Introduction

According to the previous researches, emergency room use varies by age, income, education level, and health insurance status. The acute care hospitals in Boston can be categorized into two groups: with emergency room or without emergency room. By evaluating the neighborhood and accessibility of each acute care hospital, we want to score each hospital and then propose adding or modifying the location of current emergency rooms.

Methodology

To evaluate the population composition within a 500m walking distance of each acute care hospital, we plan to map the population based on surrounding residents’ age, education level, household income, and health insurance status. By creating a series of hospital buffers, we can sum up the number of potential patients within each buffer and get a score for each hospital. To evaluate the accessibility of each acute care hospital, we plan to count the number of T stations, bus stops, and park lots covered by a 500m walking circle of each acute care hospital.

Results and Discussion

The results indicated that the neighborhood of Kindred Hospital contains more potential patients than St. Elizabeth’s Medical Center, so it would be a propose to modify the location of emergency room in St. Elizabeth’s Medical Center to Kindred Hospital.

According to the maps, Beth Israel Deaconess Medical Center may also cover more potential patients than the other hospitals nearby. However, as the density of hospitals in this area has been high, we don’t consider to modify the location of any emergency room.

Key Datasets


References