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Cristina Vellozzi-Averhoff Date

Inequity of Care: Perceived Differences in Quality of Care in the Homeless Population at Grady Memorial Hospital

By

Cristina Vellozzi-Averhoff
Master of the Arts
Bioethics

Kathy Kinlaw, M.Div
Advisor

Dr. John Banja, PhD
Committee Member

Dr. Jada Bussey-Jones, MD
Committee Member

Accepted:

Lisa A. Tedesco, Ph.D.
Dean of the James T. Laney School of Graduate Studies

Date

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Cristina Vellozzi-Averhoff
B.A.S.H, Stanford University, 2014

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An abstract of
A thesis submitted to the Faculty of the
James T. Laney School of Graduate Studies of Emory University
in partial fulfillment of the requirements for the degree of
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2018

Abstract

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By Cristina Vellozzi-Averhoff

Background:

Homelessness in the United States has a long history of stigma and bias, stemming from the time of colonialism. Over the years, homelessness has come to be associated with laziness and lack of purpose--an underserving poor. Stigma and bias infiltrate the healthcare system to affect the quality of care patients receive, but little to no data has reported on the quality of care for the homeless patient population. This research looks at empirical data from a social justice lens to examine the ethical implications of the impact of stigma on care quality for the homeless population at Grady Memorial Hospital.

Materials and Methods:

This study looks at both qualitative quality of care data through a survey to gather the perspective of the patient as well as quantitative quality of care measures found in the electronic medical record. Out of 112 total participants, 33 were identified as homeless and 79 were identified as non-homeless. Statistical analysis was conducted via SPSS software to examine statistical differences in both the qualitative and quantitative data sets.

Results:

Homeless participants overall rated their care unfavorably with a global score of 2.85, whereas the non-homeless cohort rated their care favorably with a global score of 3.26. Several specific questions reflected statistical significance, including questions on patient-provider communication and staff responsiveness. Many of the retrospective quantitative metrics were equivalent between the two cohorts.

Discussion/Ethical Analysis:

Homeless participants overall rated their care less favorably than did the non-homeless cohort. In particular, the homeless participants perceived worse communication between themselves and their providers as well as decreased responsiveness by providers. The significant differences in the quantitative review demonstrate reflections of implicit bias on the part of the providers towards the homeless cohort. These demonstrated differences reflect social injustices which violate deontological ethics, the social justice dimensions of well-being, as well as the bioethical principles of autonomy and non-maleficence. Hospital systems can put measures in place to highlight implicit bias so that providers are aware and work to rectify this disparity.

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Table of Contents

Table of Tables

Chapter 1: Background

The homeless population has undergone a number of demographic and social changes throughout the history of the United States but has consistently struggled with integration and acceptance into society. Today, the homeless population is highly heterogeneous, but as a group it remains significantly marginalized. Many of the challenges the homeless face include problems with the health and stigmatization in the healthcare field. Unfortunately, individuals often become homeless secondary to health conditions, such as alcohol abuse or mental illness. Once becoming homeless, individuals often then develop diseases due to being homeless, such as venous stasis and ulcers. This circular pathway tragically ensures that the homeless remain on the margins of society, isolated even from healthcare providers who aim to help to those in need. In their book *The Safety-Net Health Care System*, Almgren and Lindhorst note that the homeless are "the most disadvantaged of all Americans—not only in terms of material needs, but also in terms of health and health care as well" (Almgren and Lindhorst 2012, 167).

Health and human services (HHS) defines a homeless person as "an individual who lacks housing (without regard to whether the individual is a member of a family), including an individual whose primary residence during the night is a supervised public or private facility (e.g., shelters) that provides temporary living accommodations, and an individual who is a resident in transitional housing" (What 2017). This definition is non-discriminatory and encompasses all individuals who sleep on the streets, live in shelters, or have transitional housing. The U.S. Department of Housing and Urban Development found that at a point in time in January 2016, there were 549,928 homeless individuals in the country (National 2018). According the NCH, there has been a rise in the number of homeless individuals over the past 20-25 years, likely attributable to "shortage of affordable rental housing and a simultaneous increase in poverty" (National 2009). In Georgia, the point-in-time count of homeless individuals in January 2015 was 13,790, interestingly a decrease from the 2013 count of 16,947 (Department of Community Affairs, 2015). The national demographic data from the 2009 NCH Fact Sheet is shown in Table 1, and the Georgia state specific information is shown in Table 2, with data gathered the Department of Community Affairs 2015 Report on Homelessness.

Table 1: Selected Demographic Characteristics of the Homeless, National

Social Characteristic	Statistical Estimate	Data Sources
Age	39% Children under age 18	National Law Center on Homelessness and Poverty, 2015
Gender	67.5% Single men	U.S. Conference of Mayors, 2016
Families	76% Single individuals 23% Families with children	U.S. Conference of Mayors, 2016
Race/Ethnicity	42% African American 38% White 20% Hispanic 4% Native American 2% Asian	U.S. Conference of Mayors, 2016
Veterans	40% of homeless men	McMurray-Avila, 2001
Mentally Ill	26% of all sheltered homeless people	U.S. Department of Housing and Urban Development, 2009
Addicted Persons	30-38% of all homeless	U.S. Conference of Mayors, 2016, National Health Care for the Homeless Council 1988
Employment	13-44% of all homeless	U.S. Conference of Mayors, 2016 National Coalition for the Homeless, 2009

In their book *A Nation in Denial,* Alice Baum and Donald Burns discuss the historical roots of homelessness, which stretch back into the colonial era (Baum and Burns 1993, 91). Baum and Burns mention that even in the time of colonialism, the homeless were already viewed as a "threat to their young society and its strong work ethic," and our society continues to struggle with understanding and dealing with this population (Baum and Burns 1993, 91). People in the United States specifically seem to differentiate between those who deserve aid and public assistance and those who do not; Baum and Burns highlight these different populations in what they call “the deserving and undeserving poor” (Baum and Burns 1993, 107). The ‘deserving’ poor are those with bad luck— ‘poorness’ was thrust upon them—while the ‘underserving’ poor are those who brought their situation on themselves (Baum and Burns 1993, 107). They argue that the homeless population has consistently been a part of the undeserving poor given their association with drug and alcohol dependence, the transient nature of their existence in a community, and their economic instability and dependence on aid and public assistance programs, all of which remain pervasive today (Baum and Burns 1993, 107). They contrast this population with the deserving poor, consisting of orphans, widows, veterans, and the ill (Baum and Burns 1993, 107). Barrett Lee theorizes on the public’s beliefs of the causes of homelessness. He notes that historical perceptions and anecdotal evidence reinforce stereotypical causes of homelessness to be laziness, lack of morals, lack of purpose, and drunkenness (Lee et al 1990, 254).

Even as opinions fluctuate regarding the deservedness of the homeless population for charity and aid, Baum and Burns recognize that through the 1980’s our society switched gears and began to view the homeless more as the ‘deserving poor,’ grouping them with the widows and orphans (Baum and Burns 1993, 108). However, as we continued to fight the enormous problem of homelessness without much headway, our society began to experience significant “compassion fatigue” with the homeless population (Baum and Burns 1993, 108). Some argue that compassion fatigue has no true impact on the population, whereas others argue that compassion fatigue may lead our society to blame the poor for their situation and provide fewer aid and welfare resources (Link et al. 1995, Phelan et al. 1997).

Table 2: Selected Demographic Characteristics of the Homeless, Georgia State

Age	18% Children under age 18	Department of Community Affairs, Georgia, 2015
Gender	59-74% men	
Race	65% African American 31% White 4% Other	
Families	70% adults 30% Families with children	
Veterans	12% of homeless	
Mentally Ill	13% of homeless	
Addicted Persons	19% of homeless	

Blaming the homeless population for their tenuous social situation can be particularly problematic, as it contributes to an already significant issue of stigmatization. Stigma is a challenging concept to define and identify, but Goffman manages to simplify it to a digestible definition: ‘an attribute that is deeply discrediting,’’ reducing a person ‘‘from a whole and usual person to a tainted, discounted one’’ (Goffman 1963, 13). Goffman further characterizes stigma into three different categories: deformed bodies, character flaws, and stigma against a particular race/religious/gender (Goffman 1963, 12). The homeless population would likely meet criterion two and possibly criterion three from Goffman.

Marcus and Singer, two anthropologists, specifically analyze the negatives opinions against the homeless population; their analysis builds upon that posed by Goffman, but they characterize reasons of stigma against the homeless population specifically. They boil it down to five main reasons:

> “(1) they are the bottom rung for its own failure in society; (2) they are forced to spend considerable time on the streets on in public places and are, therefore, visible to others…and often viewed as a disruption; (3) being without regular shelter, they have difficulties cleaning themselves or their clothes and can be considered aesthetically unappealing and unhygienic…; (4) they may have mental illness or substance use disorders; and (5) because the homeless serve as among the most easily targeted blamable populations upon which to assign culpability for structurally caused problems of contemporary society” (Marcus and Singer 2017, 109).

Phelan et al. discuss the impact of the actual term ‘homeless’ on perpetuating the stigmatization of this unhoused community, by using ‘social distancing’ as a proxy for stigmatization (Phelan et al. 1997). This group found, in a primary research study, that “reactions to the homeless man are not more favorable or more benign than to the domiciled man on any of the attitude measures…These results suggest that identifying a person as being homeless, rather than eliciting compassion or reducing blame, engenders a degree of stigma over and above that attached to poverty” (Phelan et al. 1997, 332). Moreover, this group found that the label of homelessness carried the same amount of stigmatization as being hospitalized for a mental illness (Phelan et al. 1997, 332). Therefore, simply labeling an individual as ‘homeless’ contributes to an already marked stigmatization of the unhoused population.

In the scientific literature, there are some qualitative articles addressing the experiences of the homeless within the healthcare world, and many of these articles describe homeless people feeling worthless secondary to or actually neglected by their care providers. An early paper from 2007 demonstrates that 17 out of 17 patients, many of whom were homeless, who used the emergency room for their primary care frequently encountered episodes of “unwelcome-ness” that contributed to their overall distaste and mistrust of the healthcare world (Wen et al. 2007). Multiple independent studies have examined perceptions of healthcare workers from homeless individuals, and these patients have frequently identified the following issues as contributing to the overall stigma felt by the homeless population: lack of compassion, "feeling invisible," and disrespect from healthcare workers (Nickasch and Marnocha 2009, Martins 2008, Zerger et al. 2014).

While stigma itself is objectionable, stigma and bias can end up impacting the quality of the care individuals receive. Few scientific studies have looked directly at the impact of stigma on the health of and care of the homeless population by providers. However, researchers have examined the effect of stigma on providers' care in different arenas, particularly race, obesity, or socioeconomic status, and understanding the effect of stigma in these areas can help form a hypothesis regarding the quality of care for the homeless.

Many researchers have shown time after time that stigma against a particular race can lead to poorer quality in care (Fiscella et al 2000, Schwamm et al 2010, Ayanian et al. 1999). In 1999, Ayanian et al. found that African American patients received worse quality of care for congestive heart failure and pneumonia based on evidence-based standards (Ayanian et al. 1999). Schwamm et al. found similar results in 2010 in the acute stroke setting; African American patients were significantly less likely to receive guideline-based interventions than were white or Hispanic patients, and the team noted that each difference was small but could add up to a modest decrease in quality of care and overall outcomes (Schwamm et al 2010). Race-based stigma on health care and treatment has been so prolific that racial stereotyping by physicians was addressed in the Institute of Medicine's *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* report in 2003 (Institute of Medicine 2003). This report emphasizes the implicit biases that physicians and clinicians reflected, and it details out the dominance these biases play in clinical care, particularly in the high stress environment of hospital-based care (Institute of Medicine 2003).

Some may argue that race itself is the factor contributing to poorer care quality, not stigma. However, the mal-effects of stigma is reflected in quality of care data of different income brackets as well as in obesity literature. Brook's team found that in outpatient medicine, patients with lower income and lower socioeconomic status had slightly worse quality of care for disease-specific interventions than those in a higher income bracket (Brook et al. 1990). Additionally, many different studies have examined the perceived weight-bias of providers against patients, including providers who specialize in weight problems (Puhl and Brownell 2001; Schwartz et al. 2003). Puhl and Heuer found that weight stigma and negative attitudes towards obese patients can actually result in worse quality of care by impeding effective and guideline-based care (Puhl and Heuer 2009). Obese patients can feel the effects of the stigma, which not only are emotionally damaging but can also impact their healthcare quality (Malterud and Ulriksen 2001).

Each of these examples demonstrate a stigmatization of a particular group, whether it is race-based, income-based, or weight based. The literature is much more extensive in these areas than in that of the homeless population, and from the different studies, one can see how stigma leads to inequity in care for each of these disparate populations. Given the deeply engrained bias and stigma against the homeless population, one can infer that homeless individuals also suffer from decreased quality of care. The effects of stigma on care quality demonstrated in other populations and the historically entrenched bias against the homeless population contributes to the hypothesis for this research project: stigma of and intrinsic bias against the homeless population leads to decreased qualitative and quantitative care quality.

More recently, the healthcare community has recognized the socioeconomic and health crisis of homelessness in this country. Researchers, individual providers, and hospital systems have approached this as a medical rather than just social problem, as many disease conditions are specific to the living situation of homeless individuals. Some researchers, such as Peter Conrad, refer to this approach as medicalization, which he defines as "a process by which nonmedical problems become defined and treated as medical problems, usually in terms of illness and disease" (Conrad 1992). When homeless individuals enter into a healthcare system, they are identified as homeless and are labeled as such in the electronic health record (EHR). In fact, some patients are even labeled with a diagnostic code for homelessness or 'lack of housing' (ICD-10-CM 2018). This medicalization of a social status does help to identify patients as homeless and provides a targeted approach for these individuals regarding their health care. However, as was just discussed, homeless individuals already have a complex history of social stigmatization, and even without this glaring alert to their housing status, they may feel the effects of stigma in the care received at healthcare facilities. Additionally, regarding homelessness as a medical problem may further stigmatize; their social status is literally thought of as a 'disease.'

