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**Increasing the Impact of the Urban Health Institute on Baltimoreans’ Health/Wellbeing**

Baltimore’s public transportation infrastructure is failing Baltimoreans. It is failing low and mid-income Baltimoreans, who are disproportionately cut off from job opportunities and forced to endure extremely long commutes. It is failing Baltimore’s students who are cut off from employment and educational opportunities as they try to make their way out of poverty. It is failing the health of all Baltimoreans by preventing access to fresh food and healthcare and by discouraging walking and biking as part of commutes.

It is easy for those who own and drive cars to overlook the importance of public transportation, since they do not depend on these systems. However, all Baltimoreans must realize that all our city’s transportation systems work together, and that the efficiency of each system depends on the success of all other systems. If Baltimore invests in new public transportation systems that are safe, reachable, reliable, and rapid, our city can see improved health outcomes through greater transportation efficiency.[[1]](#footnote-1)

As studied in Seminar on Public Health and Wellbeing in Baltimore, there are serious health outcome disparities in Baltimore City. In 2012, Benjamin Evans et al. found that residents in Greater Roland Park/Poplar had an average life expectancy of 86.3 years, while residents of Upton/Druid Heights had an average life expectancy of just 56.7 years (a 29.6-year difference).[[2]](#footnote-2) Just as there are disparities in health outcomes, there are disparities in the factors that predict these health outcomes, like access to transportation to jobs, fresh food, and healthcare. Research from the Opportunity Collaborative found that in 2016, the average commute for residents in East and West Baltimore was 90 minutes.[[3]](#footnote-3) Additionally, in 2015 the Baltimore Neighborhood Indicators Alliance found that over 30% of the population in some neighborhoods, like Greenmount East, Oldtown/Middle East, Sandtown/Winchester, and Poppleton/Hollins Market, had to commute more than 45 minutes to work. Meanwhile, in Greater Roland Park/Poplar, the neighborhood with the highest life expectancy in Baltimore, as few as 11% of residents had commutes longer than 45 minutes.[[4]](#footnote-4)

The relationship between commute length and health outcomes is described through focus groups conducted by Lili Farhang and Rajiv Bhatia in the San Francisco Bay Area. When public transit systems make commutes longer than necessary, like when commuters must make multiple transfers or wait a while for their bus or train to arrive, commuters lose valuable time for family, social, or leisure activities. Losing time for these stress-relieving activities, along with increased stress through the long and unpleasant commutes themselves, increases the pressure of stress on populations subjected to long commutes. Stress is related to negative physical and mental health outcomes, like immune system effectiveness and depression,[[5]](#footnote-5) which helps to explain the connection between long commutes and the health outcomes of Baltimore’s different neighborhoods.[[6]](#footnote-6)

Long commutes also affect the intergenerational mobility of a city’s residents. A study by Raj Chetty at Harvard University ranked the 50 largest commuting cities by their degree of intergenerational mobility. Comparing these rankings to the University of Minnesota’s rankings of cities by job accessibility through public transit, a clear pattern emerges: eight of the top ten job-accessible cities (New York, San Francisco, Los Angeles, Washington, D.C., Boston, Seattle, Denver, and San Jose)[[7]](#footnote-7) are also found in the top 20 cities for intergenerational mobility. For reference, Baltimore is ranked 37th for intergenerational mobility,[[8]](#footnote-8) and is nowhere to be found in the rankings for job-accessible cities.[[9]](#footnote-9) Job accessibility through public transit is not the only determinant of intergenerational mobility, but additional evidence from Chetty’s study shows that it nonetheless remains the single strongest factor for predicting intergenerational mobility.[[10]](#footnote-10)

Obesity is another serious public health issue in Baltimore which can be addressed by investing in Baltimore’s public transportation infrastructure. The pattern of obesity disparities between different Baltimore neighborhoods resembles the patterns of disparities in transportation access and health outcomes discussed above. In 2015, the Baltimore City Health Department reported that 39.4 percent of adult residents with an annual income of less than $15,000 were obese, while only 16.5 percent of adult residents with an annual income of more than $75,000 were obese.[[11]](#footnote-11) The same neighborhoods with the highest levels of poverty (and thus obesity) also have the least accessible public transportation[[12]](#footnote-12) and the worst overall health outcomes.[[13]](#footnote-13) The same focus groups conducted by Farhang and Bhatia found that when both fresh food and healthcare are inaccessible to residents, otherwise preventable diseases like obesity are more likely to develop and remain untreated.[[14]](#footnote-14) Without opportunities to access fundamental determinants of health like fresh foods and healthcare, populations with poor access to public transportation have no practical ways to avoid the development of disease. We can at least begin to address Baltimore’s disparities in obesity and health outcomes by investing in reachable, reliable, and rapid public transportation.

