Recognizing Social Determinants of Health to Better Care for the Most Vulnerable Populations

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Lauren Marcello

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THE CAPSTONE PAPER HAS BEEN ACCEPTED BY THE COMMUNITY ENGAGEMENT PROGRAM IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION IN COMMUNITY ENGAGEMENT.
Acknowledgements

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Abstract

The history of healthcare has transitioned from an effort to care for people who were ill to a profitable business through the process of medicalization. Which today makes receiving comprehensive care extremely difficult or impossible for individuals who are considered vulnerable or have significant social determinants of health. Through the recognition of social determinants of health in the institution of government health insurance, the opportunity for a healthier population.
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Recognizing Social Determinants of Health to Better Care for the Most Vulnerable Populations

The world of health care is forever changing as the needs of people change. Diseases have come and gone, treatment techniques have done the same. Treating the human condition is a complex process. Medicalization is a process that can make the treatment of human condition by medical professionals simpler. Medicalization is the process of defining and treating problems that humans face as medical problems (Sadler, Jotterand, Simon, & Inrig, 2019). The process of medicalization essentially legitimizes common ailments that people may face in order to receive medical treatment. Medicalization allows individuals to seek and receive help when facing any issues that may be out of the ordinary medically (Fainzang, 2013). However, medicalization can prevent people from receiving the full extent of treatment that is necessary for the problems they may have. Medicalization restricts treatment to the determined biotechnology treatment for the diagnosis (Lantz, Lichtenstein, & Pollack, 2007). Biotechnology treatment is treatment that addresses any physiological ailments such as prescription drugs (Conrad, 2005). Medicalization can impact people’s ability to receive holistic treatments for their ailments.

The history of health care started off in religious sectors with the definition of care being to make people comfortable (Rosenthal, 2018). Many people did not survive their illness or injuries which made comfort the priority (Rosenthal, 2018). As technology and the understanding of the human body increased, the survival rate of people also increased (Rosenthal, 2018). This began the evolution of care from comfort to treatment. Even though recovery was possible, the recovery for basic procedures was long (Rosenthal, 2018). The wages lost during the recovery process by workers opened the market for the opportunity to provide what is now known as company provided health insurance (Rosenthal, 2018). Companies would pay local doctors a monthly fee for them to care for the workers (Rosenthal,
2018). This process began to spread throughout the United States with more and more people entering the health insurance industry creating a competitive market for companies and people to find the best price for their insurance needs (Rosenthal, 2018). As the companies expanded, they set criteria for what gets covered under insurance (Rosenthal, 2018). Medicalization provides these criteria of what is considered a medical issue that requires some type of intervention (Lantz, Lichtenstein, & Pollack, 2007).

Medicalization of diseases or disorders can happen in multiple ways. One-way medicalization can happen is through social movements (Conrad, 2005). Social movements have the ability to create great change in the world and through social movements diseases and disorders can become legitimized. Through large support social movements can medicalize diseases or disorders and give them the backing to be seriously considered by medical professionals (Conrad, 2005). One example of a medicalized disease is addiction, which was strongly influenced through social movements (Tournier, 1985). Some of the earliest social movements to medicalize alcoholism began in the late 1800’s (Tournier, 1985). These social movements to identify alcoholism as a genuine medical diagnosis and issue set the groundwork for not only the medicalization of alcoholism but also other addiction related diseases (Tournier, 1985). The issues within these now diagnosable and treatable diseases is not only the types of treatments that are available but also the qualifications of doctors to treat newly medicalized disorders (Roy & Miller, 2012). Doctors and medical professionals have to keep up with the constant changing of the field which can be difficult especially when diseases like alcoholism and addiction require such intense treatment (Roy & Miller, 2012). Many times, medical professionals are not equipped with the knowledge or resources to effectively treat issues that do not fit within the biotechnology treatment that they provide (Roy & Miller, 2012). The
treatments that medical professionals provide fall within that biotechnology and lack the ability to provide holistic treatment that can cure and maintain these diseases (Roy & Miller, 2012). Social movements have had an extremely strong impact in bringing the attention to serious issues but the work towards more holistic treatment is still necessary.