The environment and living situation have changed since the term 'homeless' first began, and current conditions for this population contributes to 'homeless-specific' disease conditions that is more recent in American history. Homelessness initially referred to vagrants and workers who traveled around the country searching for jobs. They were unable to maintain the middle-class norm of having a home, but they did typically have consistent shelter and work, unlike the population today (Bloom 2005). Today's homeless population either lives on the street or in shelters, with a few members of the population living in transitional housing. In Georgia, 5803 individuals are unsheltered, meaning they "live in a car, park, abandoned building, encampment, dilapidated building, on the sidewalk, or similar location" (Department of Community Affairs 2015). Seven thousand nine hundred and eighty-seven individuals are considered sheltered or "liv[ing] in an emergency shelter, transitional housing for homeless persons, or a hotel or motel with the stay being paid for by an organization" (Department of Community Affairs 2015).

Because of this disparity in shelter, a basic human need, the homeless population has a changed relationship with society as well as with their health. Without reliable housing, people are subject to the weather and environmental toxins. They also frequently have to sleep sitting, which can have a significant impact on one's health. The Committee on Health Care for Homeless People highlights an example of these risks in their book when they detail the life of a homeless woman with venous insufficiency (Committee 1988, 41). Venous insufficiency is a common problem that impacts up to 40% of women and 17% of men (Beebe-Dimmer et al. 2005). It typically causes discomfort and swollen ankles and, in severe cases, can cause ulcers. For this particular woman, as she was homeless, she was forced to sleep in a sitting position. Because of this, the venous blood was consistently pooling in her lower extremities, which expectedly led to ulcers on her ankles. As she was homeless, she was unable to easily access healthcare services to care for her wounds, and she was forced to continue sleeping upright. Her wounds continued to worsen, to the point at which maggots entered her wounds as a result of the environment in which she lived (Committee 1988, 41). This extreme example demonstrates how homelessness can worsen or even cause disease states. Furthermore, communicable diseases are more easily spread in close quarters, so those individuals that manage to find shelter in in a shared living space have an increased risk of contracting diseases, such as tuberculosis (Haddad 2005).

However, homelessness has an even more complicated relationship with health and disease; in the United States, many individuals *become* homeless due to their health. Major mental illness is a common example of this phenomenon. Individuals without resources to manage their mental health issues begin to develop a strained relationship with others around them and can easily end up on the streets (National Coalition 2012, Committee 1988, Fischer and Breakey 1986, Sullivan et al. 2000). Many others also have medical conditions that may impact their ability to work, such as alcoholism/drug dependence or degenerative diseases. Those who develop alcoholism and drug dependence may be fired from their jobs, be unable to pay for rehabilitation services and a home, and subsequently find themselves homeless (Committee 1988, 40). Additionally, many individuals develop health conditions that incur enormous expenses and require significant resources to manage, and those people who do not have the necessary resources can end up on the streets (Committee 1988, 40-1). Interestingly and sadly, the death rates for homeless individuals were found to be three-to-four times higher than that of the general population, and the leading causes of death were secondary to chronic disease conditions (O’Connell 2005, 1). These examples of the close-knit and precarious relationship between social status and health demonstrate that the homeless population faces challenging social issues that can cause disease states and premature mortality, uniquely secondary to housing status.

In a hospital system, providers often recognize homeless individuals as soon as they enter the hospital bay. Some patients are ‘frequent flyers’ to the ER due to their lack of housing. Other patients may be brought in via ambulance for being ‘found down’ outside and are presumed homeless given their appearance or situation. Other homeless individuals are recognized during the intake process. Medical providers are trained to ask questions about the ‘social situation’ of an incoming patient, which includes where patients live. During this process, patients may reveal that they have unstable housing and are living on the streets or in shelters. At any point during this process, providers document their findings in the EHR, oftentimes in the “history and physical” section of their notes. From this point forward, providers in the hospital who care for the patient have access to this information, and almost all providers read the history and physical document prior to meeting the patient for the first time (Centers for Medicare and Medicaid 2015). Some patients with chronic housing concerns are occasionally labeled using an ‘international classification of disease’ (ICD) code (Jetté et al. 2010). ICD codes are primarily utilized for billing purposes, but these diagnoses appear in prominent locations on the EHR (Aetna 2015).

This relationship between health and homelessness becomes even more complex for those who experience chronic homelessness, in the sense that they are not just ‘between homes’ but rather have been on the streets for months to years. Homelessness itself creates challenges for hygiene, leaving individuals susceptible to skin infections and other hygiene-related diseases (Committee 1988, 43-5). Finally, homelessness, beyond just inadequate housing, leads to significant access issues to health care, including such issues as difficulty in making appointments with providers and properly storing insulin or other medications (Committee 1988, 94-5). These types of challenges are specific to those who are homeless and explain the importance of not only identifying homeless individuals in the medical chart but also emphasizing their social status as a disease concern using the ICD code.

Homelessness exemplifies an important phenomenon of ambivalent medicalization, which can have a number of effects, both positive and negative, toward the affected population. Healthcare providers identify and label those who fit the homelessness definition and stereotype in the EHR, which helps to improve surveillance and call attention to homeless-specific disease concerns. Many healthcare providers support this methodology, given the close interaction between housing and health. However, given the stigma of unstable housing itself, along with the added stigma addressed above encompassed in the word “homeless,” identifying these patients so prominently as “homeless” in the EHR may automatically introduce bias and impact patient care. Laura Maudlin defines this phenomenon as “ambivalent medicalization” which “tries to capture both the gains and losses that come with medical...advancement” (Maudlin 2016, 5). Maudlin highlights in her book that this ambivalence leads to a set of tensions between the negative and positive aspects of medicalization (Maudlin 2016, 5). The focus on homelessness and housing in the medical chart highlights this ambivalence in many ways, as detailed above. Positive implications include alerting providers about the status of their patient immediately through the use of the EHR, which can ensure an early dialogue with patients regarding their health challenges and difficulties in accessing care. Additionally, with the increased efficiency and transparency, the homeless patients will theoretically have increased availability to targeted resources, such as housing options and low income medical clinics.

Negatively, using the EHR may encourage stereotyping individuals; homeless patients may be reduced to their social status, or a disease state. The traditional stereotype of the homeless population, “two headed monsters...or just lazy people on welfare,” has been created over the years (Mathieu 1993, 173). Because the HHS definition of homelessness is incredibly generalized, in order to narrow down those who may benefit from the ‘good effects’ of early identification of homelessness, providers can easily stereotype those they put in the health record as “homeless.” Furthermore, by even giving these homeless individuals an ICD-10 code, health institutions are labeling homelessness, in the public eye, as a disease. Even though homelessness comes with its own set of stereotypes, stigma, and resulting discrimination, the idea of 'disease' itself invokes a stigma, which can lead to isolation of those labeled as 'diseased' (Pettit 2008). In her article, Pettit shows that disease states that are perceived as 'controllable,' such as AIDS or obesity, have an increased sense of stigma that can manifest in emotional anguish and physical implications (Pettit 2008). Given that homeless individuals are already viewed as "two-headed" or "lazy," the added implications that homelessness is a preventable disease expand the level of stigma homeless patients experience, leaving them vulnerable to further marginalization in society. Other researchers have shown that stigma, particularly in the setting of health, leads to significantly decreased quality of life and may impact their desire to receive help and care (Earnshaw 2011). With the already present boundaries to care homeless individuals face, society must eradicate the increasing level of stigma this population feels, both in a societal and healthcare setting.

Regardless of the social view of these individuals, homelessness comes with a series of health risks and challenges with bidirectional effects. This interaction between health and the homelessness has opened the doors for the health field to emphasize the medical challenges these individuals face. Highlighting an individual's homeless status can admittedly ignite implicit biases originating from historical roots against the homeless population. However, not identifying an individual as having unstable housing can in itself be a violation of standards of care and quality of care measures, as resources and aid are available to those struggling with housing. This idea of ambivalent medicalization plays an enormous role in understanding the importance of recognizing social structure, bias, and discrimination.

The medicalization of homelessness negatively impacts this community but also acts as a band-aid to mask the greater societal problems that lead to homelessness in the first place. The first step to addressing the bias and stigma against the homeless population is to recognize where it manifests most prominently. Because of the ambivalence present in the benefits and harms of labeling individuals as homeless in the hospital system, understanding exactly how impactful the harm is can help justify or condemn current hospital practices. Some research has illustrated the existence of negative perceptions of the homeless population, but unlike the significant data showing disparity in health care based on race, weight, and socioeconomic status, little data looks specifically at the healthcare quality of the homeless population, particularly in the inpatient setting. The empirical research presented in this thesis works to elucidate whether there are discriminatory practices against the homeless population in an inpatient setting at a safety-net hospital, where presumably providers are trained and accustomed to working with the most vulnerable patient populations. The data seeks to show, when all other variables have been controlled, whether or not homeless individuals receive poorer quality of care, simply because they lack a basic need: housing.

Chapter 2: Ethical Framework

While prejudice in general should be condemned as a practice, stigma and bias can be particularly problematic when looking at the theory and philosophy of health care, as health care has high standards of upholding social justice standards and giving each individual patient the care they deserve. The ethics of care quality and the physician-patient relationship has its roots in primarily deontological (or rights-based) ethics. Deontology is defined as "a domain of moral theories that guide and assess our choices of what we ought to do (deontic theories), in contrast to those that guide and assess what kind of person we are and should be" (Alexander and Moore 2016). Deontology prescribes a set of correct moral actions for individuals to abide by in order to live morally. Immanuel Kant is one of the most famous and prolific deontologists, and he formed his moral theory by outlining moral duties and responsibilities. One of the fundamental concepts of Kant's writings involves the categorical imperative, which is more easily understood as a set of moral rules and obligations (Timmons 2012, 220). His categorial imperatives are "objective, rationally necessary, and unconditional principles that we must always follow," and these categorical imperatives are constructed by maxims (Johnson and Cureton 2018). Kant argues that maxims, or "subjective principles of volition," guide individuals in moral decision-making (Timmons 2012, 220). A maxim follows the form "I will____, if/when____ in order to_____" to prescribe moral decision-making practices (Timmons 2012, 220).

Although many philosophers claim that deontological, individualistic theory cannot be transcribed into a societal setting, the language used to describe social justice concerns of inequity of care implicitly lies within Kantian deontology (Mandal et al 2016). One of Kant's most famous categorical imperatives, "one must act to treat every person as an end and never as a means only," can be thought of as fundamental to the interpersonal physician-patient relationship (Beauchamp and Childress 2013, 363). One can reinterpret it to read that providers should treat each patient with respect and moral dignity (Beauchamp and Childress 2013, 363). With this mandate as a universal baseline, Kant's writings fulfill the ethical requirement for justice on an individual level and claim there is a duty to treat each patient fairly and equally (Beauchamp and Childress 2013, 365). This principle also plainly demonstrates why addressing health disparities is an ethical consideration. Disparities in quality of health care violate this categorical imperative, particularly on the individual basis between patients and providers (Jones 2010). When a health provider treats an individual as less than another simply based on an intrinsic factor, such as race or housing status, their respect as a person (or moral status) is breached.

Therefore, under a deontological approach, quality of care may be thought of as individualistic, simply because *each person* should be afforded the same respect and moral dignity. If this applies to every individual patient, then ultimately the entire population of patients will have ethically just quality of care. This categorical imperative demands that each provider be thoughtful about his/her biases toward patients and actively work to combat these biases in order to treat each person with equal respect.

Quality of care is not simply a concern for each provider and their individual practice, but rather should also be approached from a population perspective. Population based healthcare ethics usually looks at disparities of care within different groups or fair allocation of resources to various populations. However, as evidenced in the previous chapter, different populations that face societal based stigma, bias, and discrimination also suffer from quantitative quality of care disparities. Additionally, quality of care measures are already used by hospitals nationwide to examine the care given to all patients within hospital systems, through qualitative surveys such as HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) (Jha et al.

2008). Therefore, while individual patients each deserve high quality standards of care, systems and institutions may be able to address inequity on a population scale, through these existing metrics, rather than simply on an individual level.

Inpatient hospitalizations provide a unique opportunity for hospitals to examine the care they provide in a moderately controlled setting. The inpatient setting, particularly in safety-net hospitals such as Grady Memorial Hospital in Atlanta, Georgia, can control for aspects such as access to care and resources. Safety-net hospitals provide care to all patients who come through the doors, regardless of income or social status (Dobson et al. 2017). In fact, the safety-net hospital system exists specifically to combat the inequities in access to health care so prevalent in this country (Almgren and Lindhorst 2012, 5). Almgren and Lindhorst further characterize safety-net hospitals as the last resort for "persons…shunned and rejected by mainstream health care providers (Almgren and Lindhorst 2012, 107). Once patients are admitted to the hospital, other quality measures assess the care they receive. These measures help examine patient satisfaction and well-being. Healthcare systems can use both qualitative methods (such as surveys) and quantitative methods (such as patient outcomes) to examine the quality of care given to their patients. Based on these factors, health care administrations can then implement changes to increase the "likelihood of desired health outcomes," which is interpreted both as clinical outcomes as well as patient-satisfaction and well-being (Harris-Wehling 1990).

Within this nation-wide approach to quality of care, deontological ethics expands beyond the individual patient to the greater population. However, this ethical approach must follow the laws Kant laid out in his categorical imperatives and maxims. Kant's most famous categorical imperative could be slightly altered to represent a population, rather than just an individual: 'we must act to treat all persons as ends and never as means only.' With this simple change, which does not violate Kant’s strict outline for maxims, we can begin to see how Kantian ethics could be used to address the challenges of the population as a whole.

For some, this plural maxim may be simply a way to keep other ethical theories in check, such as public health interventions or eugenic practices. The idea of ‘the greatest good for the greatest number,’ which is consistently used in utilitarian theory and applied in public health, can be dangerous if not monitored closely (Timmons 2012, 114). Any sort of eugenic practice can be thought of as utilitarianism gone wrong. For example, a utilitarian may believe that any person with intellectual disability cannot contribute fully to society and thus produces less, while taking up more resources. The subsequent utilitarian mission would be to eliminate any person with intellectual disability. However, Kant’s maxim above, particularly in the plural sense, prohibits this extreme application, identifying that the utilitarian mission would treat a group of people as a means rather than as an end.