Overall, 33.8% of all adults Baltimoreans are obese.[[15]](#footnote-15) A study by Megan Jehn et al. found that, in Baltimore City Public Schools, 17.2% of boys and 20.7% of girls were overweight, with 14.1% of boys and 15.3% of girls at-risk for being overweight. These statistics are higher than the national averages, indicating a high prevalence of obesity.[[16]](#footnote-16) Increases in obesity prevalence are associated with increased prevalence of type-2 diabetes, obesity-related cancers, cardiovascular disease, osteoarthritis, and overall increases in morbidity and mortality.[[17]](#footnote-17) Obesity is also costly for our healthcare system and our economy; a study by Adam Gilden et al. found that being overweight raises an individual’s average medical costs by $266, and being obese raises costs on average by a staggering $1,723.[[18]](#footnote-18) Obesity and its associated health outcomes are estimated to account for as much as 20% of medical spending in the United States;[[19]](#footnote-19) since Baltimore’s obesity levels are higher than national averages, it is fair to say that obesity in Baltimore accounts for a similar percentage of our city’s healthcare expenditure. Public transportation infrastructure can help address general obesity in Baltimore by increasing time spent walking as part of Baltimorean’s daily commutes. A 2007 study by Ryan Edwards found that by increasing commute walk time, even by a modest eight minutes, weight gain could be eliminated in 43-60 percent of the general population.[[20]](#footnote-20) It follows that investments in reachable, reliable, and rapid public transportation will help reduce the overall prevalence of obesity and the amount of healthcare spending on obesity in Baltimore.

While not its main goal, improving public transportation infrastructure in Baltimore will also help to break the “Hopkins Bubble”, which exists in part because of limited public transportation options for Hopkins students. It’s not just Hopkins students who miss out on experiencing and exploring Baltimore because of its public transportation infrastructure; in a 2012 survey conducted by the Baltimore Collegetown Network, the biggest complaint from graduating college seniors about Baltimore was its public transportation options. Baltimore can better attract and retain talented students and employees by improving its public transportation infrastructure.[[21]](#footnote-21)

How can we improve Baltimore’s public transportation infrastructure to address these public health issues? The specific problems that the infrastructure faces should first be described. The Maryland Transit Administration (MTA) has a developed collection of bus routes that can get Baltimoreans to many areas of the city, but these buses are the MTA’s focus, with few rapid transit or light rail lines present.[[22]](#footnote-22) The buses themselves often fall victim to mechanical failure or shortage of drivers, leading to late or completely missed stops and overcrowded buses.[[23]](#footnote-23) As discussed previously, conditions like these add significant stress to commuters’ lives, and can precede increases in morbidity and mortality. To be fair, the MTA has tried to improve its systems, with its implementation of the BaltimoreLink system last summer and the development of a new smartphone app which allows riders to more seamlessly track buses and plan their routes.[[24]](#footnote-24) However, some argue that these changes have not markedly improved transportation in Baltimore and that much more still needs to be done.[[25]](#footnote-25)

To address these issues and promote a more robust public transportation infrastructure, Transit Choices, a coalition of organizations dedicated to forming a more mature public transportation system in Baltimore, [[26]](#footnote-26) has outlined a few focus areas. One focus area is Baltimore’s rail systems. Transit Choices recommends that Baltimore’s Metro SubwayLink line be expanded from its current, limited route between the Johns Hopkins Hospital and Owings Mills Station to include other destinations further north,[[27]](#footnote-27) including Madison Square, East North Avenue, Coldstream, 33rd Street, Northwood, and Morgan State University.[[28]](#footnote-28) They also suggest reopening considerations into the previously proposed Red Line,[[29]](#footnote-29) which would service destinations like Rosemont, Westside, Charles Center, Inner Harbor East, Patterson Park, and Dundalk.[[30]](#footnote-30) Beyond opening new lines, Transit Choices suggests a more complete utilization of existing infrastructure, such as former streetcar systems and current Light RailLink services. Baltimore’s Light RailLink service could be made more efficient by prioritizing light rail cars at traffic signals and by promoting Transit Oriented Development (TOD) around existing Light RailLink service areas.[[31]](#footnote-31) The goals of TOD include increased walkability and decreased dependence on cars; these impacts are achieved by mindfully designing neighborhoods to enable residents to seamlessly utilize existing public transportation infrastructure.[[32]](#footnote-32) This combination of improvements to the MTA’s rail systems will help alleviate pressure from other transportation systems, allowing all systems to work more fluidly together.