Another way medicalization occurs is through doctors and medical professionals themselves. Medical professionals research different frequent complaints that they receive and then are able to research and find patterns and generalize these diseases and disorders (Fainzang, 2013). Once the disease or disorder is defined, it is then released and medicalized for people who fit the pattern to be diagnosed (Conrad, 2005). This type of medicalization occurred with the disorder of attention deficit hyperactivity disorder (ADHD). ADHD was medicalized after medical professionals received many complaints of distracted children out of the normal realm of distractedness (Mayes, 2019). Once ADHD was medicalized and the treatment of Ritalin was discovered, it became one of the most diagnosed disorders among children within two decades (Mayes, 2019). The diagnosis of ADHD and the requirements to fit the pattern for ADHD were so broad that many children fit the description and were immediately diagnosed and treated (Mayes, 2019). The diagnosis of this disorder became very popular to create children who were more attentive and better behaved which was socially very desirable (Mayes, 2019). However, the push for ADHD also came from pharmaceutical companies that were able to capitalize on the profit of the treatment of stimulant drugs (Dumit & Greenslit, 2006). ADHD became a marketable and economically sustainable disorder through medicalization despite the broad factors that lead to diagnosis (Mayes, 2019).

Medicalization has definitely had positive effects in terms of bringing legitimacy towards certain diseases and disorders. However, medicalization has also created a space where diseases
and disorders can be profited from with very little justification for the diagnosis. It has also created a space where medical professionals believe that they are helping people but really they are just maintaining them on the most basic level. Medicalization, with the correct definition and intent, has the potential to help many people but as of right now it is only surface level. Medicalization and the treatment of diseases and disorders also fail to look at outside factors that may impact a person’s ability to receive treatment or the root causes of the issue (Lantz, Lichtenstein, & Pollack, 2007). This is due to the strictly biotechnological approach to treatment, which disregards the other social factors in a person’s life (Lantz, Lichtenstein, & Pollack, 2007). The history of healthcare has transitioned from an effort to care for people who were ill to a profitable business through the process of medicalization. Which today makes receiving comprehensive care extremely difficult or impossible for individuals who have significant social determinants of health.

**Literature Review**

The Ecological Framework

Bronfenbrenner’s ecological framework implies that every level of social interaction has an impact on the individual (Bronfenbrenner, 1977). This framework is broken down into several levels of relation to the individual. The first level is the microsystem, the individual and the closest groups connected to the individual, family, school, work (Bronfenbrenner, 1977). The second level is the mesosystem which is comprised of groups from the microsystem, most likely more acquaintance level people who exist in these settings but have very little direct interaction with the individual (Bronfenbrenner, 1977). The third level is the exosystem, which are the institutions or systems that an individual is involved with (Bronfenbrenner, 1977). The last level is the macrosystem, which is the concepts and social understanding of institutions that a person
has (Bronfenbrenner, 1977). All of these systems impact individuals in some way. In the health care field these types of systems would be considered social determinants of health.

Social Determinants of Health

Many factors impact the health of both individuals and populations. These factors range from medical related factors to environmental to social to economic, all with the ability to impact health (Baum, 2018). The factors that are not directly medical related sum up into one term that encompasses everything that impacts individual and population health, that term is Social Determinants of Health (SDOH) (Baum, 2018). SDOH or Social Determinants of Health are the “social, political, and economic factors that determine our health” (Baum, 2018). These factors include housing and environment, socioeconomic status, race, gender, and practically any other social characteristic that contributes to individuals' identities and access to resources (Matsumoto & Nakayama, 2017). These factors all fall within Bronfenbrenner’s (1977) ecological framework. Some of these factors may not seem to directly connect to health however they all strongly contribute to people’s ability to access health, the treatment of individuals based on their SDOH and ultimately their health outcomes (Pförtner & Richter, 2011).

SDOH in depth encompasses a variety of circumstances that may be independent of overlap other circumstances (Matsumoto & Nakayama, 2017). Broken down further SDOH can include ten determinants that fall under social, political, or economic. The first of these ten is economic status (Matsumoto & Nakayama, 2017). Economic status directly relates to what an individual has access to in terms of housing, food, and other necessities that can either improve or hinder health (Matsumoto & Nakayama, 2017). Economic status at a young age has serious impacts on health outcomes as well. The second determinant is the early life, education and access during that time is the beginning of lifelong habits (Matsumoto & Nakayama, 2017). The
ability to receive good early education and have positive development during early childhood can lead to good health outcomes in life (Matsumoto & Nakayama, 2017). The habits that are obtained during pivotal development years can set the standard for the rest of life (Viner, Orzer, Denny, Marmot, Resnick, Fatusi, & Currie, 2012). In an environment that has poor economic factors and poor health influences, the likelihood of poor health outcomes in adulthood significantly can increase (Viner, Orzer, Denny, Marmot, Resnick, Fatusi, & Currie, 2012). This would be an example of how the overlapping of some of these social factors can be detrimental towards health starting at a young age. Poor development can lead to negative social effects which can cause social exclusion which is the third determinant. Social exclusion typically leads to isolation which negatively impacts both physical and mental health (Matsumoto & Nakayama, 2017). The economic status, social isolation, and early development are all related to the microsystem, they are immediate social impacts on an individual in both their family life and school life (Bronfenbrenner, 1977).