This maxim can be used not only as a checkpoint for other ethical theories, but it can also be the basis of additional ethical theories. Social justice ethics, as they relate to quality of care, draw from Kant’s maxims. Justice can be defined as "treat[ing] others as they should or deserve to be treated" (Cropanzano et al. 2003). Social justice can then be thought of in terms of the definition above or by Powers and Faden’s definition: “concerned with human well-being” (Powers and Faden 2008, 15). Both of these reflections on social justice cater directly to Kant’s reinterpreted maxim. Transitioning from individual to population-based duties highlights the foundation of deontology in social justice ethics, particularly in the arena of care quality.

Social justice ethics, at its core, is “concerned with human well-being” (Powers and Faden 15). Powers and Faden identify six different dimensions that contribute to well-being: health, personal security, reasoning, respect, attachment, and self-determination. In the context of quality of care and disparities in the inpatient setting, health, respect, and self-determination are the most salient dimensions (Powers and Faden 2008, 16). They also provide definitions that highlight the importance of these dimensions in quality ethics. Health is thought of as “sustaining a human existence across the whole life-span” and is more than just biologic functioning (Powers and Faden 2008, 17). Health can be considered a fundamental need for human beings, although this does not necessarily equate to a right. Therefore, as it is a fundamental need, disregarding a person’s health goes against treating him/her as an “end.” By addressing all people as ends in and of themselves (rather than as means to an end), nurturing and respecting their health status are crucial elements of this maxim.

Respect in the social justice sense is defined as seeing other individuals as independent sources of moral worth and dignity, which is highly reminiscent of Kant’s maxim (Powers and Faden 2008, 22). The idea of respect also directly relates to stigma and intrinsic bias. Bias towards another individual, whether it is race-based, weight-based, or housing-based is a manifestation of disrespect, and stigma is an expansion of bias on a population scale. Bias and stigma both directly oppose the basic tenant of respect espoused by Powers and Faden, which again also inherently violates Kant’s categorical imperative of treating others as ends and not as means.

Self-determination is defined as individuals being able to live “guided by one’s own choices and values” (Powers and Faden 2008, 26). The domain of self-determination allows individuals to live independently, without imposition, which relates directly back to Kant’s maxim of treating people as ends and not as means. However, self-determination has limitations and cannot interfere with other individual's dimensions of well-being. For example, an individual cannot use this dimension to justify deliberately injuring another person, as that infringes on another individual's well-being.

Furthermore, as these ethics of social justice and well-being are being questioned, one must also look at the other basic principles of biomedical ethics (autonomy, non-maleficence, and beneficence), as described by Beauchamp and Childress (Beauchamp and Childress 2013). Autonomy, as defined by Beauchamp and Childress is "self-rule that is free from both controlling interference by others and limitations that prevent meaningful choice, such as inadequate understanding" (Beauchamp and Childress 2013, 101). The tenant of autonomy rests on fulfilling many of the dimensions of well-being, but in particular respect and self-determination, and one must be aware of autonomy as it relates to these dimensions. Similarly, non-maleficence and beneficence have influence within the tenants as well. The principle of non-maleficence is the idea that health providers must follow the Hippocratic oath and "do no harm," whereas the principle of beneficence is a more active, 'do good,' ethical obligation (Beauchamp and Childress 2013, 150). As one can see, non-maleficence, or not doing harm to another individual directly interacts with the dimensions of well-being listed above. Harming an individual, both emotionally or physically can interfere with their health. Additionally, doing harm can both disrespect another individual and not allow for self-determination. Although beneficence may be able to positively impact some of the dimensions, the absence of beneficence is more challenging to relate to the dimensions of well-being. Thus, non-maleficence has more bearing both in this project and in the ethics of violating social justice than does beneficence.

However, social justice ethics and human well-being are founded not simply on the aforementioned six dimensions. According to Powers and Faden, social justice ethics “impose duties on everyone because they are claims based on one’s universal humanity” (Powers and Faden 2008, 46). Powers and Faden utilize the term ‘universal humanity’ to ground their discussion of “universal natural rights” or “basic human rights,” claiming that these rights are afforded to all people without other contingencies or relationships (Powers and Faden 2008, 45-6). Powers and Faden further define dimensions of well-being as ‘basic human rights.’ They used Nussbaum’s rationality test and ultimately claim that it will always be reasonable to want these dimensions of well-being regardless of other desires (Powers and Faden 2008, 46). While the terms ‘basic human rights’ and ‘universal humanity’ can be problematic to use, they help anchor social justice ethics, and one can use the Nussbaum’s foundational logic to make a claim that equity in care quality is a basic human right, as any person will reasonably desire equity in care quality as a fundamental baseline.

In a more traditional sense, social justice also refers to the fair “distribution of benefits and burdens throughout a society...[which] include intangible benefits such as prestige and self-respect” (Miller 1979, 22). To combine these two descriptions of social justice, one might infer that societal and governmental structures have a duty and responsibility to uphold basic human rights by fairly distributing intangible benefits, including dimensions of well-being such as health and respect. This language not only highlights why basic human rights are critical to social justice ethics but also harkens back to its deontological foundation.

Powers and Faden also recognize that human well-being is reliant on assistance from societal institutions and other individuals (Powers and Faden 2008, 48). Well-being cannot be achieved individually when we all function within a larger society; therefore, social justice and the related ethical concerns address all people on a societal level. The duties that are imposed by social justice ethics include a duty to protect those who may be systematically oppressed. Quality of care ethics and the disparities in equity of care are an example of Kantian ethics applied on a societal scale in the form of social justice outlined above.

Previously, experts have explained that disparities based on race and intrinsic patient factors are a reflection of challenges in access and differences in health care use. A health policy brief published in 2011 outlined reasons for disparity in minority communities (Bahls 2011). Health disparities may be caused by economics or socioeconomic status, generally affecting access to care. Education level was also found to be a significant contributing factor. Additionally, geography and neighborhood affected health disparities; for example, if patients live in areas where there is not easy access to healthy food ("food deserts"), they are more likely to suffer from obesity and other diet-related disorders. Similarly, the environment has a large impact on health, and traditionally minority communities are exposed more to environmental toxins. Higher stress levels, likely caused by harsher living conditions, have also been shown to be a factor in health disparities, with minorities generally reporting higher stress levels. This brief also states that minority patients had decreased access and decreased health literacy contributing to poorer quality of care (Bahls 2011).

In a safety-net hospital, these explanations are insufficient, as patients should theoretically be receiving equal access and usage of the healthcare system. Rather, intrinsic provider bias and stigma against particular populations play a role in these disparities, as literature has shown previously in stigma related to race, income and weight. However, when examined within the hospital system, scholars such as Fiscella et al. have found differences in care quality based on provider bias alone. The 2011 health policy brief also found that minorities, for whatever reason, receive lower quality of care in the inpatient setting (Bahls 2011). Bahls described lower-quality of health care as it related both to specific disease processes as minorities reportedly receive less evidence-based care than white patients, as well as evidence of bias and stereotyping in treating minority patients (Bahls 2011). These findings suggest that disparity in care cannot be attributed to usage and access alone, but rather to myriad factors between the patient and provider, including dimensions of well-being.

The ethics of quality of care relate specifically to social justice and upholding the dimensions of well-being, outlined by Powers and Faden. Disparities in quality of care suggest that many of these dimensions, particularly health and respect, are being violated. One can also see the influence of the other major principles of biomedical ethics, particularly autonomy and non-maleficence, which have a role in understanding the impact of the dimensions of well-being. Furthermore, social justice expands beyond the tenants of well-being, as Powers and Faden outline the relationship of social justice to the duty of protecting basic human rights. This duty-based language derives directly from Kantian deontology and his theory of categorical imperatives, particularly his most famous imperative of treating all persons as ends and not as means alone. This research projects seeks to highlight disparity in care quality for the homeless population, and through the results, one will see that providers violate their deontological duties of social justice, particularly with regard to the dimensions of well-being of respect and health among the homeless population.

Chapter 3: Research Design and Methods

Approval for the research project from both Emory University's Institutional Review Board (IRB) and Grady Memorial Hospital's Research Oversight Committee (ROC) was sought and obtained prior to the start of data gathering. As this project included both survey administration and retrospective chart review for all survey participants, the research team provided full informed consent for each participant. The consent form was created in accordance with both Emory IRB requirements and Grady ROC requirements. Each patient was given a consent form, which was written at a Flesch-Kincaid grade level of eight; the principal investigator (Cristina Averhoff) read the consent form aloud, answered any questions, and requested a signature to signify agreement to participate in the study. The consent form contained information regarding the survey risks, including sensitive questions specifically evaluating their medical care team. The consent also contained detailed information regarding the chart review process, including an emphasis on privacy, security, and HIPAA laws and regulations. In total, 211 individuals were approached for this project; 112 agreed to participate, while 99 declined to participate.

Survey Development:

The survey instrument (Appendix 1) used in this project was developed using two major sources: the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey and the Primary Care Quality-Homeless (PCQ-H) Instrument.

The Agency for Healthcare Research and Quality developed the HCAHPS tool specifically designed to assess patient experience during a hospital admission (Jha et al. 2008). The agency sought to address and document disparity across hospitals nationwide through a survey tool, and both the Centers for Medicare and Medicaid Services (CMS) and the Joint Commission oversaw its development (Jha et al. 2008). Prior to this survey, national data regarding the inpatient experience was unknown, both with regard to the patient perception of care and the more objective quality of their care (Jha et al. 2008). The HCAHPS survey instrument underwent rigorous testing and validation beginning in 2002, including numerous cognitive interviews, focus groups, and psychometric analysis as well as a three-part pilot test (Centers for Medicare and Medicaid Services 2017). This tool helps to detail more thoroughly the patient experience (i.e. concerns such as communication with physicians and nurses), while also standardizing assessments in order to compare healthcare systems across the country (Jha 2008).

As this is a nationwide, widely utilized and repeatedly validated survey instrument, this tool was an excellent starting point in the creation of the survey utilized in this research project to address this specific question. The tool used in this project uses questions 1-7, which is the subset of questions regarding "your care from nurses" and "your care from doctors," and 10-17, which is the subset of questions for "your experiences in the hospital" verbatim from the HCAHPS instrument. These questions are labeled at Q13-27 in Appendix 1:

Q. During this hospital stay, how often did nurses treat you with courtesy and respect?

Q. During this hospital stay, how often did nurses listen carefully to you?

Q. During this hospital stay, how often did nurses explain things in a way you could understand?

Q. During this hospital stay, after you pressed the call button, how often did you receive help as soon as you wanted it?

Q. During this hospital stay, how often did doctors treat you with courtesy and respect?

Q. During this hospital stay, how often did doctors listen carefully to you?

Q. During this hospital stay, how often did doctors explain things in a way you could understand?

Q. During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bed pan?

Q. How often did you get help in getting to the bathroom or in using a bed pan as soon as you wanted?

Q. During this hospital stay, did you have any pain?

Q. During this hospital stay, how often did the healthcare team talk with you about how much pain you had?

Q. During this hospital stay, how often did the healthcare team talk with you about how to treat your pain?

Q. During this hospital stay, were you given any medicine that you had not taken before?

Q. Before giving you any new medicine, how often did your healthcare team tell you what the medicine was for?

Q. Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?

Participants were asked to provide responses to these questions using Likert scale choices: “Never,” “Sometimes,” “Usually,” “Always,” or “Not Applicable.”

These questions help elucidate the experience the patient had during his/her stay at the hospital. Although hospitals tend to group all patients together and analyze the data as more quality review projects, these questions allow for easier discernment of the individual patient experience and provide a starting point for a quality of care research project, such as the one presented here. This question set also addresses the presence, acknowledgement, and treatment of pain, which can frequently inform the care experience patients have (Naidu 2008).

While these questions are broad and likely help capture the general experience of the patient, this questionnaire has been utilized primarily as a quality indicator for hospital systems and the overall patient experience, rather than in research projects comparing various population subgroups within a hospital. For that reason, the research team felt it imperative to include some questions that specifically look at challenges that might be felt by an underserved or minority group in the hospital, such as the homeless population. Dr. Stefan Kertesz's team from the University of Alabama developed an instrument to measure the experience of the homeless population in a primary care setting (Kertesz et al. 2014). His group found that a variety of surveys were beginning to be utilized to assess quality of care in the outpatient setting, but they found that these tools were ultimately inaccessible to the homeless population, either due to literacy concerns or questions that missed the mark in regard to the population-specific difficulties homeless patients face in the healthcare system.

For this reason, his group developed a tool specifically geared toward the homeless population: the Primary Care Quality-Homeless (PCQ-H) Instrument (Kertesz et al. 2014). They developed the tool to address particular concerns, including adhering to the primary care quality standards of the Institute of Medicine (IOM) and homeless person-specific concerns and needs (Kertesz et al. 2014). To develop appropriately the questions based on specific needs and concerns, Kertesz et al. interviewed both patients and expert care providers to create a finely tuned tool to measure quality specifically for the homeless population. Although this tool has yet to be widely utilized, Kertesz and his team validated this instrument with psychometric analysis.

