more than the state average.**
- The Gini coefficient of **0.44** suggests a sizable income gap between residents with greater vs. lower income, 9% less than the state coefficient.
- **53.4%** of children live in a single parent-headed household, 72% more than the state average.
- **54.9%** of mothers received publicly financed prenatal care, 43% more than the state average.
- **16.2%** of families receive cash assistance from TAFDC, 88% more than the state average.

About one fifth of Webster residents experience residential instability and overall are less likely to rent.



- **18.2%** of residents moved at least once within the past year, 51% more than the state average.
- Residents are less likely to be renters vs. owners with a ratio of **0.81** renter-occupied residences for each owner-occupied residence, 35% more than the state ratio.

Relative to Massachusetts residents overall, Webster residents experience teen births at a higher rate.



- **7.3%** of mothers are less than 20 years of age, **1.72 times more than the state average.**
- **14.1%** of mothers did not complete high school.*
- **8.9%** of mothers are non-US-born, 70% less than the state average.
- **21.4%** of mothers are BIPOC.*
- **7.7%** of residents 18 years of age and older are veterans, 40% more than the state average.

Webster residents experience SUD-related challenges at relatively higher rates than Massachusetts residents overall.

- The average annual rate of opioid overdose deaths is **31.90** per 100,000 residents, 33% more than the state rate.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **2,449.10** per 100,000 residents, 53% more than the state rate.



Note. This color indicates a relative difference between city/town and state of 100% more/less. ^a "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less; * state-level data unavailable.

Webster has a relatively higher violent crime rate than Massachusetts overall.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **728.54** per 100,000 residents, **1.04 times more than the state rate.**

Webster children experience unintentional injuries at a relatively higher rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **14,745.75** per 100,000 same age residents, 48% more than the state rate.

Webster children and youth have one of the highest maltreatment rates in Massachusetts.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **60.15** per 1,000 same age residents (**1.76 times more than the state rate**), **the sixth highest rate in MA.**

Webster residents experience some of the most adverse perinatal outcomes in Massachusetts.



- **8.1%** of all births are preterm, 7% less than the state average.
- **7.6%** of all births are low birth weight, which is in line with the state average.
- The rate of infant mortality is **6.38** per 1,000 live births, 73% more than the state rate.
- **18.3%** of women received less than adequate prenatal care, which is in line with the state average.
- **28.6%** of women do not intend to breastfeed.*
- **22.5%** of mothers smoke during pregnancy (**3.25 times more than the state average**), **the sixth highest rate in MA.**
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **31.74** per 100,000 female residents.*
- The rate of infant NAS is **31.30** per 1,000 live births, **1.27 times more than the state rate.**
- **51.1%** of women are overweight or obese during pregnancy.*

Relative to their Massachusetts peers overall, Webster children and youth experience several challenges related to development, health, and school at higher rates.



- The average percent of children less than 3 years of age enrolled in EI services is **22.4**, 21% more than the state average.
- The average percent of children in elementary and middle school affected by asthma is **9.6**, 21% less than the state average.
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **157.12** per 100,000 same age residents, 4% less than the state average.
- The rate of EBLs for children aged 9 months to less than 4 years of age is **22.5** per 1,000 same age children who were screened, 46% more than the state rate.
- **35.0%** of students in grades 1, 4, 7, and 10 are overweight or obese, 12% more than the state average.
- The school district in this community requires assistance or intervention from the state.
- **9.6%** of students are ELs, 9% less than the state average.
- **21.3%** of students have disabilities, 18% more than the state average.
- **62.3%** of students have high needs, 31% more than the state average.
- **0.2%** of students experience truancy, 99% less than the state average.
- **20.3%** of students experience chronic absenteeism, 57% more than the state average.
- Third graders' average scaled scores for the MCAS test are **497.0** for ELA and **486.6** for math. Although both scores are in line with the state's average scores, **the math score is the ninth lowest in MA.**

Community Profile Data for the 9 Domains – Webster: Rank Sixteenth

Domain	Data Indicator	Webster	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	12.0%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	14.9%	14.6%
	Percent of population 16 years of age and older who are unemployed	9.3%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	11.6%	3.1%
	Gini coefficient of income inequality	0.44	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	53.4%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	54.9%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	16.2%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	18.2%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	0.81	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	7.3%	2.7%
	Percent of mothers who did not complete high school out of all live births	14.1%	—
	Percent of mothers who are non-US-born out of all live births	8.9%	30.3%
	Percent of BIPOC mothers out of all live births	21.4%	—
	Percent of residents 18 years of age and older who are veterans	7.7%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	31.90	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	2,449.10	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	728.54	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	14,745.75	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Webster	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	60.15	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	8.1%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	7.6%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	6.38	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	18.3%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	28.6%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	22.5%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	31.74	—
	Rate of infants with NAS per 1,000 live births	31.30	13.82
Child Development & Health and School Outcomes	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	51.1%	—
	Average percent of children less than 3 years of age enrolled in EI out of same age residents	22.4%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	9.6%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	157.12	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	22.5	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	35.0%	31.3%
	Whether school district in this community requires assistance or intervention from the state	Yes	—
	Percent of students who are ELs out of all students enrolled	9.6%	10.5%
	Percent of students with disabilities out of all students enrolled	21.3%	18.1%
	Percent of students who are high needs out of all students enrolled	62.3%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	0.2%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	20.3%	12.9%
Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	497.0	504.1	
Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	486.6	499.4	

Everett

Middlesex County, Northeast Massachusetts

Everett, part of the Port of Boston, is a diverse city with a large immigrant community. Everett's current population is 45,212, with 45.9% of residents identifying as White alone, 22.9% identifying as Hispanic or Latino of any race (36% Brazilian and 34% Salvadoran), 19.3% identifying as Black or African American alone, 6.5% identifying as Asian alone, and 4.0% identifying as multiracial. Slightly fewer than a quarter of residents are 0–18 years of age (23.8%), and 6.5% are children under the age of 5. Everett residents are especially vulnerable to SUD- and housing-related challenges, including the highest rate of opioid overdose deaths in the state and a high ratio of renter- vs. owner-occupied residences. Relative to Massachusetts overall, fewer residents enroll in substance addiction service programs, fewer violent crimes occur, and fewer mothers smoke while pregnant. Moreover, fewer young children enroll in EI services and have EBLs, and fewer students are affected by asthma.

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Everett residents experience several SES-related challenges at relatively higher rates than Massachusetts residents overall.



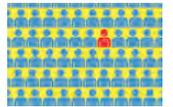
- **13.9%** of residents live below the FPL, 32% more than the state average.
- **28.0%** of children under the age of 5 live below the FPL, 92% more than the state average.
- **7.2%** of residents aged 16 and older are unemployed, 57% more than the state average.
- **9.9%** of 16–19-year-olds are neither enrolled in school nor are high school graduates or the equivalent, **2.19 times more than the state average**.
- The Gini coefficient of **0.44** suggests a sizable income gap between residents with greater vs. lower income, 9% less than the state coefficient.
- **36.0%** of children live in a single parent-headed household, 16% more than the state average.
- **65.3%** of mothers received publicly financed prenatal care, 70% more than the state average.
- **10.3%** of families receive cash assistance from TAFDC, 19% more than the state average.

Nearly one-sixth of Everett residents experience residential instability and overall are more likely to rent.



- **14.9%** of residents moved at least once within the past year, 24% more than the state average.
- Residents are more likely to be renters vs. owners with a ratio of **1.52** renter-occupied residences for each owner-occupied residence (**1.53 times more than the state ratio**), **the sixth highest rate in MA**.

Relative to Massachusetts residents overall, Everett residents experience teen births at a higher rate.



- **3.8%** of mothers are less than 20 years of age, 41% more than the state average.
- **24.1%** of mothers did not complete high school, **the sixth highest rate in MA**.*
- **70.8%** of mothers are non-US-born (**1.34 times more than the state average**), **the highest rate in MA**.
- **70.0%** of mothers are BIPOC, **the eighth highest rate in MA**.*
- **3.3%** of residents 18 years of age and older are veterans, 40% less than the state average.

Relative to Massachusetts residents overall, Everett residents have a lower enrollment rate to substance addiction service programs, but the highest rate of opioid overdose deaths.

- The average annual rate of opioid overdose deaths is **76.09** per 100,000 residents, **2.18 times more than the state rate**.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs is **1,488.17** per 100,000 residents, 7% less than the state rate.



Everett has a relatively lower violent crime rate than Massachusetts overall.



- The rate of all reported violent crimes, including rape, robbery, assault, and murder is **332.73** per 100,000 residents, 7% less than the state rate.

Everett children experience unintentional injuries at a relatively higher rate than Massachusetts children overall.



- The rate of emergency department visits for children aged 0–9 associated with unintentional injuries is **11,206.14** per 100,000 same age residents, 12% more than the state rate.

Everett children and youth experience maltreatment at a relatively lower rate than their Massachusetts peers overall.



- The average rate of substantiated maltreatment reports for children aged 0–17 is **20.12** per 1,000 same age residents, 8% less than the state rate.

Relative to Massachusetts residents overall, Everett residents experience some adverse perinatal outcomes at higher rates.



