One Step Closer: Envisioning Broader Mental Health Care at Tufts University

Methods and Data

Tufts Mental Health Resources (Tufts Mental Health Task Force Tufts On-Campus Housing (Tableau): Tufts Fact Book Tufts Off-Campus Housing (Tableau): Tufts Community Relations Tufts Building Outlines (Vector Polylines): Tufts Data Lab National Streets Layer (Vector Lines): MassGIS

Massachusetts Towns Layer (Vector Polylines): MassGIS

I took the street data and assigning a walk time to each street segment based on a 4.95 feet walk time. Then, ran a service area network analysis using Tufts Counseling and Mental Health Services (CMHS) as the Facility. Then I added other proposed facilities and ran further service area network analyses. Next, I geocoded on- and off-campus housing data and ran a Kernel Density analysis to generate a total student density heat map. I repeated this process for off-campus only. I conducted a spatial join with the original points to determine percentage of students within certain walkable distances from CMHS. Lastly, I composed a dataset of the hours of operation for certain resources of interest to the Task Force and used Time Slider in ArcMap create a time lapse video of resources.

Introduction

Nationwide, the demand for mental health care on college campuses has skyrocketed. On the Tufts campus, Counseling and Mental Health Services (CMHS) has seen a 61% increase in onsite intake between the fall of 2015 and 2017. In 2016, Health Minds data indicated that 37% of students had a clinical diagnoses for depression, anxiety, or an eating disorder.

This project is in conjunction with the work of the Mental Health Task Force hosted by the Tufts Office of the President. In response to growing needs, the Task Force is exploring alternative models of care to better meet the demand on the Medford/Somerville campus in Boston, Massachusetts. For this project, I have proposed two options for new satellite locations to ease the demand on the current location at 120 Curtis Street. These locations are proposed in response to student residency density and student concerns collected by the task force.

Spatial Questions

- Where are resources available at 4:00 am (after Tisch late night closes), 12pm (open block), and 6pm (when the workday ends)? What hours should Tufts be investing in more resources?
- What portion of the student body is currently within an accessible range of the counseling services?
- Where are resources available at 4:00 am (after Tisch late night closes), 12pm (open block), and 6pm (when the workday ends)? What hours should Tufts be investing in more resources?

Literature Review


The total student density raster shows the highest concentrations at the uphill and downhill dorms. However, they also indicate some clustering of off-campus housing near the gym and along the residential roads to Powderhouse circle. When the on-campus housing is removed, the map displays other clusters of housing which represent primarily upper-class undergraduates and graduate students. Based on the student density mapping, I proposed one satellite location at 574 Boston Avenue to support on the East/Southeastern edge of campus. I then analyze two options for a second satellite site: 163 College Avenue, the Tisch Fitness Center, or at 200 Boston Avenue. A visual analysis of the maps show that a location at the Fitness Center offers the most concentrated layout of care. More of the student density exmares falls into the zero-to-five and five-to-ten minute range. Under this layout, about 89% of the student body has at most a 10 minute walk time. However, about 6% of students are over 15 minutes’ walk away.

Analysis

The second satellite location at 200 Boston, the student density raster are still within the new walk range of clinical services. However, in the break down, now only 87.13% of students are within 10 minutes’ walk time and 6.64% of students are still over 15 minutes away. However, one source of error in this project is the use of existing resources rather than academic buildings, where students are more likely located during the day. For the 200 Boston Ave location, I am proposing it be designated a graduate-student specific satellite location for the many graduates that work hours in the labs in this building.

The time map reveals that there while there are a variety of options the day, resources are scare in the evenings and night when students are still active. Tisch library late night study closes at 3:00AM and Eaton lab closes at 4:00AM. It is within reason to think that these students may be feeling overwhelmed and anxious. Currently, only the Latin’s LGBT center is the only physical resource available at this hour. Similarly, at 6:00PM there is a significant drop in the number and types of resources that are available. Many students may be finishing class for the day or returning to campus from a job. This reflects another complaint from student regarding the hours of CMHS. Since CMHS operates during normal business hours, when many have class or work, care is less accessible than it seems. Tufts should invest in more resources during these critical time slots.

Conclusion

This data is timely and will be utilized immediately. Following the completion of these maps, they will be provided to the Mental Health Task Force, the Dean of Student Affairs Office, the Office of the President, and Tufts Community Relations. The maps here suggest that Tufts is currently underperforming in its’ provision of mental health services while the demand for this care is growing exponentially. These findings will have implications for what recommendations the Task Force will be proposing this summer. By expanding the hours of existing resources and establishing new services in strategic areas, Tufts can vastly increase the current scope of their care on the Medford/Somerville Campus.

Conclusion:

This data is timely and will be utilized immediately. Following the completion of these maps, they will be provided to the Mental Health Task Force, the Dean of Student Affairs Office, the Office of the President, and Tufts Community Relations. The maps here suggest that Tufts is currently underperforming in its’ provision of mental health services while the demand for this care is growing exponentially. These findings will have implications for what recommendations the Task Force will be proposing this summer. By expanding the hours of existing resources and establishing new services in strategic areas, Tufts can vastly increase the current scope of their care on the Medford/Somerville Campus.

Projected Coordinate System: (NAD 1983) Massachusetts State Plane Projection: Lambert Conformal Conic

Mayakaylah Respicio-Evans
GIS 102: Advanced GIS, Tufts University
May 8th 2018