Because of this group’s focus on the homeless population, especially emphasizing the quality of care this population receives, the validated PCQ-H tool served as an excellent foundation for a series of questions utilized in this project. The questions from the PCQ-H tool were modified in order to apply to the inpatient setting. For example, in the PCQ-H, a question reads, “My primary care provider never doubts my health needs.” In the modified version used for this project, the question reads, “My healthcare team never doubts my health needs.” After discussing the modifications with Dr. Kertesz himself, our research team decided that the modifications would not alter the validity of the survey questions significantly. Notably, the term ‘healthcare team’ includes all nurses, doctors, and medical students involved in the care of the patient. The questions adapted from the PCQ-H and utilized in this project’s survey instrument are listed as follows:

Q. My healthcare team never doubts my health needs.

Q. My healthcare team takes my health concerns seriously.

Q. I feel my healthcare team has spent enough time trying to get to know me.

Q. I can reach my healthcare team when I need to.

Q. I can get enough of my healthcare team’s time if I need it.

Q. I worry about whether my healthcare team has the right skills to take good care of me.

Q. My healthcare team needs to communicate with each other more.

Q. I have been frustrated by lack of communication among the members of my healthcare team.

Q. The healthcare team at this place listens to me.

Q. This place tries to help me with things I might need right away, like food, shelter or clothing.

Q. The people who work at this place seem to like working with people who have been homeless.

Q. Staff at this place treats some patients worse if they think that they have addiction issues.

The demographic portion of the instrument was also primarily from the HCAHPS tool, including questions 38 and 39 (see Appendix 1). Other demographic questions were derived from alternate sources. Questions 35 and 36 (see Appendix 1), describe the type of location in which the patient lived prior to coming to the hospital and was adapted from Dr. Jack Barile's (University of Hawaii) Housing and Support Survey, whose team has extensively researched homeless communities and performed significant survey research.

Finally, given that this particular project is examining disparity in care, with the presumption that any disparity can be attributed to stigma and implicit bias on the part of the healthcare providers, our research team felt it imperative to include screening questions for depression, drug, and alcohol use. Mental health problems and addiction are two important sources of implicit bias that have been well documented in the literature (Rao et al. 2009, Van Boekel et al. 2013).

We included the Patient Health Questionnaire-2 (PHQ-2) questions in order to screen for depression. Providers often screen for depression in the clinic setting, and prior to the development of the PHQ-2, there was significant impetus for the development of a short questionnaire to quickly screen for any red flags for depression. The PHQ-2 asks pointed questions about the frequency of depressed mood and anhedonia (inability to feel pleasure or have interest in doing things) over the past two weeks, from "not at all" to "nearly every day" (Kroenke et al. 2003). This validated questionnaire has been shown to have a sensitivity of 83%

and specificity of 92% for major depressive disorder (Kroenke et. al 2003). We felt that this fairly high sensitivity and specificity was adequate for our purposes of examining whether or not depressive features influenced a patient's response to the survey.

The question on alcohol abuse screening or unhealthy alcohol use was adapted from the National Institute on Alcohol Abuse and Alcoholism's single-screening question; this question was validated in the primary care setting by Smith et al. in 2009. This question screen was found to be 81.8% sensitive and 79.3% specific in detecting unhealthy alcohol use, which was adequate for our survey purposes (Smith et al. 2009). The question on drug abuse was validated by the same group (Smith et al.) in 2010 and was found to 100% sensitive and 73.5% specific for drug-use disorders (Smith et al. 2010).

One researcher (Cristina Averhoff) administered the survey to all participants in this study. Each participant was offered the opportunity to complete the survey on his or her own or to have the researcher read it aloud, marking down the answers. The complete survey had a Flesch-Kincaid Grade Level of 5.8 (Appendix 1).

Study Site and Design:

Grady Memorial Hospital (GMH) is a tertiary care, 953-bed hospital; it is the fifth largest public hospital in the United States, located in downtown Atlanta, GA (Becker's Hospital Review 2010). It was originally opened in 1892 as a segregated institution, with a separate wing for white and black patients. Its namesake Henry Grady was a promoter of the "New South" movement, "where all could prosper" (Lee 2017). In memory of his journalism, GMH was founded primarily to treat the underserved and those with lower incomes (Lee 2017). Grady Hospital was desegregated in 1965 and in 2008, Grady became a non-profit institution (Atlanta

University Center 2017, Lee 2017). Each year, Grady admits approximately 30,000 patients, with an average length of stay of six days (Grady Memorial Hospital 2018). The majority of patients are low income, with 30% of patients on Medicaid and 24% without insurance (Grady Memorial Hospital 2018). Grady is a teaching hospital, partnering with Emory University School of Medicine and Morehouse School of Medicine (Lee 2017). Each Emory general internal medicine team is staffed with one attending physician and three-to-five additional members, including one second- or third-year resident, first-year residents, and third- and/or fourth-year medical students. Usually, first-year residents write patient notes, including the admitting history and physical, and orders, with direct oversight from the attending physician.

We followed a matched cohort design, in which each "homeless" participant was approximately matched with two or more "non-homeless" participants. In order to identify subjects, the primary researcher (Cristina Averhoff) performed a manual search. The researcher had access to hospital medicine lists for patients currently admitted to Grady during the months of December 2017 through March 2018. The researcher only identified participants who were admitted to the inpatient general medicine wards for Emory lists A through H, which includes approximately 1/8 of the patients admitted to the hospital and is a representative sample of all patients admitted to general medicine wards. Emory lists are staffed by Emory University faculty, residents, and students. Within each patient list, every patient had the same attending physician and medical team (including residents and medical students). Selecting from a set number of teams was intended to reduce variability in medical providers, as well as maintain feasibility. The researcher manually reviewed the patient record for each admitted patient in the group and determined their housing status by inputting "homeless" into the search bar of the medical record. If a patient was flagged as "homeless" during the current admission, i.e. the patient was admitted off the street or from a shelter and/or was documented as homeless in the medical record, the researcher would then identify controls. This definition of homeless was adopted for feasibility purposes, and this methodology also flagged patients who were also identified as homeless by the care teams. The controls were selected by matching gender, approximate age, race, and provider. The aim of this matching process was to control for possible confounding factors, particularly race and provider differences in clinical management. Two hundred and eleven inpatients were approached to participate, with 112 agreeing to participate and 99 declining.

Data Collection:

During each initial encounter between the researcher and participant, the researcher would uniformly introduce herself and gauge interest with the following line: “I am doing some research regarding the quality of care from the patient perspective. Do you have any interest in participating?” If the patient demonstrated interest, the researcher would proceed by consenting the patient. At this point, the patient had an additional opportunity to decline to participate. The researcher also advised each participant that s/he was welcome to withdraw from the study at any point, and the researcher provided contact information to each participant. No incentives were offered or provided to participants at any point during the interaction.

After agreeing to participate and signing the consent form, the survey was presented to the participant. The participant was invited to ask clarifying questions regarding the survey, and if asked, the researcher would first repeat the question. If further clarification was needed, the researcher would reword the question until the participant demonstrated understanding. With all encounters with potential participants, Cristina Averhoff served as the researcher introducing the study and administering the survey.

The same researcher performed a chart review on each survey participant. Chart review was done electronically, and the data gathered for each participant was from the admission encounter at the time of the survey. Data sources included administrative information, including date and time of arrival to Grady, admission documentation, and discharge documentation. Data sources also included provider notes, particularly the primary care team's history and physical note from the patient's admission, among other provider notes such as physical therapy. If the primary care team did not write a history and physical note, the admitting team's history and physical was used as a proxy. Further data sources included nursing vital sign records, complete order records during the admission, and discharge summaries. Computerized order entry and diagnosis-specific order sets were in use at the time of the study.

Outcome Measures:

Survey Outcomes

Survey outcomes centered on patients' perceptions of the quality of the care they received during their hospital admission. Survey questions were scored using a four-point Likert response scale. Questions 1 through 12 employed the following scoring system:

1 = "Strongly Disagree," 2 = "Disagree," 3 = "Agree," and 4 = "Strongly Agree."

Questions 13 through 27 employed another scoring system:

1 = "Never" 2 = "Sometimes" 3 = "Usually" 4 = "Always."

The survey questions were divided into "positive" and "negative" questions. Positive questions were defined as those for which a score of 3 or 4 was favorable; in other words, a higher score indicated that patients perceived good care. Questions 1-5, 9-11, and 13-27 were defined as positive questions. Negative questions were defined as those questions for which a score of 3 or 4 was not favorable; in other words, a higher score indicated that patients perceived poor care. Questions 6-8 and 12 were defined as negative questions. The division between positive and negative questions was adapted from the scoring system of the PCQ-H survey instrument and helps identify overarching trends in question response and perception of care.

Medical Record Review Outcomes

We evaluated eleven general quality of care measures (Table 3). These quality measures were selected because they can reflect general differences in standard of care, they are appropriate regardless of the admitting diagnosis, and they have been used in previous studies as quality measures (Liu et al. 2014). We also evaluated four descriptive measures: (1) initial admission unit; (2) use of personality descriptor in the history and physical; (3) number of labs or imaging entities ordered on the date of admission; (4) urine drug screen collected on admission. These measures were selected from personal experience at Grady by the researchers due to their potential relevance when examining the effect of stigma on quality of care.

Statistics:

We used SPSS software for the statistical analysis. We performed Chi-square and Fisher's exact test to compare the significant of percentages between the two cohorts. We also used independent t-test analysis to compare the significance of means between the two cohorts. A statistically significant p-value is defined as ≤ 0.05, and a marginally significant p-value is defined as ≤ 0.095.

We compared the means of the total positive questions and total negative questions to understand a general care rating among the “homeless” and “non-homeless” patients. We also compared the means and percentages of unfavorable scores for each individual question across the study and control cohort. “Unfavorable” indicated that an individual chose “strongly disagree/disagree” or “never/sometimes” for positively worded questions (Q1-5, 9-11, 13-27) or “strongly agree/agree” for negatively worded questions (Q6-8, 12) (See Appendix 1). We further analyzed the data using Chi-square and Fisher’s exact test to determine statistical significance for each question’s unfavorable response percentage.

We also evaluated general quality measures by comparing the means and/or percentages from the study population and the control cohort. From there we performed independent t-tests and Chi-Square and Fisher’s exact tests for statistical analysis again.

Table 3: General Quality of Care Measures

1	Length of stay (LOS)
2	Time from arrival to Grady Memorial Hospital (GMH) to Admission
3	Number of hours between documented history and physical (H&P) note to attending physician attestation
4	Nursing Adherence to vital sign measurement
5	Frequency of respiratory rate documentation of 20 breaths per minute
6	Frequency of documentation of the mode respiratory rate
7	Number of physical exam findings on the H&P
8	Early* documentation of pharmacy medication reconciliation
9	Early* documentation of patient's resuscitation status
10	Early* ordering of physical therapy
11	Early* assessment by physical therapy

**Early was defined as within twenty-four hours of admission or within twenty-four hours of order placement.*

Chapter 4: Results

From December 2017-March 2018, 112 participants were recruited from the inpatient setting and participated by completing a survey instrument and consenting to a chart review. Thirty-three of the participants were identified as homeless, thirty of whom self-identified on the survey and three of whom were identified in the chart review process, either with a recent use of an ICD-10 code for “lack of housing” or “homeless” or marked in a provider note as “homeless.” Provider notes include nurses, physicians, social workers, or case managers. These 33 homeless participants were matched with 79 non-homeless participants, with the same attending physician and team, and gender, with approximately the same age and admission date. Other baseline characteristics of the participants were similar (Table 4). The mean age of all participants was 54, with no statistical difference in age groups between the homeless and non-homeless participants. The percentage of women participants was reasonably representative, compared with Georgia’s 2015 data on the state’s homeless population with 64% men and 36% women (Department of Community Affairs 2015). Approximately 30% of participants in the homeless cohort and 41.8% in the non-homeless cohort were women. The racial breakdown of the homeless cohort, with 78.8% Black or African American and 21.2% White, roughly mirrors the population of homeless individuals in Georgia, with 65% of the state’s homeless population identified as Black or African American and 31% of the state’s homeless population identified as White (Department of Community Affairs 2015). The status of health insurance was marginally statistically significant between the two populations, with the homeless population trending towards having less access to health insurance with 54.5% indicating that they were “uninsured.” Finally, both groups reflected similar education levels, with the highest percentage of both groups (45.5% in the homeless cohort and 39.2% in the non-homeless cohort) specifying education level as: graduation from high-school or receiving a GED.

There were significant statistical differences between the income levels of the homeless cohort and non-homeless cohort. Income was self-reported by study participants in the survey. The majority of both the homeless and non-homeless cohorts, 93.8% of the homeless population and 69.7% of the non-homeless population, fell below $1000 a month. The vast majority of homeless participants (75%) had between $0 and $750 in income per month. Seven-hundred and fifty dollars represented a cut-off margin as that is the maximum supplemental security income an individual can receive in the state of Georgia (Social Security 2018). Nearly half (46.1%) of the non-homeless participants also fell into this income bracket, demonstrating that the control population, although more diverse than the homeless cohort, still represents a fairly low-income population.

In addition to expected income differences, there were statistically significant differences in alcohol abuse, drug abuse, and mental health histories among the two cohorts. The homeless population far exceeded the non-homeless cohort in having a history of alcohol abuse and drug abuse, as well as a history of a mental health disorder with respective percentages of 51.5%, 69.7%, and 63.6% versus 25.3%, 31.6%, and 32.9% in the non-homeless cohort. Alcohol abuse was defined in the chart review process as a male individual less than 65 years old having fourteen or more drinks a week or a female individual (or male greater than 65 years old) as having seven or more drinks/week, or as having "alcohol abuse" or "excessive alcohol consumption" documented in any part of their medical record (National Institute on Alcohol Abuse and Alcoholism 2016). Drug abuse was defined as an individual having any use of illicit substances documented in their medical record. Both groups reported similar general health status, with approximately 60% of participants labeling their health status as either "fair" or "poor." The Likert scale choices were "excellent," "very good," "good," "fair," and "poor."

Table 4: Participant Characteristics

Characteristics	Homeless %	Non-homeless %	Probability Statistic*
Age			0.388
18-25	3.0	0.0	
26-40	15.2	8.9	
41-55	48.5	45.6	
55-70	30.3	41.8	
>70	3.0	3.8	
Gender			0.146
Male	69.7	58.2	
Female	30.3	41.8	
Race			0.496
White	21.2	9.0	
Black/African American	78.8	88.5	
Other	0	2.6	
Ethnicity			0.496
Non-Hispanic/Latino	100	97.5	
Hispanic/Latino	0.0	2.5	
Income ($/month)			0.024
0-750	75.0	46.1	
751-999	18.8	23.7	
1000-1999	3.1	19.7	
2000-2999	3.1	1.3	
≥3000	0	9.2	
Health Insurance			0.093
Medicaid	27.3	24.1	
Medicare	12.1	22.8	
Uninsured	54.5	34.2	
Other	6.1	19.0	
Education Level			0.332
8th grade or less	9.1	2.5	
9-11 grade	24.2	20.3	
Graduated High School/GED	45.5	39.2	
Some college/2-year degree	9.1	25.3	
4-year college degree	6.1	7.6	
Graduate school	6.1	5.1	
History Alcohol Abuse	51.5	25.3	0.007
History of Drug abuse	69.7	31.6	<0.001
History of psychiatric diagnosis	63.6	32.9	0.003

Participant Characteristics, cont.