- **9.8%** of all births are preterm, 13% more than the state average.
- **8.1%** of all births are low birth weight, 7% more than the state average.
- The rate of infant mortality is **3.72** per 1,000 live births, which is in line with the state rate.^a
- **19.0%** of women received less than adequate prenatal care, 7% more than the state average.
- **13.2%** of women do not intend to breastfeed.*
- **4.7%** of mothers smoke during pregnancy, 11% less than the state average.
- The average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women is **19.55** per 100,000 female residents.*
- The rate of infant NAS is **15.82** per 1,000 live births, 15% more than the state rate.
- **53.9%** of women are overweight or obese during pregnancy.*

Relative to their Massachusetts peers overall, Everett children and youth experience several challenges related to development, health, and school at higher rates.



- The average percent of children less than 3 years of age enrolled in EI services is **15.8**, 15% less than the state average.
- The average percent of children in elementary and middle school affected by asthma is **9.5**, 21% less than the state average.
- The rate of hospitalizations for asthma or asthma-related issues for children under 20 years of age is **260.48** per 100,000 same age residents, 59% more than the state rate.
- The rate of EBLLs for children aged 9 months to less than 4 years of age is **14.6** per 1,000 same age children who were screened, 5% less than the state rate.
- **47.4%** of students in grades 1, 4, 7, and 10 are overweight or obese (51% more than the state average), **the highest rate in MA.**
- The school district in this community does not require assistance or intervention from the state.
- **25.0%** of students are ELs (**1.38 times more than the state average**), **the seventh highest rate in MA.**
- **71.0%** of students have high needs, 49% more than the state average.
- **17.8%** of students have disabilities, which is in line with the state average.
- **37.0%** of students experience truancy (**1.22 times more than the state average**), **the seventh highest rate in MA.**
- **20.3%** of students experience chronic absenteeism, 57% more than the state average.
- Third graders' average scaled scores for the MCAS test are **499.7** for ELA and **494.2** for math, both scores are in line with the state's average scores.

Note. ^a "in line with the state" indicates a relative difference between city/town and state of 0–3% more/less.

Community Profile Data for the 9 Domains – Everett: Rank Seventeenth

Domain	Data Indicator	Everett	Massachusetts ^b
SES	Percent of individuals living below the FPL in the past 12 months	13.9%	10.5%
	Percent of children under the age of 5 living below the FPL in the past 12 months	28.0%	14.6%
	Percent of population 16 years of age and older who are unemployed	7.2%	4.6%
	Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents	9.9%	3.1%
	Gini coefficient of income inequality	0.44	0.48
	Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households	36.0%	31.1%
	Percent of women giving birth who received publicly financed prenatal care out of all live births	65.3%	38.4%
	Percent of families who received cash assistance from TAFDC out of all families	10.3%	8.6%
Housing	Percent of residents who lived in the same residence as the previous year ^c	14.9%	12.0%
	Ratio of renter-occupied to every 1 owner-occupied residence	1.52	0.60
Populations of Special Interest	Percent of mothers who are less than 20 years of age out of all live births	3.8%	2.7%
	Percent of mothers who did not complete high school out of all live births	24.1%	—
	Percent of mothers who are non-US-born out of all live births	70.8%	30.3%
	Percent of BIPOC mothers out of all live births	70.0%	—
	Percent of residents 18 years of age and older who are veterans	3.3%	5.5%
SUD	Average annual rate of occurrence of opioid overdoses per 100,000 residents	76.09	23.91
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents	1,488.17	1,596.14
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents	332.73	358.00
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents	11,206.14	9,988.88

^bProvided when state-level data are available.

^cReverse-score presented.

Domain	Data Indicator	Everett	Massachusetts
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents	20.12	21.78
Adverse Perinatal Outcomes	Percent of all births that are preterm, or born before 37 weeks, out of all live births	9.8%	8.7%
	Percent of all births that are low birth weight, less than 2500g, out of all live births	8.1%	7.5%
	Death rate of infants under the age of 1 per 1,000 live births	3.72	3.71
	Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births	19.0%	17.7%
	Percent of all women not intending to breastfeed upon discharge from hospital out of all live births	13.2%	—
	Percent of mothers who reported smoking during pregnancy out of all live births	4.7%	5.3%
	Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents	19.55	—
	Rate of infants with NAS per 1,000 live births	15.82	13.82
	Percent of mothers who are overweight or obese prior to pregnancy out of all live births	53.9%	—
Child Development & Health and School Outcomes	Average percent of children less than 3 years of age enrolled in EI out of same age residents	15.8%	18.5%
	Average percent of children in elementary and middle school affected by asthma per 100 students	9.5%	12.1%
	Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19	260.48	163.84
	Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children	14.6	15.4
	Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened	47.4%	31.3%
	Whether school district in this community requires assistance or intervention from the state	No	—
	Percent of students who are ELs out of all students enrolled	25.0%	10.5%
	Percent of students with disabilities out of all students enrolled	17.8%	18.1%
	Percent of students who are high needs out of all students enrolled	71.0%	47.6%
	Percent of students who are truant with more than 9 unexcused absences out of all students enrolled	37.0%	16.7%
	Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled	20.3%	12.9%
	Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS	499.7	504.1
	Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS	494.2	499.4

Table 1. City/Town-Level Data Indicators Sources

Domain	Data Indicator
SES	<p>Percent of individuals living below the FPL in the past 12 months¹</p> <p>Percent of children under the age of 5 living below the FPL in the past 12 months²</p> <p>Percent of population 16 years of age and older who are unemployed³</p> <p>Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents⁴</p> <p>Gini coefficient of income inequality⁵</p> <p>Percent of children under the age of 18 living in single parent-headed households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households⁶</p> <p>Percent of women giving birth who received publicly financed prenatal care out of all live births⁷</p> <p>Percent of families who received cash assistance from TAFDC out of all families⁸</p>
Housing	<p>Percent of residents who lived in the same residence as the previous year⁹</p> <p>Ratio of renter-occupied to every 1 owner-occupied residence¹⁰</p>
Populations of Special Interest	<p>Percent of mothers who are less than 20 years of age out of all live births¹¹</p> <p>Percent of mothers who did not complete high school out of all live births¹²</p> <p>Percent of mothers who are non-US-born out of all live births¹³</p> <p>Percent of BIPOC mothers out of all live births¹⁴</p> <p>Percent of residents 18 years of age and older who are veterans¹⁵</p>
SUD	<p>Average annual rate of occurrence of opioid overdoses per 100,000 residents¹⁶</p> <p>Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents¹⁷</p>
Crime	Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents ¹⁸
Child Unintentional Injuries	Rate of emergency department visits for children aged 0–9 associated with unintentional injuries per 100,000 same age residents ¹⁹
Child Maltreatment	Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents ²⁰

Domain	Data Indicator
<p style="text-align: center;">Adverse Perinatal Outcomes</p>	<p>Percent of all births that are preterm, or born before 37 weeks, out of all live births²¹</p> <p>Percent of all births that are low birth weight, less than 2500g, out of all live births²²</p> <p>Death rate of infants under the age of 1 per 1,000 live births²³</p> <p>Percent of women who received less than adequate prenatal care according to the APNCU Index out of all live births²⁴</p> <p>Percent of all women not intending to breastfeed upon discharge from hospital out of all live births²⁵</p> <p>Percent of mothers who reported smoking during pregnancy out of all live births²⁶</p> <p>Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents²⁷</p> <p>Rate of infants with NAS per 1,000 live births²⁸</p> <p>Percent of mothers who are overweight or obese prior to pregnancy out of all live births²⁹</p>
<p style="text-align: center;">Child Development & Health and School Outcomes</p>	<p>Average percent of children less than 3 years of age enrolled in EI out of same age residents³⁰</p> <p>Average percent of children in elementary and middle school affected by asthma per 100 students³¹</p> <p>Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19³²</p> <p>Rate of children aged 9 months to less than 4 years who have estimated confirmed BLLs $\geq 5 \mu\text{g/dL}$ (elevated) out of children screened for lead per 1,000 children³³</p> <p>Percent of students in grades 1, 4, 7, and 10 considered overweight or obese out of all students screened³⁴</p> <p>Whether school district in this community requires assistance or intervention from the state³⁵</p> <p>Percent of students who are ELs out of all students enrolled³⁶</p> <p>Percent of students with disabilities out of all students enrolled³⁷</p> <p>Percent of students who are high needs out of all students enrolled³⁸</p> <p>Percent of students who are truant with more than 9 unexcused absences out of all students enrolled³⁹</p> <p>Percent of students who are absent 10% or more of their total number of student days of membership in a school out of all students enrolled⁴⁰</p> <p>Average scaled score for MCAS ELA results for third graders who completed the Next Generation MCAS⁴¹</p> <p>Average scaled score for MCAS math results for third graders who completed the Next Generation MCAS⁴²</p>