The next group of factors revolve around a secondary ring of social factors. These factors are more temporary and have the ability to be changed wither through self or outside intervention. They all fall within the mesosystem with less of an immediate control on the individuals part, with more susceptibility of influence from a higher level. The fourth determinant is work which goes directly with the fifth determinant unemployment. The ability to have control at work over schedule and timelines, as well as overall job satisfaction leads to better health outcomes (Matsumoto & Nakayama, 2017). Unemployment, however, typically leads to poorer health outcomes and well-being during the time of being unemployed (Matsumoto & Nakayama, 2017). The workplace and ability to control the workplace are both mesosystem level interactions where they are significant in the individuals life but the control
over this system lies outside of their immediate circle. The sixth determinant is social support. Having strong or weak social support can either make difficult health times more or less stressful (Matsumoto & Nakayama, 2017). When surrounded by a strong social support during difficult times people are less likely to experience stress which will help recovery (Matsumoto & Nakayama, 2017). Whereas during stressful times with poor social support individuals will be more stressed which impacts their health negatively (Matsumoto & Nakayama, 2017). The seventh determinant is social capital which in terms of health can lead to very positive health outcomes based on the larger network an individual has or negative health outcomes based on the smaller network (Matsumoto & Nakayama, 2017). This can connect to social support as well in terms of having larger or smaller supports and how influential those supports are. The eighth determinant is addiction which includes tobacco use and is considered both a medical determinant as well as a social one because of the social nature of alcohol, drug, and tobacco use (Matsumoto & Nakayama, 2017). Social capital, social support, and addiction are all mesosystem level influences on an individual due to the abundant influences that come from outside of the immediate circle (Bronfenbrenner, 1977). Social support involves microsystem level individuals within that mesosystem of outside influence controlling the level of support and capital the microsystem can give.

The next group of factors are all exosystems reliant on institutional choices (Bronfenbrenner, 1977). The ninth determinant is food, the ability to access healthy foods is a major issue in many places which leads to poor nutrition and poor health outcomes (Matsumoto & Nakayama, 2017). Placement of food and the ability to access food relies on a larger system of supermarkets, economic factors, local government; all of which are institutional exosystems (Bronfenbrenner, 1977). The last determinant is transportation which can influence many of the
other determinants. If people are unable to get transportation, they are also unable to access food, medical services, social services, and many other resources (Matsumoto & Nakayama, 2017). Transportation is also an exosystem which is completely controlled by an institutional level but directly impacts an individual’s ability to get places (Bronfenbrenner, 1977). All of these determinants are not directly medically rooted but they all impact individual’s ability to have positive health outcomes which makes them SDOH.

The macrosystem is the health care field. The health care field is an institution with longstanding perceptions of how it works and why. The healthcare field focuses traditionally on the direct medical symptoms and signs of people to determine health (Muntander & Chung, 2008). Diagnoses are formed based on the physical now of the individual without consideration of other forces that could be impacting the individual (Muntander & Chung, 2008). When the health care field is able to consider SDOH the entire picture is formed where you can see individuals' physical being as well as their confounding variables (Muntander & Chung, 2008). SDOH consideration allows health care professionals to make connections for individuals and populations at this level (Muntander & Chung, 2008). The ability to see the different levels and their impacts on individuals allows health care allows professionals to understand their patients on a deeper, more complex level based on their entire life.

Social Determinants of Health Impact on Health Outcomes

Social determinants of health are the confounding variable between health behaviors and health outcomes (Rasanathan, Montesinos, Matheson, Etienne, & Evans, 2011). A person’s ability to participate in either healthy or unhealthy behaviors is significantly impacted on the social determinants of health (Rasanathan, Montesinos, Matheson, Etienne, & Evans, 2011). As stated previously food and access to food is considered an important social determinant of health.
If individuals are unable to access quality food, their health behaviors are going to include poor eating habits. Consuming processed and less fresh food is directly associated with many health complications and poor health outcomes (Braillon, 2019). This is one example of how SDOH impacts health outcomes. Healthy behaviors are pivotal in having a healthy lifestyle and healthy outcomes that lead to a longer lifespan (Viner, Orzer, Denny, Marmot, Resnick, Fatusi, & Currie, 2012). SDOH that leads to poor health behaviors and ultimately poor health outcomes create people who are considered high-risk (Matsumoto & Nakayama, 2017). These high-risk individuals are ultimately susceptible to a variety of poor health behaviors based on having one or more negative social determinants of health (Ansari, Carson, Ackland, Vaughan, & Serraglio, 2003).