Reported General Health Status			0.728
Excellent	3.0	5.1	
Very Good	12.1	5.1	
Good	24.2	29.1	
Fair	48.5	48.1	
Poor	12.1	12.7	

Participants had no statistical differences between reasons for hospitalization, day of hospitalization or number of other comorbid conditions on admission (Table 5). In both cohorts, the most common cause for hospitalization reported in the history and physical admissions note was cardiovascular with 33.3% in the homeless population and 25.1% in the non-homeless population. Cardiovascular included conditions such as myocardial infarction, hypertension, hypotension, chest pain, and congestive heart failure, arrhythmias, among others. Infection included conditions such as cellulitis, sepsis, pneumonia, influenza, HIV, among others. Respiratory conditions included chronic obstructive pulmonary disease, respiratory failure, dyspnea, and pulmonary embolism. Neurologic included strokes, altered mental status, headaches, seizures, etc. The category "other" include a myriad of conditions, including glycemic control issues, liver conditions, cancer, social issues, kidney problems, and electrolyte imbalances. The absolute number value for any one of these conditions was too insignificant to warrant separate categories. For example, glycemic control concerns were the most common conditions in the "other" category, with an n of 3 individuals.

Both sets of participants had a similar number of comorbid conditions as well, with both groups having approximately four other conditions, in addition to the admission diagnosis, documented in the history and physical admission note. Finally, both sets of participants had roughly comparable distribution regarding day of admission.

Table 5: Patient Demographics

	MEAN SCORE +/- SD		PROBABILITY STATISTIC
	Homeless	Non-homeless	
Number of other comorbid conditions on admission	3.67 +/- 1.83	4.15 +/- 1.97	0.228
	HOMELESS %	**NON-HOMELESS %**	**PROBABILITY STATISTIC**
Reason for Hospitalization			
Cardiovascular	33.3	25.3	0.261
Infection	21.2	15.2	0.303
Respiratory	9.1	7.6	0.527
Neurologic	12.1	10.1	0.499
Other	24.2	30.4	0.339
Day of Admission			0.868
Monday	6.1	12.7	
Tuesday	18.2	19.6	
Wednesday	24.2	15.2	
Thursday	12.1	10.1	
Friday	9.1	16.5	
Saturday	8.6	7.6	
Sunday	18.2	17.7	

Survey Results:

The survey instrument used in this project examined patient perceptions of their care and was developed from the PCQ-H questionnaire and HCAHPS questionnaire. The PCQ-H tool provided questions regarding homeless specific concerns, while the HCAHPS tool provided widely used questions that examine patient satisfaction, communication with providers, and staff responsiveness. In order to analyze the results, we categorized the quality-related questions (Q1-27 in Appendix 1) in the survey instrument based on whether they were positive or negative questions. “Positive questions” are defined as positively-worded questions when a participant’s choice of “agree/strongly agree” or “usually/always” indicates a favorable care experience. Therefore, numerical responses of greater than or equal to 3 correspond with better perceived care. Conversely, “negative questions” are defined as negatively-worded questions, such that a choice of “agree/strongly agree” or “usually/always” indicates a negative care experience and “disagree/strongly disagree” indicates that the participant perceived a positive care experience. For these “negative questions” numerical responses of less than or equal to 2 correspond with better perceived care. All questions are scored on a 1-4 Likert scale, as detailed above in the methods section. The majority of questions in the survey instrument are “positive questions,” and include questions 1-5, 9-11, and 13-27. The instrument contains four “negative questions,” questions 6-8 and 12.

From the analysis, we found that our hypothesis was supported from the survey instrument; homeless patients perceive that they receive worse care than their non-homeless counterparts perceive. The homeless population generally responded in a less favorable way to the positive questions in the survey instrument (Table 6). At 2.85, the mean score for the homeless population was less than 3, which corresponds to answer choices “disagree/strongly disagree” or “never/sometimes.” This contrasts directly with the non-homeless population which scored a favorable 3.26 overall on the positive questions. From these results, one can see that the homeless respondents view their overall care experience unfavorably, while the non-homeless respondents view their overall care experience favorably. The specific question breakdown further supports and elucidates differences in perceived care quality between the two cohorts.

However, in response to the negative questions in the instrument, we found that generally, the homeless and the non-homeless population responded similarly, both with a generally favorable view of their care. The homeless participants generally rated negative questions at a 2.10 mean and non-homeless rated the same questions at 2.21.

Table 6: Global Survey Results

	MEAN SCORE +/- SD		**PROBABILITY STATISTIC**
	Homeless	**Non-homeless**	
Positive Questions (Q1-5, 9-11, 13-27)	2.85 +/- 0.8	3.26 +/- 0.3	0.004
Negative Questions (Q6-8, 12)	2.10 +/- 0.9	2.21 +/- 0.8	0.626

In the breakdown of the questions (Table 7), one can see a general trend between the two tools used to create the survey instrument used in this project. The PCQ-H questions, which assess homeless specific quality measures and more global views of the care given by the healthcare team, generally demonstrate, without any statistical significance, that the homeless population scores questions more unfavorably than the non-homeless population. This same trend, with some questions showing statistically significant differences, is seen in the HCAHPS question set, which measures provider-patient communication, staff responsiveness, and overall patient satisfaction. Although none of the specific PCQ-H questions reflected statistically significant differences, several trends are apparent that are then reflected in the compiled data in Table 7. For example, 18.8% of the homeless population feels that their healthcare team doubts their health needs, versus 8.3% of the non-homeless population. Similarly, 20% of the homeless disagree that their healthcare team enjoys working with the homeless, whereas only 10% of non-homeless disagree with that statement.

All of the “negative questions” demonstrated high unfavorable responses in both cohorts, particularly question 7 regarding communication, with 53.1% of the homeless and 40.3% of the non-homeless cohorts both marking that their healthcare teams *do* need to communicate more.

None of the trends in the PCQ-H questions had statistical significance, but some of the questions in the HCAHPS sections of the instrument do demonstrate statistical significance. Unfavorable responses for the HCAHPS questions were denoted when a patient marked “never’ or “sometimes” on the Likert scale of “never” “sometimes” “usually” and “always. Homeless patients were significantly more likely to have communication concerns with both their doctors and nurses.

Homeless participants, at 30.3% were significantly more likely to mark “never” or “sometimes” when asked if they could understand explanations from the nursing staff, as compared with the 11.4% of non-homeless patients. A similar, but only marginally statistically significant, pattern is seen in the question asking if doctors listen carefully; 21.9% of homeless marked listening unfavorably compared with 8.9% of non-homeless. Significant communication disparities between the groups was seen again with the question regarding pain treatment; 46.7% of homeless patients marked unfavorably compared with 25.8% of the non-homeless. The last two quality questions also demonstrate statistical differences. Homeless patients were marginally more likely to mark “never” or “sometimes” on question 26, asking if the healthcare told the patient what medication they were giving. However, homeless patients were significantly more likely to mark they “never” or “sometimes” received side effect information on medications, at 58.1%, compared with the 34.3% of non-homeless patients. Finally, regarding staff responsiveness, homeless patients, at 45.8%, are marginally more likely to mark “never” or “sometimes” when asked whether they received help to use the bathroom when they wanted, compared with the 25.6% of non-homeless patients.

Table 7: Itemized Survey Instrument Results

	UNFAVORABLE RESPONSES (%)*		PROBABILITY STATISTIC
	Homeless	Non-homeless	
Modified PCQ-H Questions			
1 My healthcare team never doubts my health needs.	18.8	8.3	0.116
2 My healthcare team takes my health concerns seriously.	9.7	3.9	0.227
3 I feel my healthcare team has spent enough time trying to get to know me.	9.7	11.7	0.530
4 I can reach my healthcare team when I need to.	17.2	17.6	0.608
5 I can get enough of my healthcare team's time if I need it.	13.3	9.3	0.387
6 I worry about whether my healthcare team has the right skills to take good care of me.	42.4	30.3	0.156
7 My healthcare team needs to communicate with each other more.	53.1	40.3	0.158
8 I have been frustrated by lack of communication among the members of my healthcare team.	31.3	28.2	0.460
9 The healthcare team at this place listens to me.	16.1	10.3	0.291
10 This place tries to help me with things I might need right away, like food, shelter or clothing.	13.3	9.7	0.420
11 The people who work at this place seem to like working with people who have been homeless.	20.0	10.4	0.197
12 Staff at this place treats some patients worse if they think that they have addiction issues.	33.3	40.9	0.364

HCAHPS Questions			
13 During this hospital stay, how often did nurses treat you with courtesy and respect?	24.3	14.0	0.185
14 During this hospital stay, how often did nurses listen carefully to you?	21.3	11.6	0.185
15 During this hospital stay, how often did nurses explain things in a way you could understand?	30.3	11.4	0.002
16 During this hospital stay, after you pressed the call button, how often did you receive help as soon as you wanted it?	27.6	31.5	0.691
17 During this hospital stay, how often did doctors treat you with courtesy and respect?	12.5	5.1	0.170
18 During this hospital stay, how often did doctors listen carefully to you?	21.9	8.9	0.061
19 During this hospital stay, how often did doctors explain things in a way you could understand?	18.8	9.1	0.156
21 How often did you get help in getting to the bathroom or in using a bed pan as soon as you wanted?	45.8	25.6	0.091
23 During this hospital stay, how often did the healthcare team talk with you about how much pain you had?	23.2	20	0.708
24 During this hospital stay, how often did the healthcare team talk with you about how to treat your pain?	46.7	25.8	0.045
26 Before giving you any new medicine, how often did your healthcare team tell you what the medicine was for?	21.3	9.2	0.096
27 Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?	58.1	34.3	0.024

** "Unfavorable response" indicates that an individual chose "strongly disagree/disagree" or "never/sometimes" for positively worded questions (Q1-5, 9-11, 13-27) or "strongly agree/agree" for negatively worded questions (Q6-8, 12).*

General Process of Care Measure Results:

For the general process of care measures attained from the chart review, only a few of the variables revealed statistically significant differences between the homeless and non-homeless cohort (Table 8). Both groups had similar lengths of stay, about 9 days for the homeless cohort, and approximately 8 days for the non-homeless cohort. Additionally, both cohorts had similar times from arrival to the hospital to admission, at approximately 9 hours for each cohort. Both groups had equal nursing adherence to vital sign measurement, with the homeless cohort at 55.9% and the non-homeless cohort at 63.6%. Both groups had approximately the same number of respiratory rates (RR) documented as a vital sign; the homeless group had an average of 30.27 RRs while the non-homeless cohort had 25.84 RRs documented within the medical record. Within the RR record, both cohorts had similar rates of documentation as 20 breaths per minute, and documentation of the mode RR was marginally significant, with 37.36% in the homeless cohort and 46.25% in the non-homeless cohort. Both groups had approximately equal documentation of pharmacy reconciliation at approximately 70%. Both documentation of resuscitation status as well as early ordering of deep venous thrombosis (DVT) prophylaxis were nearly 100% in both groups. For those for whom physical therapy was ordered, both groups had equal assessment within twenty-four hours of the order, at approximately 56-58%. Finally, on admission, the number of diagnostics, including labs and imaging, were approximately equal among the homeless and non-homeless cohorts, with a mean of 24.33 for the homeless and 19.58 among the non-homeless.

There were some statistically significant variables, including the time between writing of the admission history and physical (H&P) note to attending physician attestation, ordering of physical therapy, the use of personality descriptors in the history and physical (H&P), and regarding the use of the urine drug screen (UDS) on admission. For homeless patients, the attending physician took approximately 14.3 hours before signing the resident's H&P, whereas for non-homeless patients, the attending took only about 11 hours. The ordering of physical therapy was also statistically significant, with a higher percentage of homeless patients (42.4%) receiving an order compared with the 24.1% of non-homeless participants. The use of personality descriptors was significant only in the breakdown of positive and negative descriptors. Positive descriptors included words such as "pleasant" "cooperative," and "soft-spoken." Negative descriptors included "agitated," "uncooperative," and "irritable." Descriptors were only counted when they were used in the history of the H&P or in the 'general description' portion of the physical exam. The 'positive' or 'negative' valence of the descriptors was determined by the researchers after the data collection process was complete. Personality descriptors were excluded when used in the psychiatric portion of the physical exam. Positive personality descriptors were used equally among the cohorts at 12.12% and 11.39%. However, the use of negative personality descriptors was statistically significant, as they were used exclusively among the homeless population, in 9% of the participants.

The use of a urine drug screen (UDS) on admission was also statistically significant among the two cohorts. The total percentage of UDSs for the homeless population was 69.7% versus only 30.38% of the non-homeless cohort. In those with a history of drug use, 86.9% of the homeless population received a UDS versus 52% of the non-homeless. In participants without a history of drug use, 13% of the homeless cohort received a UDS versus 20.37% of the non-homeless cohort.