Reference List for City/Town-Level Data Indicators

1. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Subject Tables. Poverty status in the past 12 months | TableID: S1701 – County subdivisions of Massachusetts. Data indicator – *Percent of individuals living below the federal poverty level (FPL) in the past 12 months from 2013–2017.*
<https://data.census.gov/cedsci/table?q=poverty&g=0400000US25.060000&hidePreview=true&tid=ACSST5Y2017.S1701&t=Poverty&vintage=2018>. Accessed July 1, 2019.
2. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Subject Tables. Poverty status in the past 12 months | TableID: S1701 – County subdivisions of Massachusetts. Data indicator – *Percent of children under the age of 5 living below the federal poverty level (FPL) in the past 12 months from 2013–2017.*
<https://data.census.gov/cedsci/table?q=poverty&g=0400000US25.060000&hidePreview=true&tid=ACSST5Y2017.S1701&t=Poverty&vintage=2018>. Accessed July 1, 2019.
3. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Subject Tables. Employment status | TableID: S2301 – County subdivisions of Massachusetts. Data indicator – *Percent of population 16 years of age and older who are unemployed from 2013–2017.*
<https://data.census.gov/cedsci/table?q=unemployment&g=0400000US25.060000&tid=ACSST5Y2017.S2301&vintage=2018&hidePreview=true>. Accessed July 1, 2019.
4. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Detailed Tables. Sex by school enrollment by educational attainment by employment status for the population 16 to 19 years | TableID: B14005 – County subdivisions of Massachusetts. Data indicator – *Percent of 16 to 19-year-olds not enrolled in school and not a high school graduate out of same age residents from 2013–2017.*
<https://data.census.gov/cedsci/table?q=high%20school%20graduate&g=0400000US25.060000&tid=ACSDT5Y2017.B14005&vintage=2018&hidePreview=true>. Accessed July 1, 2019.
5. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Detailed Tables. Gini index of income inequality | TableID: B19083 – County subdivisions of Massachusetts. Data indicator – *Gini coefficient of income inequality from 2013–2017.*
<https://data.census.gov/cedsci/table?q=gini%20coefficient&g=0400000US25.060000&tid=ACSDT5Y2017.B19083&hidePreview=true>. Accessed July 1, 2019.
6. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Data Profiles. Selected social characteristics in the United States | TableID: DP02 – County subdivisions of Massachusetts. Data indicator – *Percent of children under the age of 18 living in single parent households (sum of single male-headed, and single female-headed) out of all children under the age of 18 living in households from 2013–2017.*
<https://data.census.gov/cedsci/table?q=single%20parent&g=0400000US25.060000&tid=ACSDP5Y2017.DP02&hidePreview=true>. Accessed July 1, 2019.
7. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Percent of women giving birth who received publicly financed prenatal care out of all live births from 2012–2016 (Custom Report).* 2019.
8. Department of Transitional Assistance. *Public records request – Transitional Aid to Families with Dependent Children (TAFDC) and Supplemental Nutrition Assistance Program (SNAP) families data.*

Data indicator – Percent of families who received cash assistance from TAFDC out of all families from 2014–2018 (Custom Report). 2019.

9. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Detailed Tables. Geographical mobility in the past year by tenure for current residence in the United States | TableID: B07013 – County subdivisions of Massachusetts. *Data indicator – Percent of residents who lived in the same residence as the previous year from 2013–2017.* Retrieved from: <https://data.census.gov/cedsci/table?q=B07013&g=0400000US25.060000&tid=ACSDT5Y2017.B07013&vintage=2018&hidePreview=true>. Accessed July 1, 2019.
10. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Data Profiles. Selected housing characteristics | TableID: DP04 – County subdivisions of Massachusetts. *Data indicator – Ratio of renter-occupied to every 1 owner-occupied residence from 2013–2017.* <https://data.census.gov/cedsci/table?q=rent&g=0400000US25.060000&tid=ACSDP5Y2017.DP04&vintage=2018&hidePreview=true>. Accessed July 1, 2019.
11. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Percent of mothers who were less than 20 years of age out of all live births from 2012–2016 (Custom Report).* 2019.
12. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Percent of mothers who did not complete high school out of all live births from 2012–2016 (Custom Report).* 2019.
13. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Percent of mothers were non-US- born out of all live births from 2012–2016 (Custom Report).* 2019.
14. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Percent of BIPOC mothers out of all live births from 2012–2016 (Custom Report).* 2019.
15. U.S. Census Bureau. 2017: American Community Survey 5-Year Estimates Detailed Tables. Sex by age by veteran status for the civilian population 18 years and over | TableID: B21001 – County subdivisions of Massachusetts. *Data indicator – Percent of residents 18 years of age and older who were veterans from 2013–2017.* <https://data.census.gov/cedsci/table?q=unemployment&hidePreview=true&tid=ACSDT5Y2017.B21001&g=0400000US25.060000&vintage=2018&t=Veterans>. Accessed June 1, 2019.
16. Massachusetts Department of Public Health | Bureau of Substance Addiction Services. *Opioid-related overdose deaths – Cities and towns of Massachusetts. Data indicator – Average annual rate of occurrence of opioid overdoses per 100,000 residents from 2013–2017 (Custom Report).* 2019.
17. Massachusetts Department of Public Health | Bureau of Substance Addiction Services. *Fiscal years 2014-2018 BSAS program enrollment rates per 100,000 – Cities and towns of Massachusetts. Data indicator – Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs per 100,000 residents based on 2016 MA population estimates from 2014–2018 (Custom Report).* 2019.
18. Federal Bureau of Investigation. Massachusetts – Offenses known to law enforcement by city, 2017. *Data indicator – Rate of all reported crimes categorized as violent (i.e., rape, robbery, assault, murder) per 100,000 residents in 2017.* <https://ucr.fbi.gov/crime-in-the-u.s/2017/crime-in-the-u.s.-2017/tables/table-8/table-8-state-cuts/massachusetts.xls>. Accessed June 1, 2019.
19. Massachusetts Department of Public Health. *Injury Surveillance Quality Improvement 5-year Estimates – Cities and towns of Massachusetts. Data indicator – Rate of emergency department events for*

- children aged 0–9 associated with unintentional injuries per 100,000 same age residents during the 2010–2015 fiscal years (Custom Report). 2019.*
20. Department of Children and Families Massachusetts. *Total maltreatment counts for 0–17-year old children from 2014–2018 – Cities and towns of Massachusetts. Data indicator – Average rate of substantiated maltreatment reports for children aged 0–17 per 1,000 same age residents from 2014–2018 (Custom Report). 2019.*
 21. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Percent of all births that were preterm, or born before 37 weeks, out of all live births from 2012–2016 (Custom Report). 2019.*
 22. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Percent of all births that were low birth weight, less than 2500g, out of all live births, from 2012–2016 (Custom Report). 2019.*
 23. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Rate of infant deaths ages 0–1 per 1,000 live births from 2012–2016 (Custom Report). 2019.*
 24. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Percent of women receiving less than adequate prenatal care according to the Adequacy of Prenatal Care Utilization (APNCU) Index out of all live births from 2012–2016 (Custom Report). 2019.*
 25. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Percent of all women not intending to breastfeed upon discharge from hospital out of all live births from 2012–2016 (Custom Report). 2019.*
 26. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Percent of mothers who reported smoking during pregnancy out of all live births from 2012–2016 (Custom Report). 2019.*
 27. Massachusetts Department of Public Health | Bureau of Substance Addiction Services. *Five-Years (FY14–18) combined pregnant women substance addiction treatment service enrollment rates per 100,000 population in Massachusetts by city/town of residence. Data indicator – Average annual rate of enrollment in BSAS/MDPH funded and/or licensed substance addiction service programs for pregnant women per 100,000 female residents from 2014–2018 (Custom Report). 2019.*
 28. Massachusetts Department of Public Health | Bureau of Family Health and Nutrition. *Neonatal abstinence syndrome (NAS) rate by community. Data indicator – Rate of Infants NAS Per 1,000 Live Births from 2012–2016 (Custom Report). 2019.*
 29. Massachusetts Department of Public Health. *Registry of Vital Records and Statistics 5-year Estimates – City and towns of Massachusetts. Data indicator – Percent of mothers who were overweight or obese prior to pregnancy out of all live births from 2012–2016 (Custom Report). 2019.*
 30. Massachusetts Department of Public Health. *Early Intervention Information System, Enrolled IFSP Children – Cities and towns of Massachusetts. Data indicator – Average percent of children <3 years of age enrolled in early intervention out of all children <3 years of age during fiscal years 2015–2017 (Custom Report). 2019.*
 31. Massachusetts Department of Public Health | Bureau of Environmental Health. *Pediatric asthma – Cities and towns of Massachusetts. Data indicator – Average percent of children in elementary and middle school affected by asthma out all students enrolled in the past year as reported during the 2012–2017 school years (Custom Report). 2019.*