Individuals who fall into high-risk SDOH categories are also considered some of the most vulnerable populations. These populations include individuals of color, immigrants, low socioeconomic status, unemployed, and other social, economic, and political factors (Durfey, Kind, Gutman, Monteiro, Buckingham, DuGoff, & Trivedi, 2018). Individuals in these populations historically have intersectional relationships with a number of these factors that impact their SDOH (Kamble & Boyd, 2008). This intersectional relationship between SDOH creates higher and higher risk populations for poor health outcomes (Cottrell, Gold, Likumahuwa, Angier, Huguet, Cohen, …& Devoe, 2018). Each high-risk SDOH an individual has makes it more difficult for them to access the comprehensive health care that they may require (Cottrell, Gold, Likumahuwa, Angier, Huguet, Cohen, …& Devoe, 2018). Examples of this include ability to get regular health check-ups, ability to follow up on recommended treatment, and other preventative treatments (Cottrell, Gold, Likumahuwa, Angier, Huguet, Cohen, …& Devoe, 2018). This is primarily due to a lack of health care coverage (Cottrell,
Gold, Likumahuwa, Angier, Huguet, Cohen, …& Devoe, 2018). People with poor or no health insurance are unable to afford or access many preventative options and follow up care that is recommended (Cottrell, Gold, Likumahuwa, Angier, Huguet, Cohen, …& Devoe, 2018). This is the lack of comprehensive care that vulnerable populations are not able to receive.

Medicare and Medicaid

Medicare and Medicaid are the United States health insurance options. Medicare is health insurance for individuals age 65 and over or individuals under 65 with a disability (Digital Communications Division, 2015). Medicaid is health insurance for low-income individuals at any age (Digital Communications Division, 2015). The requirements for these insurance options are automatically high-risk SDOH, people who are very low-income, disabled, or older adults (McCall, Sauia, Hamman, Reusch, & Barton, 2004). These insurance policies provide basic coverage that only covers what is deemed medically necessary, which is very basic biotechnical treatments and preventions (McCall, Sauia, Hamman, Reusch, & Barton, 2004). Many times, this will not include specialized blood tests necessary for individuals with preexisting conditions like diabetes (McCall, Sauia, Hamman, Reusch, & Barton, 2004). Tests that are considered very important for individuals to maintain their health and prevent worsening of any conditions are an additional out of pocket cost for individuals who rely on government health insurance (McCall, Sauia, Hamman, Reusch, & Barton, 2004). Coverage is determined through the medicalization process of what are the most basic requirements for coverage which are not informed by a person’s individual circumstances and needs (Baum, Bégin, Houweling, & Taylor, 2009).

The systems that surround an individual have the ability to impact all aspects of their lives (Bronfenbrenner, 1977). When it is focused in on the health care system people are at much higher risk when these systems are negative. Social determinants of health significantly impact
everyone’s lives. Every individual has social determinants of health (Rasanathan, Montesinos, Matheson, Etienne, & Evans, 2011). They are simply the social factors that impact people’s health, however, if they are those high-risk factors, they have the ability to create negative health outcomes for individuals (Ansari, Carson, Ackland, Vaughan, & Serraglio, 2003). The ability to account for these social factors within the health care system has the potential to improve people’s lives regardless of the other systems impacting them. Accounting for those other systems creates a space where people receive the comprehensive treatment they need.