Table 8: General Process of Care Measures

	Homeless	Non-Homeless	Probability Statistic
Length of Stay (DAYS) (mean +/- SD)	9.03 +/- 1.63	7.28 +/- 0.83	0.293
Time (hours) from arrival to admission (mean)	9.80 +/- 4.92	9.02 +/- 3.99	0.391
Time (hours) from H&P[1] written to attending attestation (mean)	14.33 +/- 6.00	10.93 +/- 6.93	0.018
Nursing adherence to vital sign measurement (%)	59.4	62.0	0.479
Total documented RR[2] (mean)	30.27	25.84	0.231
Vital signs with RR 20/min (%)	12.4	15.34	0.378
Vital signs with RR documented as mode (%)	37.26	46.25	0.085
Number of physical exam findings (mean)	26.1	26.13	0.956
Pharmacy reconciliation documented on H&P (%)	66.7	67.9	0.532
Resuscitation status documented within 24h (%)	93.9	96.2	0.462
DVT[3] prophylaxis ordered within 24h (%)	93.9	96.2	0.462
Physical therapy ordered within 24 h (%)	42.4	24.1	0.045
Physical therapy assessment within 24h of order (%)	56.5	58.8	0.525
Personality descriptor used in H&P (%)[4]	21.1	11.4	0.176
Positive (%)	12.1	11.4	0.029
Negative (%)	9.09	0.0	
Number of labs and Diagnostic imaging ordered on day of admission (mean)	24.33	19.58	0.102
UDS[5] screen on admission (%)	69.7	30.38	
UDS screen with history of drug use (%)	86.9	52.0	0.044
UDS screen with no history of drug use (%)	13.04	20.37	0.007

1) H&P: history and physical admission note
2) RR: respiratory rate (breaths per minute)
3) DVT: deep venous thrombosis
4) Positive descriptors included “pleasant” “cooperative,” and “soft-spoken.” Negative descriptors included “agitated,” “uncooperative,” and “irritable.”
5) UDS: urine drug screen

Chapter 5: Discussion

This study compared the quality of care for a homeless cohort and non-homeless cohort from the inpatient medicine wards at Grady Memorial Hospital. Grady is a public hospital and traditionally caters to an underserved population, with approximately 30% of the population on Medicaid, 24% uninsured, and 27% on Medicare (Grady Memorial Hospital 2018). Both cohorts of homeless and non-homeless represented in this study reflect a low socio-economic status, with only marginally statistically significant differences overall in insurance coverage, given the homeless had a greater population of uninsured patients (51.4%) than the non-homeless cohort (35%). The two cohorts did have statistically significant differences in income, as 75% of the homeless population earned between $0-750 per month, versus 46.1% of the non-homeless cohort. The cutoff of $750/month was chosen as it is the maximum amount an individual can receive in supplemental security income in the state of Georgia (Social Security 2018).

There was no significant statistical difference in other basic characteristics of the two participant populations. The majority of the patients in both cohorts were between the age 41 and 70, with approximately 50% between the ages of 41 and 55 in both the homeless and non-homeless population. The gender breakdown in the homeless cohort (69.7% men, 30.3% women) reflects the homeless population in Georgia, reported as 64% men and 36% women (Department of Community Affairs 2015). The non-homeless cohort is more equally distributed between men and women (58.2% and 41.8% respectively), although it is not statistically significant. This is likely due to the probability of response for men and women throughout the data collection. In the homeless cohort, the rate of refusal and rate of participation were approximately equal, with 61.6% of men and 38.4% of women refusing to participate. However, in the non-homeless cohort, women were more likely to agree to participate, with women only constituting 28.6% of refusals in the non-homeless population.

A high percentage of participants in the study were African American/Black. The racial breakdown of the homeless population in Georgia is 65% African American/Black and 31% White (Department of Community Affairs 2015). In the research population, both cohorts represented a majority African American/Black at 72.7% and 86.1% of the homeless and non-homeless cohort respectively, with the next most common race represented being White. Other than income, none of the demographic characteristics detailed above are statistically significant between the two participant cohorts, which strengthens the validity of the claims made through the research and results.

However, the data did demonstrate some statistically significant differences in characteristics between the two cohorts, notably alcohol and drug abuse history, as well as a history of psychiatric diagnoses. Increased prevalence of substance use and psychiatric disorders within homeless populations is well-documented in the literature (Fazel, et al. 2008, National Health Care for the Homeless Council 2013, Committee for Health Care for Homeless People 1988, National Coalition for the Homeless 2009, National Coalition for the Homeless 2012). However, reported percentages in the homeless population for substance abuse and psychiatric disorders varies widely. In the 1988 report on homelessness by the Committee for Health Care for Homeless People, they found that estimates of mental illness ranged from 20-50%, with 33% being most frequently reported as the approximate percentage of the homeless population suffering from a mental illness (Committee 1988). When combined with substance use disorders, this committee found that approximately 83% of the homeless population suffered from either a psychiatric diagnosis, substance use disorder or both (Committee 1988). A meta-analysis and review article from 2008 showed that alcohol abuse was the most common mental health problem in the homeless population, with an average prevalence in Western countries 37.9%, closely followed by drug abuse at an average of 24.4%, with the range of psychotic disorders ranging in prevalence from 3% to 42% across the countries (Fazel et al. 2008). More recent data from the National Coalition for the Homeless in 2009 suggests that 20-25% of the homeless population suffers from mental illness, while 38% suffered from alcohol abuse and 26% abused other drugs (National Coalition for Homeless 2009). This data mirrors the data from the review article done by Fazel et al. However, in 2013, the National Health Care for the Homeless Council compiled data from homeless individuals utilizing health centers, and they found slightly different numbers, with 11% of the population with alcohol dependence and 25% of the population having severe mental illness (National Health Care for the Homeless Council 2013). Although the numbers are somewhat less dramatic than previously found, the council found that both factors were significantly higher than the non-homeless cohort, with those numbers showing a 2% alcohol dependence rate and 12% with severe mental illness (National Health Care for the Homeless Council 2013). Other data for non-homeless participants reflects approximately 25-30% prevalence of heavy alcohol use or life-time risk of DSM-5 diagnosis alcohol use disorder (Grant et al. 2015, National Institute on Alcohol Abuse 2016). The prevalence of drug use in the general adult population in the state of Georgia in 2016 is 9.58%, data is from the National Survey on Drug Use and Health (Substance Abuse and Mental Health Services Administration 2016). The range of substance use data is strikingly variant across the different sources, which lead to questions regarding data collection methods. However, the pattern between the homeless and non-homeless cohorts remains steady.

Although the data presented in this research reflects higher percentages than the national reported averages for both homeless and non-homeless populations, the higher proportion of homeless individuals having substance use and psychiatric disorders mirrors the national population trends. Therefore, the statistically significant data we gathered is not surprising and reflects proportionally the national trends between homeless and non-homeless populations. It may-be important to control for these factors in future research, such as substance use disorders and psychiatric illness, as they may affect the participants' perception of care quality.

Fortunately, both groups indicated similar perceptions of their general health, with about 60% of both cohorts rating their health status as either fair or poor. Additionally, apart from their perceived health status, we found that both cohorts had approximately the same number of comorbidities documented in their medical record on the admitting history and physical note. Homeless individuals had an average of 3.67 admitting comorbidities, and non-homeless individuals had an average of 4.15. Furthermore, both cohorts had similar reasons for hospitalizations, with the most common reason being cardiovascular, at 33.3% and 25.3%, followed by infection at 21.2% and 15.2% of the homeless and non-homeless cohorts respectively. Finally, both cohorts were admitted with similar distribution among the days of the week. Each of these factors could have contributed to skewing the data in one direction or another, but as both groups reflected similar data, we are assured that the data and resultant assumptions about quality of care are not influenced by their reason for hospitalization nor number of comorbidities present on admission.

Survey Results Discussion:

Overall, the homeless population indicated through the survey a less favorable view of the care they received than did the non-homeless population. In general, the homeless population gave a 2.85 overall score for positive questions versus the non-homeless population which gave a 3.26 overall score. The questions were rated on a Likert scale from 1-4. For "positive questions," answer choices of 3 and 4 gave an overall favorable view of the care received, whereas answer choices 1 and 2 gave an overall unfavorable view of the care experience. As the homeless population overall ranked their care as less than 3, they generally felt unfavorably about the care they received while at the hospital. The non-homeless population not only gave a higher overall score, but the average score for this population was greater than 3, meaning that the non-homeless population overall felt they had a good care experience during their hospitalization.

The negative questions (Q 6,7,8 and 12 in Appendix 1) showed no statistically significant differences. These questions were rated on the same Likert scale, but for these questions, answer choices of 3 and 4 gave an overall unfavorable view of the care, whereas answer choices 1 and 2 gave an overall favorable view. Both cohorts had an overall score of approximately 2 for the four 'negative questions,' indicating that they felt more favorably toward their care. However, during the survey administration, it was noted that many participants were confused while answering these questions, as the 'negative' wording is more challenging to understand. Therefore, the results from these questions are likely not as accurate as the positively worded questions.

PCQ-H Based Questions

Again, the PCQ-H based questions assess homeless specific measures and provide a more global view of the healthcare team and care experience. When looking at the breakdown of specific questions, none of the PCQ-H questions had statistical significance although there were several trends present in the data. For example, 18.8% of the homeless population disagreed with the statement "My healthcare team never doubts my health needs" versus the 8.3% of non-homeless who disagreed with this statement. These participants are indicating that the healthcare team *does* doubt their health needs, and, although not statistically significant, the data does exhibit a trend that the homeless feel their health needs are doubted more so than the non-homeless. In the original instrument, this question was filed under the "Patient-Clinician Relationship" subset (Kertesz et al. 2015). This could reflect an erosion, albeit small, of the physician-patient relationship for those in the homeless cohort.

Another distinct trend found in the PCQ-H questions is reflected in this question: "The people who work at this place seem to like working with people who have been homeless." Twenty percent of the homeless population disagreed with this statement, meaning that they think hospital employees *do not* like working with homeless individuals, as opposed to the only 10.4% of non-homeless who disagreed with this statement. This question was filed under the subset "Homeless-specific needs" in the original survey instrument (Kertesz et al. 2015). As this question is specific to the homeless, it is a challenge to determine if the more unfavorable percentage in the homeless cohort is actually significant or just reflective of the specificity of the question. During the survey administration, a number of non-homeless participants commented that they were unsure, but they liked the staff and ranked them highly. Thus, it is likely that the percentage of the non-homeless cohort does not provide as much relevant information for this homeless-specific question. However, homeless individuals do have credibility to answer this question. With this in mind, 20% of the homeless cohort did respond unfavorably, which could be reflective of a poor experience during their hospitalization.

These PCQ-H based questions again show no specific statistical significant and only reflect a general trend seen in this data to show the homeless cohort reports a somewhat poorer experience of care during their hospitalization. Regardless, the trend was minimal and other than these two questions, generally the two cohorts answered similarly.

HCAHPS Questions

The HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) assesses provider-patient communication, staff responsiveness, and overall patient satisfaction. The original HCAHPS survey instrument is the first nationally utilized survey to report patient perspectives on their care (Centers for Medicare and Medicaid 2017). This instrument has been validated and supported by Centers for Medicare and Medicaid Services (CMS) and is used nationwide by hospitals, particularly those who are subject to the Inpatient Prospective Payment System (IPPS); their IPPS payment is based on hospital usage and reporting of HCAHPS data (Centers for Medicare and Medicaid 2017). CMS and the HCAHPS project team had three goals in mind when creating the survey: 1) to compare patient perspectives of care among different hospitals, 2) create a public reporting system in order to incentive hospitals to improve their quality of care, and 3) increase transparency and therefore accountability in the quality of hospital care (Centers for Medicare and Medicaid 2017). Therefore, the HCAHPS survey is utilized nationwide by hospitals to assess the quality of their care, through patient perception, and this data is publicly reported and used to improve hospital systems. The questions posed by HCAHPS, specifically the ones utilized in the survey instrument for this project, aimed to determine quality of care factors that are difficult to gauge from the medical record.

The overall trend reflected in the responses to the HCAHPS questions mirrors the trend of the survey questions in general; the homeless cohort had a significantly less favorable opinion of their care than did the non-homeless cohort for a number of questions. In fact, the majority of the HCAHPS questions, the homeless population indicated less favorable care. Some statistically significant and marginally significant differences included questions such as: “during this hospital stay, how often did nurses explain things in a way you could understand?” and “how often did doctors listen carefully to you?” Approximately thirty percent of the homeless cohort responded either ‘never’ or ‘sometimes’ to the first question versus only 11.4% in the non-homeless cohort. The homeless cohort also indicated that their healthcare team, specifically the doctors, did not listen well to them; 21.9% of the homeless cohort indicated ‘never’ or ‘sometimes’ compared with 8.9% in the non-homeless cohort.

Similar to the questions regarding physician communication, the homeless cohort reported that nursing communication (Appendix 1, Q13, 14, 15) trended less favorably, with one question reflecting significance (Q15), compared with their non-homeless counterparts. Therefore, communication is noticeably worse for homeless participants with both nursing and physician staff, which may compound the health effects related to poor communication.

In addition to these questions, statistical differences were noted in other survey questions relating to communication. The homeless cohort was significantly less likely to discuss pain treatment with their care team, with 46.7% of the homeless responding that they received unfavorable communication regarding their pain compared with only 25.8% of the non-homeless cohort reporting that such communication was unfavorable. The homeless patients also had communication barriers with regard to their medications. They were marginally more likely to mark an unfavorable response about receiving information about medications (21.3% versus 9.2% in the non-homeless cohort), and they were significantly more likely to mark as unfavorable the adequacy of information about side effects (58.1% versus 34.3% in the non-homeless).

These questions above reflect communication with nurses, doctors, and healthcare team, which is an important characteristic of quality care. In a review article written in 2010, authors Ha, Anat, and Longnecker find that good communication is a vital characteristic for patient care

(Ha et al. 2010). Good communication between patients and physicians has been shown to help patient's emotionally as well as allow for better identification of patient needs (Ha et al. 2010). Additionally, patients are more likely to share pertinent medical information with their care providers when they have a good communicative relationship with their physician (Ha et al. 2010). Some studies, per this review article, have also shown physiologic and psychological benefits to good communication (Ha et al. 2010). Patients feel they have more control when they have good communication with their physicians, and this sense of control has been shown to enhance pain tolerance and even decrease tumor growth (Ha et al. 2010). As is evidenced by a number of studies in Ha et al.'s review article, having good communication with a physician and patient clearly impacts health and therefore the quality of care received. Similar effects of good nursing care and communication have also been documented in the literature (Kourkouta and Papathanasiou 2014).