32. Massachusetts Hospitalization Discharge Database MCFH1aA. *Asthma prevention and control program 5-year estimates – Cities and towns of Massachusetts. Data indicator – Rate of hospitalizations for asthma or asthma-related issues per 100,000 residents aged 0–19 from 2010–2014 (Custom Report).* 2019.
33. Massachusetts Department of Public Health | Bureau of Environmental Health. PHIT Data: Childhood Lead Poisoning – Cities and towns of Massachusetts. Data indicator – *Rate of children ages 9 months to less than 4 years who had estimated confirmed blood lead levels ≥ 5 $\mu\text{g}/\text{dL}$ (elevated) out of children screened for lead per 1,000 children in 2017.* <https://www.mass.gov/guides/phit-data-childhood-lead-poisoning>. Accessed August 1, 2019.
34. Massachusetts Department of Public Health. Results from the Body Mass Index screening in Massachusetts public school districts, 2014. Data indicator – *Percent of students in grades 1, 4, 7, and 10 considered overweight or obese in the 2013–2014 school year out of all students screened.* <https://www.mass.gov/files/documents/2016/08/pv/status-childhood-obesity-2014.pdf>. Accessed August 1, 2019.
35. Massachusetts Department of Elementary and Secondary Education. Accountability Report - District 2019. Data indicator – *Whether at least one school district in city or town falls into one of two overall classifications on their accountability report – requiring assistance or intervention vs not during the 2018–2019 school year.* <http://profiles.doe.mass.edu/statereport/accountability.aspx>. Accessed August 1, 2019.
36. Massachusetts Department of Elementary and Secondary Education. Selected Populations. 2018–2019 Selected Populations Report (District). Data indicator – *Percent of students who were English learners out of all students enrolled during the 2018–2019 school year.* <http://profiles.doe.mass.edu/statereport/selectedpopulations.aspx>. Accessed August 1, 2019.
37. Massachusetts Department of Elementary and Secondary Education. Selected Populations. 2018–2019 Selected Populations Report (District). Data indicator – *Percent of students with disabilities out of all students enrolled during the 2018–2019 school year.* <http://profiles.doe.mass.edu/statereport/selectedpopulations.aspx>. Accessed August 1, 2019.
38. Massachusetts Department of Elementary and Secondary Education. Selected Populations. 2018–2019 Selected Populations Report (District). Data indicator – *Percent of students who were high needs out of all students enrolled during the 2018–2019 school year.* <http://profiles.doe.mass.edu/statereport/selectedpopulations.aspx>. Accessed August 1, 2019.
39. Massachusetts Department of Elementary and Secondary Education. Student Attendance Report. 2017-18 Attendance Report (District) - All Students – Cities and towns of Massachusetts. Data indicator – *Percent of students who were truant with more than 9 unexcused absences out of all students enrolled for the 2017–2018 school year.* <http://profiles.doe.mass.edu/statereport/attendance.aspx>. Accessed August 1, 2019.
40. Massachusetts Department of Elementary and Secondary Education. Student Attendance Report. 2017-18 Attendance Report (District) - All Students – Cities and towns of Massachusetts. Data indicator – *Percent of students who were absent 10% or more of their total number of student days of membership in a school out of all students enrolled for the 2017–2018 school year.* <http://profiles.doe.mass.edu/statereport/attendance.aspx>. Accessed August 1, 2019.
41. Massachusetts Department of Elementary and Secondary Education. Next Generation MCAS Achievement Results. Data indicator – *Average scaled score for MCAS English language arts results for third graders who completed the 2019 Next Generation MCAS during the 2018–2019 school year.* <http://profiles.doe.mass.edu/statereport/nextgenmcas.aspx>. Accessed July 1, 2019.

42. Massachusetts Department of Elementary and Secondary Education. Next Generation MCAS Achievement Results. Data indicator – *Average scaled score for MCAS math results for third graders who completed the 2019 Next Generation MCAS during the 2018–2019 school year.*
<http://profiles.doe.mass.edu/statereport/nextgenmcas.aspx>. Accessed July 1, 2019.

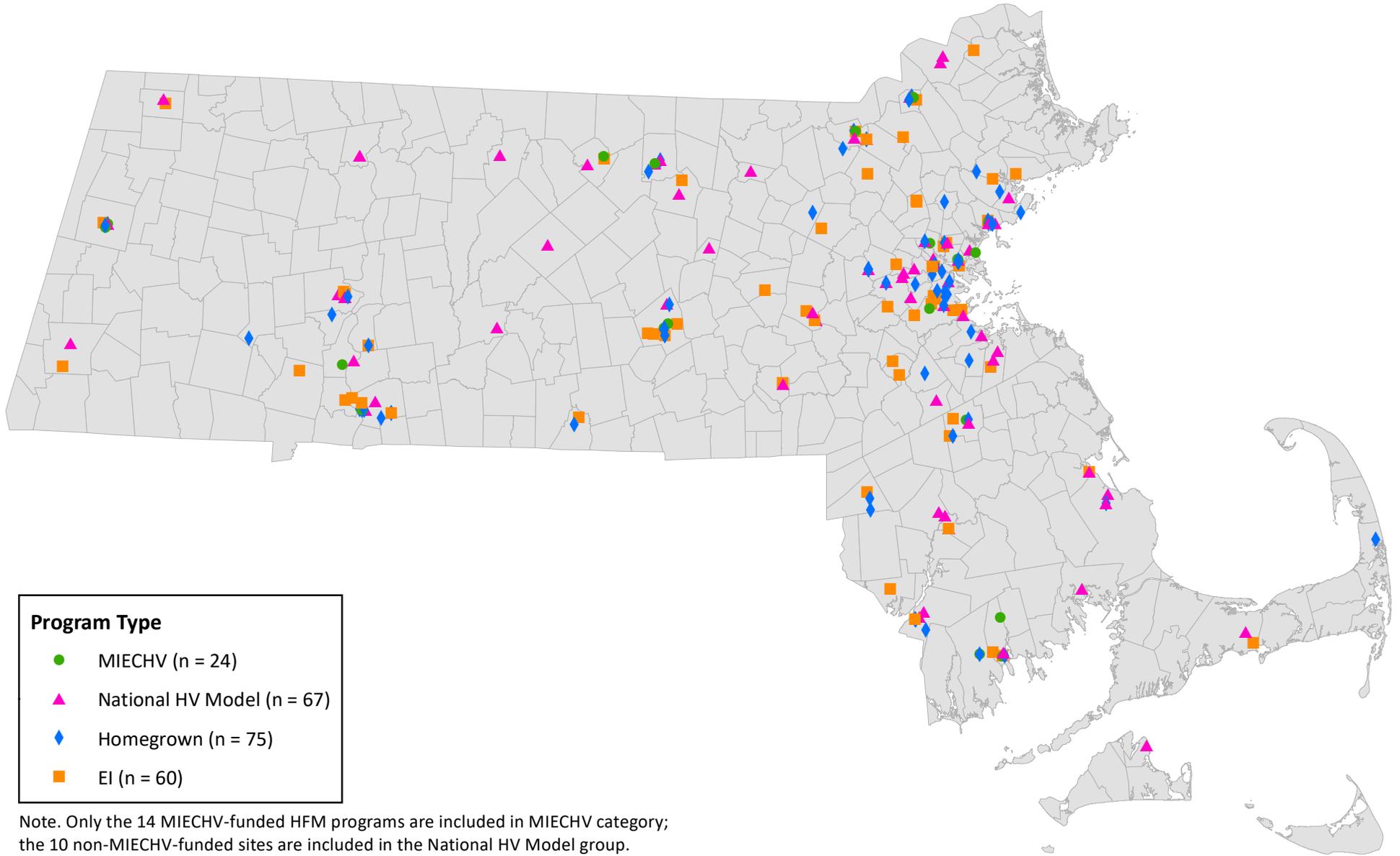
Appendix III.8—Massachusetts Home Visiting Programs: Maps One and Two

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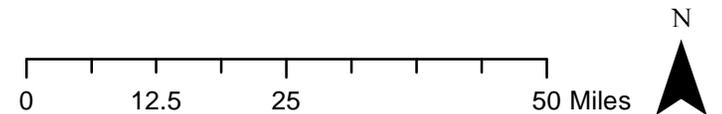
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Map Two—Cities/Towns in Massachusetts, by the number of MIECHV Home Visiting Programs that Include that City/Town in their Catchment Area(s)..... 3