**Data Analysis**

Social determinants of health have been found to have a causal relationship between the determinants, health care, health behaviors, and health outcomes (Ansari, Carson, Ackland, Vaughan, & Serraglio, 2003). SDOH impacts an individual's ability to have positive health outcomes, as already stated, but they also impact an individual's ability to interact with the health care field (Ansari, Carson, Ackland, Vaughan, & Serraglio, 2003). The health care field includes doctors, pharmacies, specialists, and insurance (Ansari, Carson, Ackland, Vaughan, & Serraglio, 2003). There are a variety of self-reported databases that look at SDOH and health outcomes. One of these databases is the 500 Cities project from the Center for Disease Control (CDC). The CDC has gathered health information from 500 cities in the United States (500 Cities Project: Local Data for Better Health: Interactive Map, 2017). One of the prevention factors that is included in this database is lack of health insurance. Data collected from Los Angeles, California; Boston, Massachusetts; and New York City, New York showed that between 2% and 36% of individuals between the ages 18 and 64 reported not having health insurance (500 Cities Project: Local Data for Better Health: Interactive Map, 2017). These are percentages taken from different neighborhoods in each city, the highest of all three cities had 36% of individuals
reporting they do not have health insurance (500 Cities Project: Local Data for Better Health: Interactive Map, 2017). A lack of health insurance is a major factor in a person’s ability to access the health care system. Without health insurance, people are responsible for paying any medical treatment they may need themselves.

Another database is the U.S. Census which collects information related to social determinants of health. With these two databases there are clear correlations between locations and a variety of health factors. One of these correlations include the percentage of people living in poverty in Boston, Massachusetts is 20.2% and individuals who have reported having poor physical health for 14 or more consecutive days being up to 27% in some areas of the city (U.S. Census Bureau QuickFacts: New York city, New York; Boston city, Massachusetts; Los Angeles city, California, n.d.; 500 Cities Project: Local Data for Better Health: Interactive Map, 2017). These individuals who are in poverty tend to have overlapping SDOH which includes poor access to food, potentially homelessness, or unemployment; all of which contribute to poor physical health outcomes (Durfey, et al, 2018). These individuals who also fall under the category of poverty are also the individuals who are eligible for Medicare and Medicaid programs. The relationships between a person’s ability to interact with the health care field and their social determinants of health are extremely important factors that the health care field needs to recognize rather than ignore.

**Recommendations**

What do we do with all of this? Ultimately what needs to be done is address the research that consistently says how important social determinants of health are. However, where does this start? I propose a series of recommendations that starts with addressing the Medicare and Medicaid system that currently provides the bridge from individuals to the health care field to the
most vulnerable populations (Rasanathan, 2018). These recommendations are seen as small steps to begin tackling the medicalized health care system that currently exists in the United States.

The first recommendation is to offer additional incentives to promote healthy behaviors. This is a small and short-term recommendation that could be implemented in a relatively simple way. Many private or company provided health insurance companies already offer incentives to keep their clients healthier and promote healthy behaviors. An example of this would be gym membership stipends. Offering a gym membership stipend would allow for individuals to practice healthy behaviors of working out. Another example could be educational opportunities, which would span from current public health topics to how to navigate the health care system. A large issue in the health care field can be a lack of knowledge of the system and how to navigate it (Matsumoto & Nakayama, 2017). These are both strategies that private insurance companies use to promote healthy behaviors and lower the risk of their clients having poor health outcomes. Adapting incentive models to a government program would require funding but overall the model is available and effective with the private sector. This type of recommendation would hopefully be a short-term fix to the poor health behaviors that ultimately lead to poor health outcomes.

The second recommendation is to make Medicare and Medicaid easier to access and apply to. This recommendation has two parts, the first is to streamline the application process. Applying for government health insurance is a lengthy and confusing process. However, with an evaluation of the application process there could be ways to simplify. This would mean making the process shorter, using more common language, and cutting unnecessary sections. Making the language simpler would allow for people to apply without filling out incorrect information or missing information because of a lack of understanding of the process. This would also include
making the process more friendly for people who have English as a second language. Making the online application more user friendly would significantly impact how many people are able to apply and how effectively. The second aspect of making access and application easier is a bit more involved. This includes during open enrollment periods for applications, offering special weeks that are staffed to provide help to some of the most vulnerable people who need government health insurance. Offering special weeks for individuals who are homeless and cannot access the application online, they would be able to walk in and apply with a person. This could also include special weeks dedicated to working with people who do not speak English or any other high-risk group of people who may struggle to apply. This entire recommendation is designed to close the gap of individuals who do not have health insurance solely because they cannot apply.