The original HCAHPS survey labels the three questions (Appendix 1, Q17, 18, 19) as reflective of physician-patient communication, and as one can see, each of these three questions reflects a trend showing more unfavorable communication between the homeless cohort versus the non-homeless cohort. Additionally, the questions regarding treatment of pain and information regarding medications and side effects is reflective of communication between the entire healthcare team and the patient. Furthermore, the PCQ-H questions discussed above also refer to the relationship between physician and patient. This trend may also lead to concerns that reflect that the homeless are less likely to share pertinent medical information with their physicians, are less likely to have their emotional needs met, and are less likely to have the resultant physiologic and psychological benefits of good physician-patient communication as compared to the non-homeless cohort.

An additional notable difference was how often participants felt they were receiving help to use the bathroom as soon as they wanted; although it was only marginally significant, 45.8% of the homeless felt they were not receiving timely help, compared with 25.6% of the non-homeless cohort. This question is included in the "responsiveness by hospital staff" subset of the HCAHPS questionnaire (Centers for Medicare and Medicaid 2017). Responsiveness by the hospital staff is correlated more with patient satisfaction than with morbidity and mortality outcomes in the literature (Mitchell 2014, Kashkoli et al 2017, Kutney-Lee et al. 2009). In addition to this question above, the questions discussed previously regarding medication information and side-effects fall under the patient satisfaction and patient experience categories in the original HCAHPS questionnaire.

Patient satisfaction is considered a hospital quality indicator, well documented in the literature (Boudreaux et al. 2003, Mehta 2015). However, as a quality indicator, it remains somewhat controversial, as some claim that satisfying patients is not necessarily a main aim of health care and should not be conflated with quality (Desmon and Jones 2013, Farley et al. 2014). Some of the arguments surrounding satisfaction assert that the results of the survey are 'biased' and emphasize communication with staff, which does not necessarily reflect the quality of evidence-based medical care patients should be receiving (Farley et al 2014). However, as seen above, communication does in fact influence the care and health outcomes of patients, so while it may not be a perfect proxy, it should be evaluated.

Beyond the relationship with communication, patient satisfaction itself has been shown to be correlated with higher quality metrics overall or associated with improved outcomes of specific evidence-based interventions, such as surgery (Jha et al. 2008, Lyu et al. 2013). According to Mehta in an article addressing this claim, two possible reasons explain this relationship, both of which increase the quality of the care received by the patient overall. One possible explanation is that hospitals which have more positive interactions with their patients encourage better care and follow up, which then is actually carried out by the patient (Mehta 2015). Another possible reason is that a better experience could actually reflect a hospital that emphasizes teamwork, improvement, and good organization and leadership (Mehta 2015). Both of these rationales regarding the positive relationship between satisfaction and objective clinical measures indicate that the *reason* behind the patient satisfaction measures directly contributes to improved care quality, and thus it is an appropriate proxy. If that is the case, then again, the fact that the homeless cohort responded less favorably to the 'patient satisfaction' questions implies worse quality of care for the homeless, particularly when recognizing that the statistically significant questions specifically address provider-patient interactions.

Ultimately, from the HCAHPS questions, the homeless population perceived inferior care than their non-homeless control group, and within these questions, experienced inferior communication with their doctors and nurses and had poorer overall patient satisfaction scores. This scoring modality is utilized nation-wide by hospitals to reflect the quality of their particular system, and the current study at Grady, seems to indicate that the homeless population is receiving inferior quality of care from these patients' perspective.

Further research should investigate the effect of the poorer ratings by the homeless population on the overall hospital rating in the public reporting system, as well as at Grady Hospital. Additionally, further research should investigate if poorer ratings, specifically in the homeless population, on HCAHPS questions have correlations with worse outcomes long-term, fewer outpatient hospital visits, and other quality of care concerns. From this data, there is also impetus to look at other marginalized populations to determine if their ratings are significantly worse than a matched cohort.

General Process of Care Measures:

The general process of care measures chosen were identified as proxies for objective measures of quality of care. Many of the measures were chosen from a study looking at the quality of care for bedspaced versus non-bedspaced patients (Liu et al 2014). These items, including nursing adherence to vital sign measurement, vital signs with a documented respiratory rate of 20 breaths per minute, number of physical exam findings, early pharmacy reconciliation, early resuscitation status, early ordering of DVT prophylaxis, and early ordering and assessment of physical therapy were identified through Liu et al.'s study. These measures reflect general thoroughness of care while being appropriate and necessary for all patients regardless of diagnosis. Within these measures, there were no statistically significant findings between the homeless and non-homeless cohort. Some of the findings, although not significant, even demonstrated a trend that favored the care for the homeless population, such as having a reduced percentage of the respiratory rate documented as 20 breaths per minute (bpm) or as the mode. We utilized this measure as a proxy for care quality as respiratory rate is often neglected and not accurately documented (Cretikos et al. 2008, Elliott 2016). Many of these quality measures proved challenging to determine their significance in documenting care quality, as often providers have either pre-filled notes or automatic prompts in the EHR system. For example, many of the physicians on staff at Grady have pre-filled physical exam findings on note templates, which somewhat negates the measure 'number of physical exam findings.' Additionally, the EPIC electronic system used by Grady often reminds providers to order DVT prophylaxis, document resuscitation status, and perform a pharmacy reconciliation at the time of admission. Therefore, these quality measures must also be viewed with a critical eye, and likely explains the nearly 100% documentation of resuscitation status and ordering of deep venous thrombosis (DVT) prophylaxis for both cohorts of participants. To counter the reminder of automatic prompting for pharmacy reconciliation, the researcher looked to the history and physical note to determine if it was documented within the note that the patient had been asked about current medications. Any documentation within the body of the note, excluding the plan component, of complete current home medications was counted as a 'pharmacy reconciliation.' Regardless, some of the function of the electronic system, while an overall positive for patient care, likely rendered some of the measures less trustworthy as proxies for the quality of care.

Length of stay (LOS) is documented in the literature and utilized frequently as a quality metric although it is highly dependent on other clinical factors (Englert et al. 2001, Brasel et al. 2007). The research presented here showed no statistically significant differences between the two cohorts, although on average, the homeless population was in the hospital for nearly 2 more days than the non-homeless cohort. According the Brasel et al., the LOS metric is frequently dependent on other factors, discharge location being one of their statistically significant factors. Therefore, the trend toward longer stays for the homeless may be correlated with unstable housing and discharge planning needs. Because this research team hypothesized that the LOS would be altered due to their housing status, we decided to include two further time-based metrics to control for this factor. The first metric is the time from arrival to Grady Hospital to the time of admission. This factor is not statistically significant, and both groups had a waiting time of approximately 9 hours each.

The second factor we included was the time from the submission of the history and physical (H&P) note to the time of the attending attestation. As Grady is a teaching hospital, the resident physicians typically write the H&P for the patients, but the attending must sign and attest the note prior to its validity. Typically, although based only on personal experience from the researchers, attendings have already heard the information from the resident and seen the patient themselves prior to attesting the notes. This metric does show statistical significance, as the attendings took approximately 14.3 hours to attest the notes of the homeless population and 10.9 hours to attest the notes of the non-homeless population. The clinical relevancy of this metric is unclear, as typically the attending signs the notes after patient care has been completed for the day. However, given that there is a statistically significant difference, one could argue that implicit bias and patient prioritization plays a role, as providers more quickly work to complete the notes of the non-homeless cohort compared with their homeless patients. Furthermore, although this metric may itself not be clinically relevant, it may impact patients' perceptions of decreased responsiveness regarding their care.

Some alternate descriptive measures the research team chose to include were number of labs and diagnostics ordered on the day of admission, the use of personality descriptors in the history and physical, and a urine drug screen (UDS) ordered at the time of admission. These measures were based on the personal clinical experience of the researchers and concern about potential discrepancies between homeless and non-homeless patient care.

The number of labs and diagnostics were equivalent between the two cohorts. This measure may be a proxy for adequate diagnostic effort at the time of admission. Equivalency between the two groups disproves the hypothesis that providers spend less effort with diagnostics for homeless individuals.

Personality descriptors in the clinical setting may be used appropriately, such as to describe the psychiatric status of a patient. Personality descriptors may also be used inappropriately, to describe the likeability factor of a particular patient. Again, this use is anecdotal, but this study sought to see the distribution of descriptors in the history and physicals of these patients. The data shows that positive descriptors were utilized equivalently among both cohorts; positive descriptions again were 'pleasant,' 'cooperative,' and 'soft-spoken.' From the chart review process, it was evident that one of more of the providers included a positive descriptor, 'pleasant,' as a part of their physical exam template, which would corrupt some of this data. The use of this descriptor (pleasant) is evidence of the corruption as it was utilized 11 times out of the total 16 positive descriptors.

However, negative descriptors were only utilized in the homeless cohort. Although it was a fairly small percentage, it is notable, and significant, that *only* homeless had a negative label placed in their chart. Negative descriptors included 'agitated,' 'uncooperative,' and 'irritable.' Some of these descriptors could be utilized in a psychiatric analysis, but all of these descriptors were utilized in either the history portion of the note or the 'general' component of the physical exam, both of which should provide a basic prima facie view of the patient. Although the numbers are small, one hypothesis of this study is that providers have a negative reaction to homeless individuals, and this reaction manifests in their description of the patient. Because negative descriptors only appeared in the homeless cohort, it may be surmised that providers were responding more negatively to their homeless patients. Including these personality traits to describe their patients in the medical chart not only is a possible manifestation of bias, but also could share a provider's own bias to the other care providers who will access the medical chart.

Finally, the UDS data is an interesting measure. This data metric was selected because drug use in general is stigmatized in health care (Lloyd 2013, Van Boekel et al. 2013, Room 2005). Additionally, many equate homelessness with drug abuse, which in turn further stigmatizes the homeless patient population (National Coalition for Homeless 2009). Given that the homeless cohort has higher rates of drug abuse than the non-homeless, it makes sense that overall, they had a higher percentage of UDSs on admission (69.7%) than did the non-homeless cohort (30.38%). In this measure, our hypothesis was that homeless individuals were more likely to be profiled as drug users and therefore more likely to be screened on admission, regardless of drug abuse history. After performing the analysis, homeless individuals were more likely to be screened for drugs *if* they *had* a history of drug use, which may represent appropriate use for a UDS. However, in participants without a history of drug use, *non-homeless* participants were significantly more likely to be screened with a UDS than homeless participants. This data, on the surface, seems to imply that *non-homeless* individuals are more likely to be profiled as possible drug users than homeless individuals. This particular metric leaves room for future research to determine how UDSs are used in hospital systems. Additionally, it is likely that this data is skewed based on reason for admission, and further analysis must be performed to see if the use of UDS is dependent on the presenting medical concern.

The quality measures utilized in this study generally demonstrate that homeless individuals receive the same quality of care as a matched non-homeless cohort. Further research should look at the use of personality descriptors in patient populations, particularly socially marginalized populations, and the relationship of personality descriptors to care perception or care quality. Additionally, further research should look at the use of UDSs in admitted patients, and whether or not the administration or results of a UDS influence the perception of the patient by provider. Additionally, all of these measures used were general and applicable to all different reasons for admissions. Further research can explore the quality of care between homeless and non-homeless individuals for specific disease processes, to determine if there are differences in evidence-based care between the two cohorts.

Although the quantitative measures demonstrate equal quality of care, it is concerning that the homeless population specifically perceived a lower care quality in the HCAHPS measures. Again, these questions look at patient satisfaction, communication, and overall perception of person-to-person care within the hospital. These types of concepts are much harder to quantify and even more difficult to examine direct economic or health-based effects, although much of the discussion above points to particular benefits from improved satisfaction and communication in the healthcare setting. Therefore, it is possible that the medical teams recognize the importance of quantifiable measures and ensure that all patients receive equal care in those respects. However, for those less easily quantifiable measures, that may impact trust and influence perception of medicine, the medical teams may allow stigma and implicit bias to enter into their care and treat the homeless differently, and worse in some respects.

There were several limitations to the project. First, the population surveyed and then reviewed retrospectively is fairly small, with only 33 homeless individuals and 79 non-homeless individuals. This limitation was pragmatic, as the survey was only administered for approximately three months with one researcher administering all the surveys. However, a larger study with a greater ‘n’ would be an appropriate next step to validate these findings. An additional limitation to this study was having only general quality of care measures, rather than evidence-based measures for particular disease processes. Again, this limitation was pragmatic as screening for particular diseases would have limited the already small study population. A follow-up of this research would be looking at particular disease processes to determine if there are disparities in evidence-based care between the two cohorts. Finally, a third limitation of the study was directly matching each patient with the same provider. As Grady is a teaching hospital, each medical team has one or two medical students, two interns, an upper level resident, and an attending. The only feasible matching process was having each homeless patient matched with one or two non-homeless patients from the same team, but it was logistically too problematic to match participants based on the primary physician (usually an intern). Regardless, this limitation is noted, but as attending physicians must teach and take responsibility of their teams, the research group felt that this was an appropriate logistical limitation.

Looking towards the future, this research may aid in institutional policy review and culture changes within the study hospital and other hospitals that provide care to the homeless. One realistic change hospitals can make is investigating and reporting on their existing and future HCAHPS data by looking at population subsets. Hospital systems already have the infrastructure in place to survey their patients immediately prior to or after discharge, and they would likely have the opportunity to examine the data and look at particular populations. Likely the data will show similar outcomes to the research presented in this project, and from there, hospitals can make internal efforts to combat intrinsic bias or other forms of prejudice that may be contributing to the disparity in results. This not only is an approach to rectify inequality in care, but it will likely also benefit the hospital, as HCAHPS ratings are tied to funding (Centers for Medicare and Medicaid 2017). Furthermore, more research needs to be done to look at other quantitative data that may be disparate between the homeless and non-homeless cohorts. For example, designing a study that looks at evidence-based treatment for congestive heart failure and sepsis between the two cohorts will help examine if implicit bias moves beyond esoteric communication disparities into concrete inequalities in care.

Finally, medical education must place more weight into the effects and outcomes of implicit bias and stigma. This research demonstrates that stigma may interfere with patient care, and providers need to understand and be aware of the effects of this bias. Only with increased education of care providers can we begin to work towards rectifying disparities in care, particularly with the more qualitative aspects found in this project.