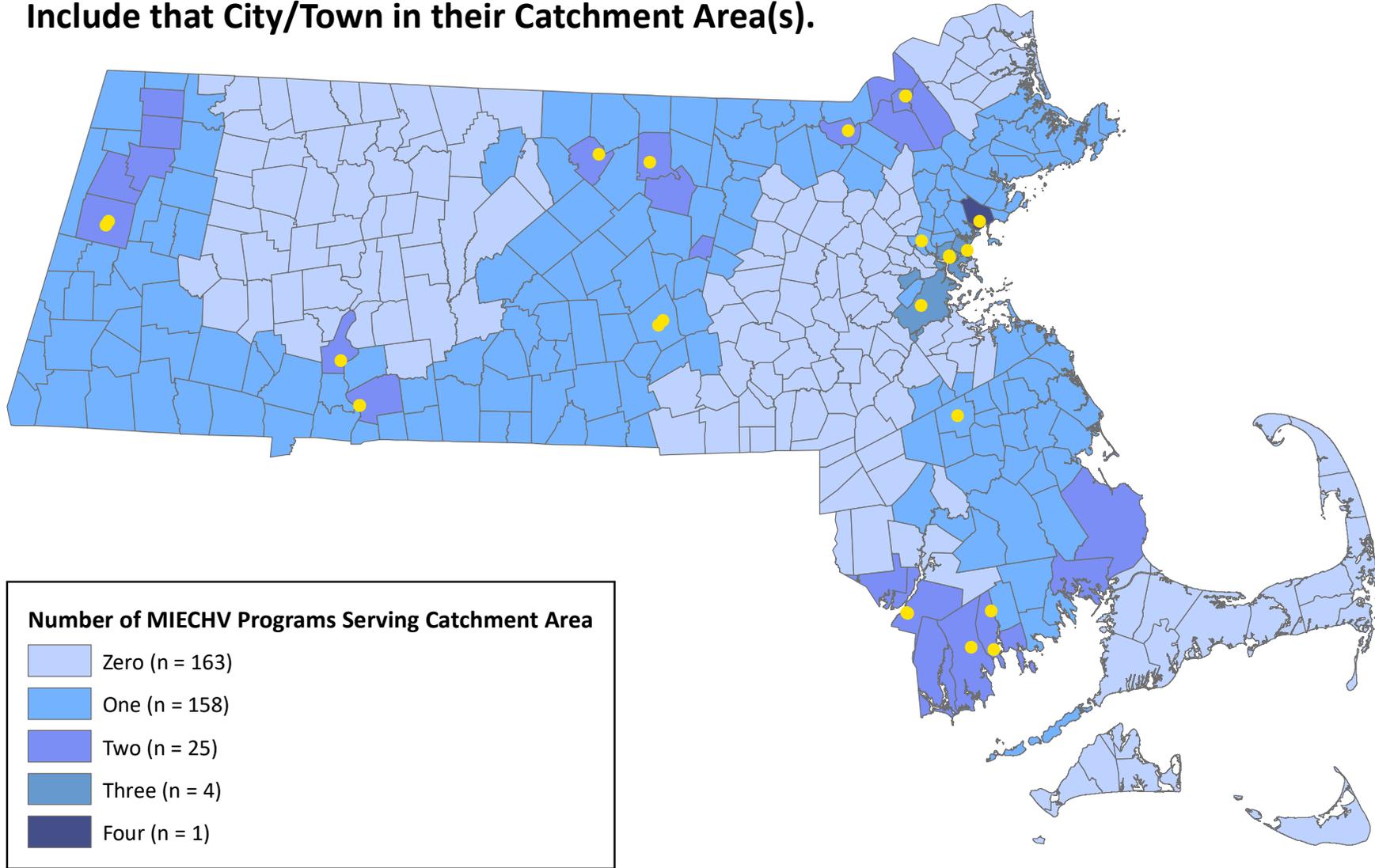
Massachusetts Home Visiting Programs, by Program Type (n = 226)



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Tufts Interdisciplinary Evaluation Research (TIER) | Tufts University
Date: 9/30/2020

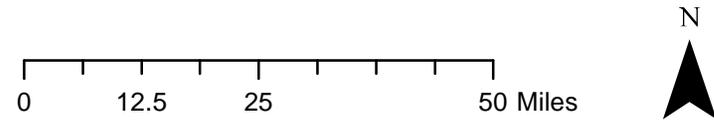


Cities/Towns in Massachusetts, by the number of MIECHV Home Visiting Programs that Include that City/Town in their Catchment Area(s).



Note. Only the 14 MIECHV-funded HFM programs are included in MIECHV category; the 10 non-MIECHV-funded sites are included in the National HV Model group.

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Date: 9/30/2020



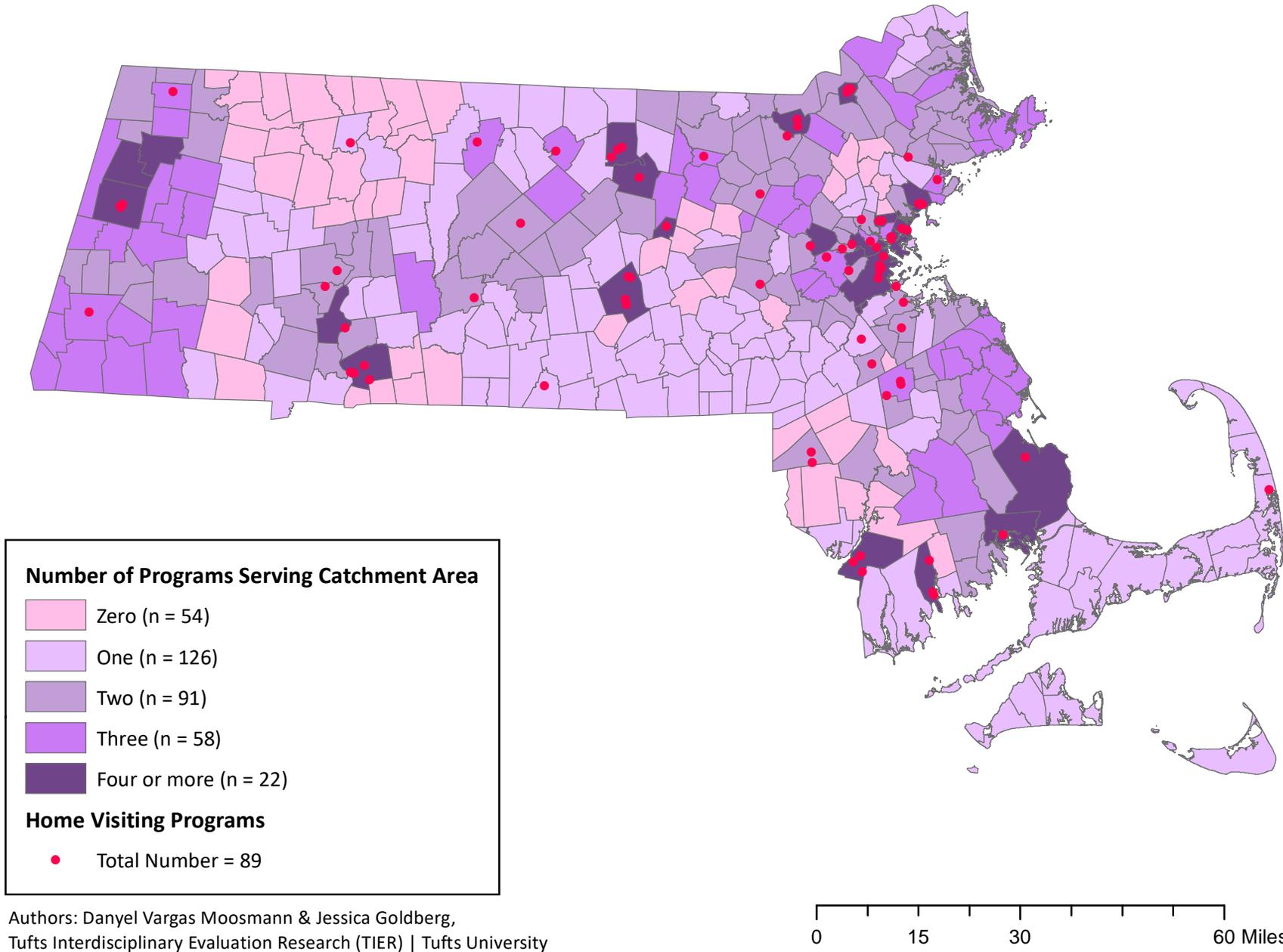
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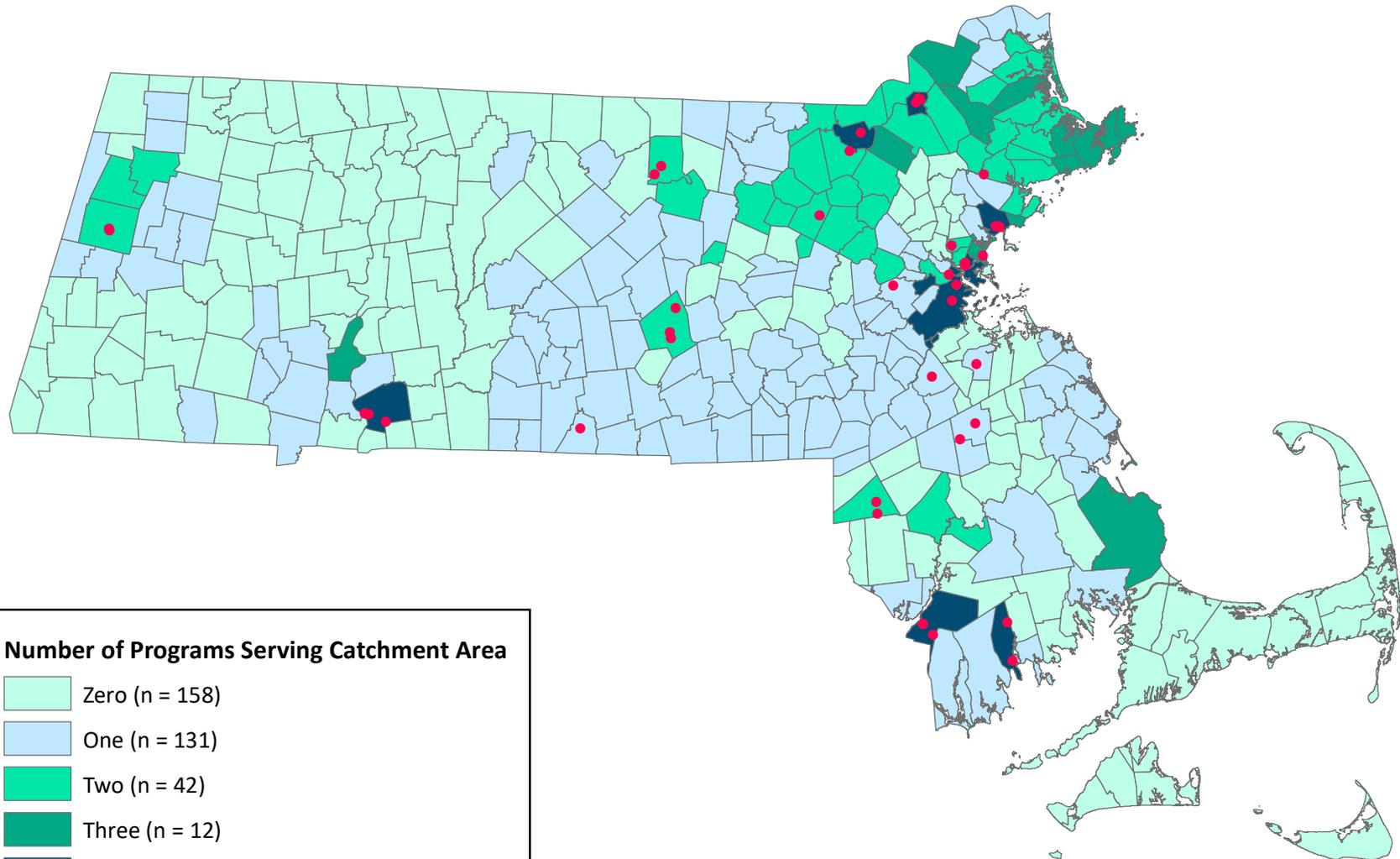
Map Two—Cities/Towns in Massachusetts, by the number of Home Visiting Programs Serving Children Five Years of Age that Include that City/Town in their Catchment Area(s)..... 3