The final recommendation is a complete overhaul of the Medicare and Medicaid system. This involves changing the insurance plans from a blanket plan of coverage to a customizable plan that is based on the individual. This would involve recognizing each individual’s health history and their social determinants of health and creating plans that fit their needs. The hope of this recommendation is to be the start of recognition of social determinants of health in an institutional way that allows people to get the comprehensive care they need. People under this reform would not be worried about having quality preventative and follow up care that is currently not covered. This reform would provide not only medical services but address the social determinants like food access to ensure quality food. This reform ignores the current process of identifying what should be covered, rather it focuses on each individual whose needs are different than anyone else.
All of these recommendations are definitely extreme in the way that they are all costly. However, the goal of these recommendations is to use them as building blocks for a greater goal. Eventually the goal would be to eliminate private health insurance and create universal health care for the entire country. However, based on the research presented here the first step is to address the quality of insurance for the individuals who currently qualify for government insurance. Once the current system is significantly improved, then the next step would be to broaden the scope of who qualifies for government insurance.

**Conclusion**

Medicalization, social determinants of health, insurance; these are all extremely important factors in maintaining a healthy population. Which means they all should have equal consideration when addressing health concerns. By placing social determinants of health into the equation, there is the opportunity for the health care field to expand out from the treatment focus that has become so important to a more comprehensive focus between treatment and comfort. Comfort having a slightly different definition now from the original comfort that health care was built on. Rather the focus would be holistic and comprehensive to ensure individuals are not only getting one-time treatment but a lifetime of maintenance to ensure positive health outcomes. Acknowledging that these outside factors exist are not enough unless they are taken into account when providing care.
References


Digital Communications Division. (2015). What is the difference between Medicare and Medicaid?


U.S. Census Bureau QuickFacts: New York city, New York; Boston city, Massachusetts; Los Angeles city, California. (n.d.).

Appendix A: Table

<table>
<thead>
<tr>
<th>Prevention</th>
<th>Boston, Massachusetts</th>
<th>New York City, New York</th>
<th>Los Angeles, California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult between 18 and 64 without health insurance</td>
<td>2% - 22%</td>
<td>5% - 35%</td>
<td>4% - 36%</td>
</tr>
<tr>
<td>Adults 18 plus who have had an annual checkup in the last year</td>
<td>70% - 80%</td>
<td>65% - 80%</td>
<td>60% - 75%</td>
</tr>
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<table>
<thead>
<tr>
<th>Unhealthy Behaviors</th>
<th>Boston, Massachusetts</th>
<th>New York City, New York</th>
<th>Los Angeles, California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults 18 plus who have participated in binge drinking in the past 30 days.</td>
<td>9% - 44%</td>
<td>8% - 31%</td>
<td>7% - 25%</td>
</tr>
<tr>
<td>Adults 18 plus who are considered obese.</td>
<td>14% - 46%</td>
<td>10% - 40%</td>
<td>11% - 34%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Health Outcomes</th>
<th>Boston, Massachusetts</th>
<th>New York City, New York</th>
<th>Los Angeles, California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults 18 plus who report having poor physical health for 14 or more consecutive days.</td>
<td>4% - 27%</td>
<td>4% - 33%</td>
<td>6% - 20%</td>
</tr>
<tr>
<td>Adults 18 plus who have high blood pressure</td>
<td>8% - 44%</td>
<td>8% - 44%</td>
<td>9% - 42%</td>
</tr>
</tbody>
</table>

All information came from the Centers for Disease Control 500 Cities Project last updated in 2017. All ranges are the lowest and highest percentages listed in the city. Percentages are based on each of the populations of each individual neighborhood within the city area codes. These are all self reported statistics.
<table>
<thead>
<tr>
<th></th>
<th>Boston, Massachusetts</th>
<th>New York City, New York</th>
<th>Los Angeles, California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of People Living in Poverty</td>
<td>20.2%</td>
<td>18.9%</td>
<td>19.1%</td>
</tr>
<tr>
<td>Percentage of People under 65 years old with a disability</td>
<td>8.6%</td>
<td>6.8%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Households with a computer in the home</td>
<td>89.7%</td>
<td>87.5%</td>
<td>89.8%</td>
</tr>
<tr>
<td>Households with broadband internet subscription</td>
<td>83.6%</td>
<td>79.4%</td>
<td>80.7%</td>
</tr>
<tr>
<td>Mean travel time to work</td>
<td>30.8 minutes</td>
<td>41.2 minutes</td>
<td>31.4 minutes</td>
</tr>
<tr>
<td>Percentage foreign born persons</td>
<td>28.5%</td>
<td>37%</td>
<td>37.3%</td>
</tr>
<tr>
<td>Percentage of people who speak a language other than English at home ages 5 plus</td>
<td>38%</td>
<td>48.7%</td>
<td>59.3%</td>
</tr>
</tbody>
</table>

All of this information came from the U.S. Census database and represents data collected primarily between 2014 and 2018.