Transit Choices also has ideas for how to improve Baltimore’s network of buses. One recommendation is to increase the clarity of signage on existing BaltimoreLink buses so that riders are aware of possible connections between the MTA’s BaltimoreLink, Light RailLink, and Metro SubwayLink services. Increasing rider awareness of the interfaces between the MTA’s different public transportation services will help riders to more efficiently take advantage of these services, saving them time and stress. Transit Choices also recommends reevaluating the role of the Charm City Circulator in Baltimore’s larger public transportation infrastructure. How can the Circulator best complement the services of other public bus systems in Baltimore, like BaltimoreLink, the Collegetown Shuttle, and the JHMI Shuttle? Over 270,000 rides are taken on buses in Baltimore *every day*. Refining and reevaluating our current bus systems can have a serious impact on the efficacy of Baltimore’s entire public transportation infrastructure.[[33]](#footnote-33)

Transit Choices also believes in redesigning streets and neighborhoods thoughtfully to support Baltimore’s other transportation systems. Redesigning streets with bicyclists in mind will help to increase bicycle ridership, promoting physical activity as part of daily commutes and further alleviating pressure from Baltimore’s transportation infrastructure. To best promote bicycle ridership, redesigned streets should include key features like protected bicycle lanes,[[34]](#footnote-34) bicycle parking, and bicycle share stations. Educating city drivers about how to share the roads with bicyclists will also help to reduce bicycle-automobile collisions and will further encourage a bicycle-friendly transportation culture.[[35]](#footnote-35) Increasing street walkability is another way to promote physical activity and reduce pressure on Baltimore’s transportation systems. To make streets more walkable, Transit Choices recommends optimizing the timing of traffic signals to promote the fair use of intersections between pedestrians and automobiles. Transit Choices also recommends installing amenities for pedestrians waiting for public transportation services. To increase pedestrian safety and further promote a pedestrian-friendly transportation culture, Transit Choices recommends implementing continuous sidewalk surfaces and pedestrian lighting so drivers are more aware of pedestrians, especially at intersections which experience high rates of pedestrian-automobile collisions. Pedestrian “refugee zones” should also be installed at these high-collision intersections.[[36]](#footnote-36) These zones allow pedestrians to safely cross one direction of traffic at a time, instead of forcing pedestrians to complete their entire crossing at once or wait in the middle of the street where they are more susceptible to being struck by passing cars.[[37]](#footnote-37) These changes, in conjunction with the changes discussed above, will help to facilitate a more reachable, reliable, and rapid public transportation system.

How do we go about making these changes in Baltimore? Some of these ideas have already been presented to Baltimore and Maryland lawmakers, most notably the Red Line expansion proposal which was vetoed by Maryland Governor Larry Hogan in 2015, citing budget issues.[[38]](#footnote-38) To address the public transportation deficit in Baltimore, Governor Hogan instead developed and implemented an overhaul of Baltimore’s bus system, known as BaltimoreLink. However, as discussed above, BaltimoreLink fell short of Baltimore’s transportation needs and is nowhere close to a viable alternative to the Red Line proposal. Evidently, Governor Hogan is not in favor of any major improvements to Baltimore’s public transportation infrastructure, but his four-year term is expiring soon, with the 2018 gubernatorial race already well underway. What the Urban Health Institute should focus on right now to promote the public health and wellbeing of Baltimoreans is the election of a new governor whose platform emphasizes addressing the public transportation deficit in Baltimore. Governor Hogan was ultimately the reason why the project failed, despite support from former Baltimore Mayor Stephanie Rawlings-Blake, the Baltimore City Council, the Baltimore City Delegation for the Maryland State Assembly and United States Congress,[[39]](#footnote-39) and the Federal Transit Administration.[[40]](#footnote-40) With the governor’s support in addition to support from these entities, transportation infrastructure reform will be much more likely. We already know that most of the Democratic gubernatorial candidates support investment in Baltimore’s public transportation infrastructure.[[41]](#footnote-41) We will know more about each candidate’s specific goals and plans for Baltimore’s public transportation infrastructure when they speak more about these issues on May 31st, 2018 at the “Leadership for Improving Transportation” forum (sponsored by Transit Choices and other Baltimore public transportation advocacy groups).[[42]](#footnote-42) Once we learn more about each candidate’s ideas at this forum, the Urban Health Institute should support the candidate most likely to both implement sound public transportation reforms and defeat Governor Hogan in the general election this November.

Beyond supporting the election of a pro-public transportation governor, the Urban Health Institute should support the signing of House Bill 372, a key transportation funding bill that has been passed by the Maryland General Assembly. The bill designates more public transportation funding to the Baltimore region,[[43]](#footnote-43) which could be instrumental in making much needed repairs to Baltimore’s Metro SubwayLink service, which went down recently for an entire month to address emergency maintenance issues.[[44]](#footnote-44) While this funding alone does not finance the exciting new improvements to Baltimore’s public transportation infrastructure described above, it is still crucial to the overall goal, as augmentations to Baltimore’s existing public transportation infrastructure will only be effective if they are built on top of an already robust system (which is currently not the case).

Once these short-term goals are achieved, the Urban Health Institute should fight for the introduction of new transportation proposals at both the city and state levels which fund the improvements to Baltimore’s public transportation infrastructure described above. This will be a long fight requiring patience and determination, but if the Urban Health Institute, the City of Baltimore, and the State of Maryland can achieve these much-needed changes, Baltimore’s public transportation infrastructure will be revitalized, along with the public health and wellbeing of *all* Baltimoreans.

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