Cities/Towns in Massachusetts, by the number of Home Visiting Programs Serving Children > Three Years of Age that Include that City/Town in their Catchment Area(s).



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Cities/Towns in Massachusetts, by the number of Home Visiting Programs Serving Children > Five Years of Age that Include that City/Town in their Catchment Area(s).



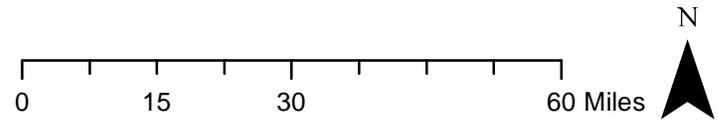
Number of Programs Serving Catchment Area

- Zero (n = 158)
- One (n = 131)
- Two (n = 42)
- Three (n = 12)
- Four or more (n = 8)

Home Visiting Programs

- Total Number = 42

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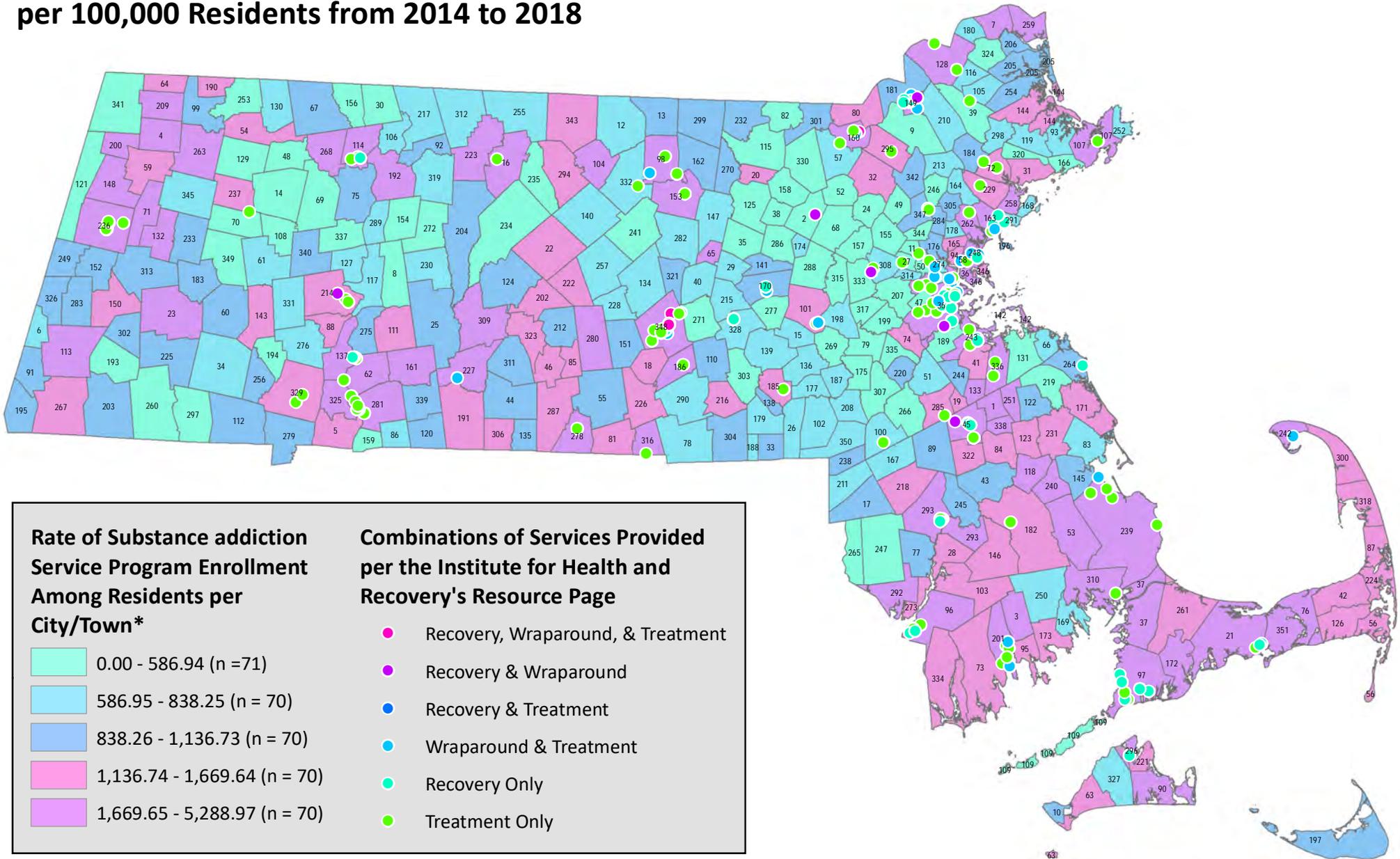


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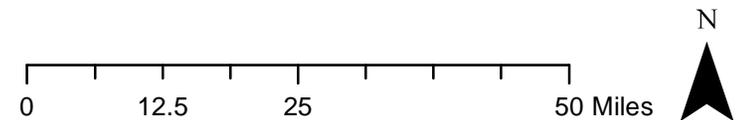
Massachusetts' Average Annual Rate of Enrollment in Substance Addiction Service Programs per 100,000 Residents from 2014 to 2018



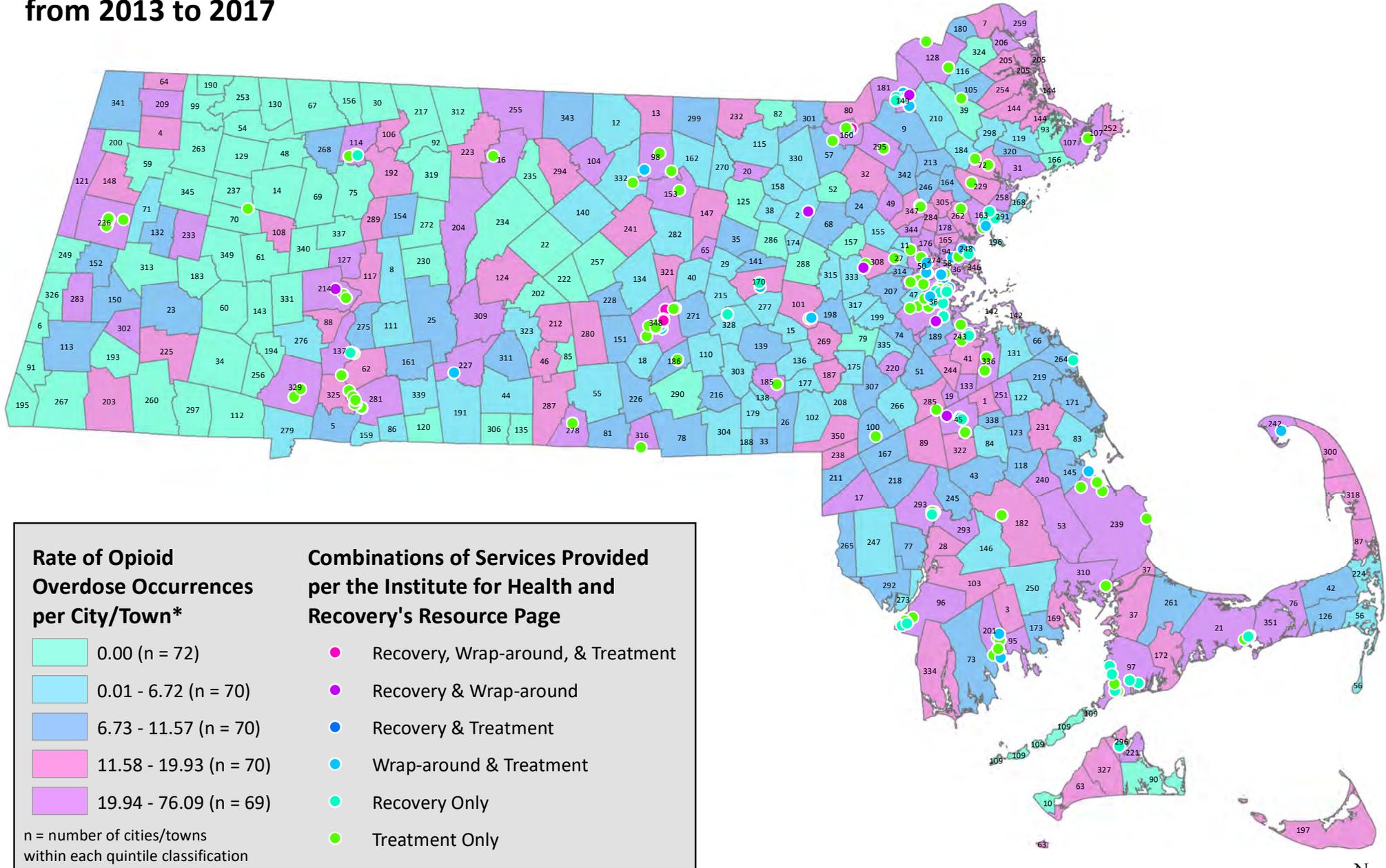
n = number of cities/towns within each quintile classification

*match city/town IDs with city/town names on page 6

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Massachusetts' Average Annual Rate of Opioid Overdose Occurrences per 100,000 Residents from 2013 to 2017



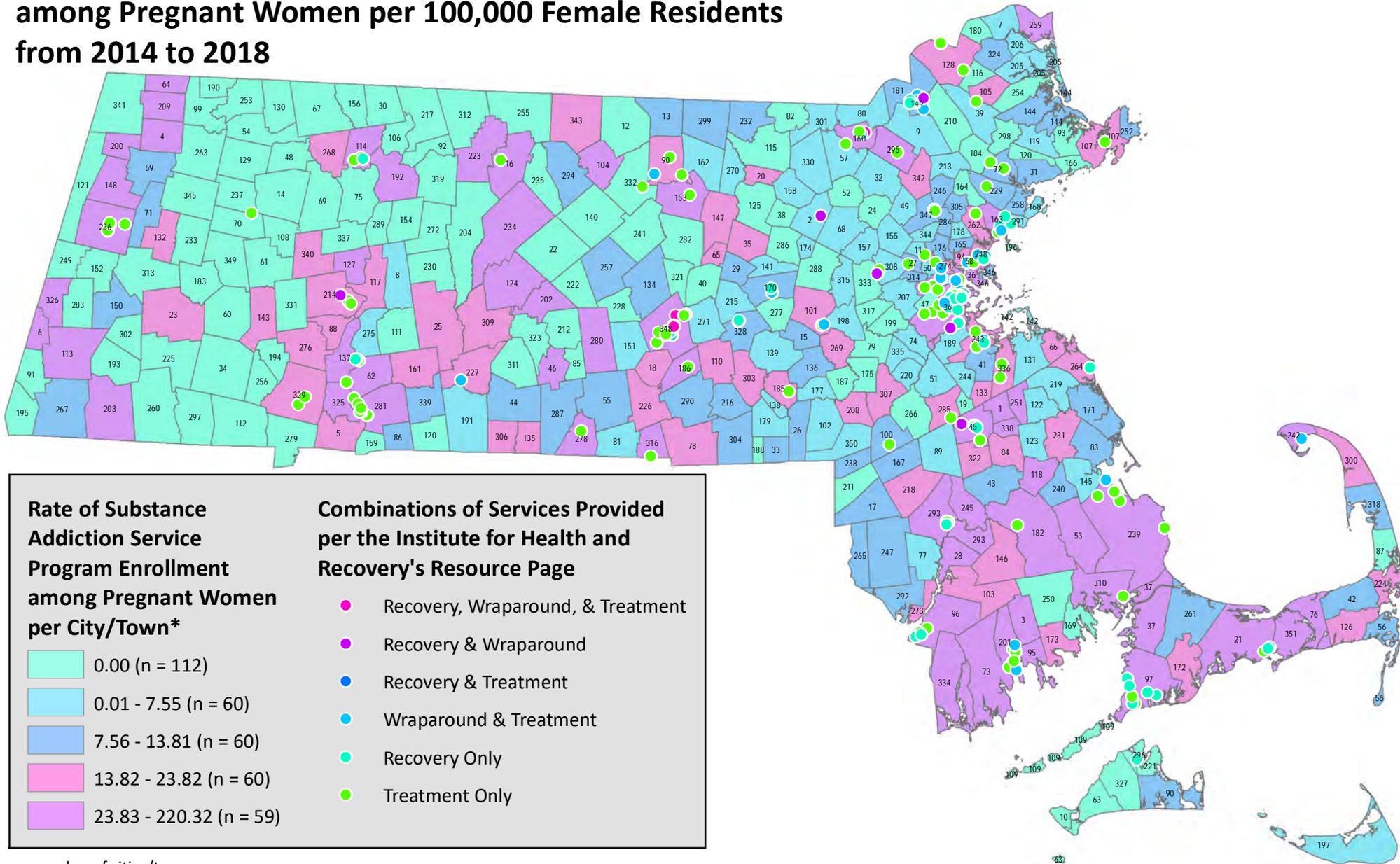
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Massachusetts' Average Annual Rate of Enrollment in Substance Addiction Service Programs among Pregnant Women per 100,000 Female Residents from 2014 to 2018

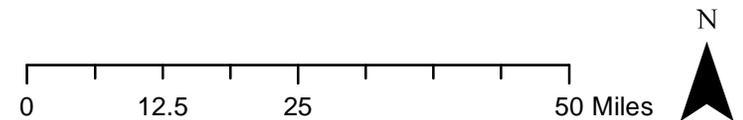


n = number of cities/towns within each quintile classification

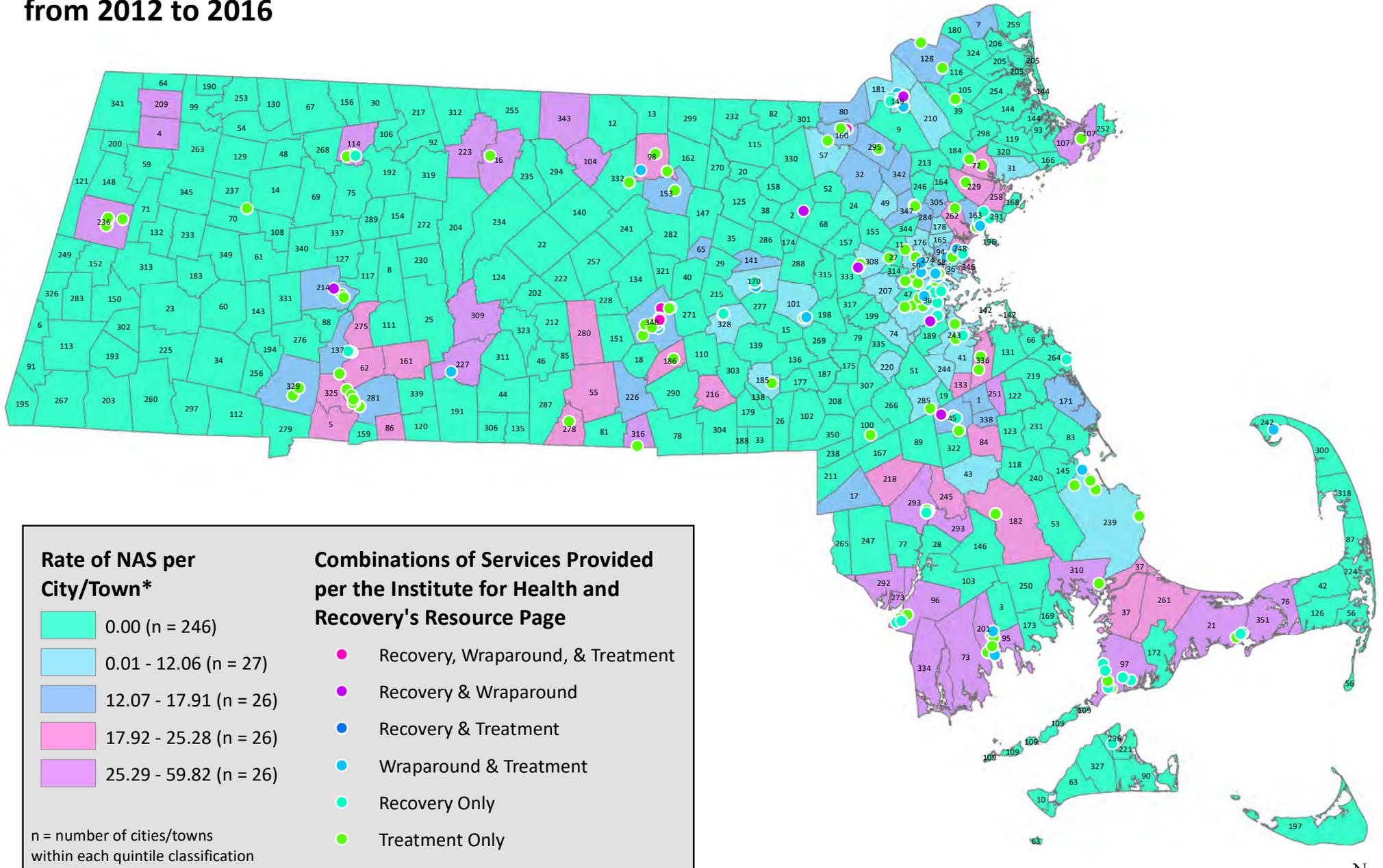
*match city/town IDs with city/town names on page 6

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Date: 9/30/2020



Massachusetts' Rate of Infants Born with Neonatal Abstinence Syndrome (NAS) per 1,000 Live Births from 2012 to 2016



*match city/town IDs with city/town names on page 6

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Date: 9/30/2020

0 12.5 25 50 Miles

N

Massachusetts' City/Town IDs and Names

City/Town ID	City/Town Name	City/Town ID	City/Town Name
1	Abington	49	Burlington
2	Acton	50	Cambridge
3	Acushnet	51	Canton
4	Adams	52	Carlisle
5	Agawam	53	Carver
6	Alford	54	Charlemont
7	Amesbury	55	Charlton
8	Amherst	56	Chatham
9	Andover	57	Chelmsford
10	Aquinnah	58	Chelsea
11	Arlington	59	Cheshire
12	Ashburnham	60	Chester
13	Ashby	61	Chesterfield
14	Ashfield	62	Chicopee
15	Ashland	63	Chilmark
16	Athol	64	Clarksburg
17	Attleboro	65	Clinton
18	Auburn	66	Cohasset
19	Avon	67	Colrain
20	Ayer	68	Concord
21	Barnstable	69	Conway
22	Barre	70	Cummington
23	Becket	71	Dalton
24	Bedford	72	Danvers
25	Belchertown	73	Dartmouth
26	Bellingham	74	Dedham
27	Belmont	75	Deerfield
28	Berkley	76	Dennis
29	Berlin	77	Dighton
30	Bernardston	78	Douglas
31	Beverly	79	Dover
32	Billerica	80	Dracut
33	Blackstone	81	Dudley
34	Blandford	82	Dunstable
35	Bolton	83	Duxbury
36	Boston	84	East Bridgewater
37	Bourne	85	East Brookfield
38	Boxborough	86	East Longmeadow
39	Boxford	87	Eastham
40	Boylston	88	Easthampton
41	Braintree	89	Easton
42	Brewster	90	Edgartown
43	Bridgewater	91	Egremont
44	Brimfield	92	Erving
45	Brockton	93	Essex
46	Brookfield	94	Everett
47	Brookline	95	Fairhaven
48	Buckland	96	Fall River

City/Town ID	City/Town Name	City/Town ID	City/Town Name
97	Falmouth	146	Lakeville
98	Fitchburg	147	Lancaster
99	Florida	148	Lanesborough
100	Foxborough	149	Lawrence
101	Framingham	150	Lee
102	Franklin	151	Leicester
103	Freetown	152	Lenox
104	Gardner	153	Leominster
105	Georgetown	154	Leverett
106	Gill	155	Lexington
107	Gloucester	156	Leyden
108	Goshen	157	Lincoln
109	Gosnold	158	Littleton
110	Grafton	159	Longmeadow
111	Granby	160	Lowell
112	Granville	161	Ludlow
113	Great Barrington	162	Lunenburg
114	Greenfield	163	Lynn
115	Groton	164	Lynnfield
116	Groveland	165	Malden
117	Hadley	166	Manchester by the Sea
118	Halifax	167	Mansfield
119	Hamilton	168	Marblehead
120	Hampden	169	Marion
121	Hancock	170	Marlborough
122	Hanover	171	Marshfield
123	Hanson	172	Mashpee
124	Hardwick	173	Mattapoisett
125	Harvard	174	Medfield
126	Harwich	175	Medford
127	Hatfield	176	Medford
128	Haverhill	177	Medway
129	Hawley	178	Melrose
130	Heath	179	Mendon
131	Hingham	180	Merrimac
132	Hinsdale	181	Methuen
133	Holbrook	182	Middleborough
134	Holden	183	Middlefield
135	Holland	184	Middleton
136	Holliston	185	Milford
137	Holyoke	186	Millbury
138	Hopedale	187	Millis
139	Hopkinton	188	Millville
140	Hubbardston	189	Milton
141	Hudson	190	Monroe
142	Hull	191	Monson
143	Huntington	192	Montague
144	Ipswich	193	Monterey
145	Kingston	194	Montgomery

City/Town ID	City/Town Name	City/Town ID	City/Town Name
195	Mount Washington	244	Randolph
196	Nahant	245	Raynham
197	Nantucket	246	Reading
198	Natick	247	Rehoboth
199	Needham	248	Revere
200	New Ashford	249	Richmond
201	New Bedford	250	Rochester
202	New Braintree	251	Rockland
203	New Marlborough	252	Rockport
204	New Salem	253	Rowe
205	Newbury	254	Rowley
206	Newburyport	255	Royalston
207	Newton	256	Russell
208	Norfolk	257	Rutland
209	North Adams	258	Salem
210	North Andover	259	Salisbury
211	North Attleboro	260	Sandisfield
212	North Brookfield	261	Sandwich
213	North Reading	262	Saugus
214	Northampton	263	Savoy
215	Northborough	264	Scituate
216	Northbridge	265	Seekonk
217	Northfield	266	Sharon
218	Norton	267	Sheffield
219	Norwell	268	Shelburne
220	Norwood	269	Sherborn
221	Oak Bluffs	270	Shirley
222	Oakham	271	Shrewsbury
223	Orange	272	Shutesbury
224	Orleans	273	Somerset
225	Otis	274	Somerville
226	Oxford	275	South Hadley
227	Palmer	276	Southampton
228	Paxton	277	Southborough
229	Peabody	278	Southbridge
230	Pelham	279	Southwick
231	Pembroke	280	Spencer
232	Pepperell	281	Springfield
233	Peru	282	Sterling
234	Petersham	283	Stockbridge
235	Phillipston	284	Stoneham
236	Pittsfield	285	Stoughton
237	Plainfield	286	Stow
238	Plainville	287	Sturbridge
239	Plymouth	288	Sudbury
240	Plympton	289	Sunderland
241	Princeton	290	Sutton
242	Provincetown	291	Swampscott
243	Quincy	292	Swansea

City/Town ID	City/Town Name	City/Town ID	City/Town Name
293	Taunton	340	Williamsburg
294	Templeton	341	Williamstown
295	Tewksbury	342	Wilmington
296	Tisbury	343	Winchendon
297	Tolland	344	Winchester
298	Topsfield	345	Windsor
299	Townsend	346	Winthrop
300	Truro	347	Woburn
301	Tyngsborough	348	Worcester
302	Tyringham	349	Worthington
303	Upton	350	Wrentham
304	Uxbridge	351	Yarmouth
305	Wakefield		
306	Wales		
307	Walpole		
308	Waltham		
309	Ware		
310	Wareham		
311	Warren		
312	Warwick		
313	Washington		
314	Watertown		
315	Wayland		
316	Webster		
317	Wellesley		
318	Wellfleet		
319	Wendell		
320	Wenham		
321	West Boylston		
322	West Bridgewater		
323	West Brookfield		
324	West Newbury		
325	West Springfield		
326	West Stockbridge		
327	West Tisbury		
328	Westborough		
329	Westfield		
330	Westford		
331	Westhampton		
332	Westminster		
333	Weston		
334	Westport		
335	Westwood		
336	Weymouth		
337	Whately		
338	Whitman		
339	Wilbraham		

The logo features the word "TIER" in large, white, sans-serif capital letters. The letters are set against a dark blue background that is filled with various white icons representing social and community themes, such as a person with a stroller, a person holding a child, a person with a shopping cart, a person with a house, a person with a scale of justice, and a person with a building. Below the "TIER" text, the full name "Tufts Interdisciplinary Evaluation Research" is written in a bold, dark blue, sans-serif font within a white rectangular box with a dark blue border.

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