Chapter 6: Ethical Analysis

The hypothesis for this research project is that stigma against the homeless population manifests during inpatient hospitalizations as inferior quality of care. From the data above, one can see that quality of care general metrics from the retrospective chart review do not necessarily support this hypothesis. However, when looking at the patient perspective, one can see that participating homeless individuals report a more unfavorable experience with their hospitalization, particularly as it relates to their patient satisfaction scores and provider-patient relationship, particularly regarding communication. This research and the subsequent results demonstrate that the homeless continue to be stigmatized even within an inpatient setting, and this stigmatization may impact the quality of their care. This effect then violates principles and tenants of social justice ethics.

The data above presents interesting results regarding the scope of the care affected by stigmatization. Per the retrospective chart review, although it has limitations as a true proxy for care quality, homeless individuals are not severely adversely affected by the stigma. Prima facie, they are treated approximately the same as their non-homeless counterparts. In fact, the only significant differences in the retrospective review include the time between the written history and physical (H&P) note by the resident and the attending attestation, the use of personality descriptors, and the use of the urine drug screen (UDS) on admission. Again, the time it takes for the attending attestation may not necessarily impact the care quality patients receive, but as described previously, this data may reflect an overall pattern of decreased responsiveness toward this particular group of people by the healthcare team. A possible hypothesis regarding personality descriptors is that they may perpetuate stigmatization of the patient within the medical record, though there is very little evidence in the literature to demonstrate that this actually occurs. Further research should be done to investigate uses and implications of personality descriptor usage by providers. For example, providers utilize personality descriptors to give a well-rounded look at the patient and provide valuable information to the providers looking at the medical record, but disparities in usage between the homeless and non-homeless cohort seems to reflect implicit biases.

In regard to the use of the UDS, in reviewing this data, it appears as though homeless individuals are receiving more appropriate drug testing than their non-homeless counterparts. Although there is a concern that a higher percentage of homeless individuals are receiving UDSs, the UDSs are being used almost exclusively in patients with a history of drug use, versus the non-homeless population, in which the UDS is being utilized without the rationale of a history of drug use.

Therefore, the data presented in the retrospective chart review begs the question: if homeless individuals are continuing to be stigmatized in the health care setting, as is evidenced through their survey results, does it matter? In the earlier discussion, we saw that some aspects of poorer communication and patient satisfaction does in fact have an effect on patient outcomes and care. Beyond that, there is an ethical justification for promoting equity in patient perspective of their care.

From the results of this study, one must return to look at social justice ethics and recognize that a less favorable perception of care may violate social justice concerns in several ethical approaches, including a philosophical foundation of social justice: Kantian categorical imperatives. As was discussed in earlier chapters, Kantian philosophy formulates the foundation of deontological thinking, which can be simplified to “some choices cannot be justified by their effects—that no matter how morally good their consequences, some choices are morally forbidden" (Alexander and Moore 2016). Furthermore, one of Kant's most famous categorical imperatives addressed in earlier chapters reminds one how his maxims applies some moral significance to this research project: "one must act to treat every person as an end and never as a means only" (Beauchamp and Childress 2013, 363).

The results from this project can be interpreted to directly violate Kant's lofty philosophical ideals. Kant's maxim is frequently interpreted, in medical ethics, to claim that there is a duty for providers to treat each patient fairly and equally (Beauchamp and Childress 2013, 365). Although the retrospective chart review data demonstrates that the measures of direct care received by the homeless patients and the non-homeless patients were equivalent in this study, the survey reveals that the homeless cohort perceives worse care. Furthermore, the statistically significant metrics in the retrospective data demonstrate that implicit bias may be affecting the interaction between the patient and provider.

Many researchers link patient satisfaction and communication to trust in the health care system and their individuals providers (Shan et al. 2016, Thom et al 2004, Birkhauer et al 2017). With increased trust in health care, patients tend to rate their satisfaction higher, along with a number of other health parameters such as quality of life or subjective symptoms (Birkhauer et al 2017). Therefore, one might reason that the homeless population in this study, with lower rankings of satisfaction and communication, have decreased trust in their health providers. Trust is a fundamentally important component of health care and drives much of the care that patients receive. Having trust in providers is linked to increased treatment adherence and increased continuity with providers (Thom et al. 2004, Abel & Efird 2013). Conversely, in patient populations with decreased trust, those populations have lower rates of care seeking, including both prevention and surgical interventions, as well as poorer care in general (Thom et al. 2004).

Therefore, regardless of whether or not homeless individuals are ‘biased’ against their healthcare team, the results reflect decreased trust, which in turn may result in decreased care. This data reflects a cycle of inadequacy of care, which is perpetrated in many minority and marginalized populations.

The ethics of trust in this conversation regarding quality of care for the homeless population is important because of the history of exploitation and the uneasiness many in marginalized populations feel toward the healthcare system. Researchers often link mistrust in these populations to the legacy of discrimination and exploitation (Williams 2017, Scharff et al. 2010). In fact, Scharff et al. describe that mistrust in the health care system continues to prevail as marginalized populations still feel exploited and misused by physicians and medical research (Scharff et al. 2010, Corbie-Smith, et al. 2002). Furthermore, as medicine expands into the world of genetics, Scharff et al. looked at perceptions of genetic research, and many in the African American community believe that genetic research will be used to slander Blacks and “reinforce negative stereotypes” (Scharff et al. 2010). Because the vast majority of the population in this project is African American/Black, it remains important to consider the racial perspectives. However, as both cohorts in the study are predominantly African American/Black, one cannot attribute the findings and their implications regarding mistrust solely to race. Thus, the findings suggest that housing status also contributes to mistrust. In fact, in a study performed in Toronto, homeless individuals were far more likely to feel discriminated against because of perceived unwelcoming attitudes of their care providers, which continues to propagate the circle of mistrust and lack of satisfaction and communication in this population (Wen et al. 2007).

With the continuation of this cycle, one can see that Kant’s maxim is again violated. Lack of trust in the healthcare system has its foundation in a history of exploitation. The fact that these feelings continue today in marginalized populations implies that either exploitation is continuing, or patients feel that their providers have an ulterior motive, or both. Regardless of whether or not providers are using their patients, the fact that patients *perceive* exploitation implies that patients feel they are beings treated as a *means to an end.* This interaction between providers and patients violates the maxim that, as Kant specifically argues, individuals should *not* be treated as a means only.

The results of this research must be related back to social justice ethics briefly discussed in earlier chapters. Deontological ethics can be considered a foundation for social justice ethics, as one can interpret social justice ethics as a duty, of both providers, hospital systems, and even possibly government, to promote equity and quality of care on a population scale. From this research, one can infer that, as a population, the homeless patients at Grady are perceiving and likely receiving inferior care. Although deontology is typically not associated with social justice, one can see the link with duty-based ethics and other theories of justice. Beauchamp and Childress outline numerous theories of justice in their book, *Principles of Biomedical Ethics,* but in reference to this research and the relationship to deontology, egalitarian theories of justice as well as well-being theories of justice are most noteworthy.

In Beauchamp and Childress's analysis, egalitarian theories of justice hold "that all humans must be treated as equals because they are created as equals and have equal moral status" (Beauchamp and Childress 2013, 256). To reference Kant's categorical imperative, one might understand that egalitarian theory interprets treating individuals as ends by providing equality of respect of all persons and equality of opportunity (Beauchamp and Childress 2013, 256). Egalitarian theories of justice integrate well into the methodology of this project. Egalitarian theory does not necessitate equality of all social benefits, but rather emphasizes the need for basic equalities with a reasonable expectation toward approaching existing inequalities (Beauchamp and Childress 2013, 256). For example, egalitarian theorists may claim that it is just if all individuals have shelter. However, having shelter does not mean that all individuals have to have the *same* shelter; rather some people may have small, basic homes and other individuals may have luxurious mansions. In healthcare, inequities often are directly caused by social determinants of health, such as accessibility to clinics, food-deserts, etc. In this study, the inpatient setting was utilized to minimize existing inequalities, such as accessibility to healthcare and medications, that may skew results. Therefore, in this study, we designed our metrics and outcomes measures to reflect egalitarian principles and measure the basic level of treatment and equality in care expected of every patient at the hospital.

The inequities described in this research project thus violate the egalitarian principles of justice, as the basic conditions for care quality were not met for the homeless cohort. One can argue that the egalitarian principle requiring equal respect of all individuals dovetails perfectly with Kant's categorical imperative. As was discussed above, one can interpret the results above to violate this imperative and thus infringe on individual's rights to be treated with equal respect. Furthermore, Beauchamp and Childress interpret the writing of Norman Daniels, an egalitarian philosopher; society has an "obligation…to correct or compensate for disadvantages" (Beauchamp and Childress 2013, 257). Thus, given egalitarian justice principles, the inequities demonstrated in this research must be rectified.

The ethical ramifications of these inequities fall within Madison Powers' and Ruth Faden's theory of well-being. They discuss that the basis of social justice ethics rests on promoting human well-being through six different dimensions (Powers and Faden, 2008, 15). These six dimensions include health, personal security, reasoning, respect, attachment, and self-determination (Powers and Faden 2008, 16). Through the lens provided by Powers and Faden, one can see that both health and respect are directly related to the results of this project.

First, health is an important component for human well-being. It is the first dimension that Powers and Faden address and described as "intended to capture the dimensions of human flourishing" (Powers and Faden 2008, 17). They further go on to explain what they mean by health, as it expands beyond the "organic functioning of the body" into "reflect[ing] a moral concern…of considerations…including premature mortality and preventable morbidity, malnutrition, pain, loss of mobility, mental health, the biological basis of behavior, reproduction…and sexual functioning" (Powers and Faden 2008, 17). Clearly, this definition of health is expansive and includes everything from basic outcomes, such as mortality, to more esoteric concepts, such as preventable morbidity and pain. Because of this wide breadth of health, one can relate the results of the project to elements of health.

This project demonstrated that objective quality metrics may be similar between the two cohorts, homeless and non-homeless. However, the more conceptual ideas of quality, such as communication and satisfaction led to different findings between the two cohorts, and homeless cohort perceived inferior levels of these components of their care. As was discussed above, these aspects of care, while harder to directly quantify through an electronic medical record or outcomes metric, significantly contribute to long term care, influence outcome measures, and decrease utilization of preventive care services (Ha et al. 2010, Jha et al 2008, Lyu et al. 2013). These violations of health and their direct impact on communities highlights the importance of social justice ethics and egalitarian principles.

Beyond just the health measure, one can also reflect on this data in terms of the 'respect' component of well-being. Powers and Faden identify respect in justice as being able to "see others as independent sources of moral worth and dignity and to view others as appropriate objects of sympathetic identification" (Powers and Faden 2008, 22). In other words, to promote human well-being, one must treat each individual with equal moral worth and dignity as the next person. It is within this realm that one can see how problematic inequality is in components of care such as communication and satisfaction particularly when more quantitative metrics of quality appear equal. Respect is the component of well-being most openly violated according to the results of this research project. The homeless population is not being treated with equal moral worth and dignity as their counterparts, as the 'sympathetic' arm of care is not being stretched out for them. They report receiving inferior communication, which directly violates treating individuals with dignity. In fact, in an article presented in *Nursing Times*, a group of nurses have started a project called "Dignity in Care" with the basic premise that "good communication is vital to dignified care" (Nicholson et al. 2010). One can also relate this to particular questions with disparate results between the two cohorts. Twenty percent of the homeless cohort claimed that they were not being told anything about their medication prior to administration, with a vast majority, at 58%, not being told about the side effects of their medications. How can one argue that the dignity of this population is being upheld when a vast majority of them are not even receiving basic information about their care and medications?

Furthermore, patient satisfaction relates predominantly to questions that reflect on responsiveness of staff. The non-homeless cohort-indicated that their basic needs were being tended to much more promptly than the homeless cohort. Again, this harkens back to treating patients with dignity, particularly in regard to basic needs, such as requiring the bathroom. Forty-five percent of homeless patients did not feel that they received help to use the bathroom quickly enough, as opposed to 25% of non-homeless patients, and bathroom privacy and responsiveness to help is often associated with preserving dignity in patients (Ferri et al. 2015). This disparity in responsiveness, particularly with something as sensitive as bathroom needs, directly reflects an imbalance of respect between the homeless and the non-homeless that Powers and Faden identify as a key component to social justice.

Some may argue that this data shows positive results: the homeless population is receiving equality of care in quantitative measures, which some would argue matter more than qualitative components of care. These violations of social justice are minimal, and we should feel proud that our homeless population is receiving equal quality quantitatively.

This is a powerful argument. Many systems, particularly our Western health care system, place a strong emphasis quantitative outcome measures. Again, although this project is limited in its scope, it provides a good general view of the care received via information recorded in the electronic medical record, and overall that care is equal between the homeless and non-homeless populations. This argument follows the logic of the "sufficiency principle" that Powers and Faden describe in their book (Powers and Faden 2008, 55). This principle essentially rejects equality as the ultimate aim and rather aims at "achieving a decent minimum for the worst off…the condition of the worst off applies only until the point that the worst-off rise above some level of absolute deprivation" (Powers and Faden 2008, 55). In the case of this research, if one were to apply the sufficiency theory, ultimately trying to equalize patient satisfaction, communication, and trust are all superfluous; given that our quantitative measures demonstrate equal care, we have achieved the minimum, and the rest is not morally necessary. Although this argument is important to note, the sufficiency principle neglects the importance of qualitative measures and cannot be used to justify equality in quantitative measures alone.

One can argue that quantitatively and only speaking with generalities of care applied to all diagnoses, quality of care for the homeless population has met the minimum requirements. However, the quantitative component of this project merely looked at one aspect of care quality, and the survey questions looks at the patient perspective of their experience, which has been acknowledged by CMS to be a quality metric separate from quantitative chart reviews and outcomes data (Centers for Medicare and Medicaid 2017). The more qualitative aspects of quality of care and justice look particularly at the components of well-being that Powers and Faden laid out in the claims previously. Therefore, one could apply the sufficiency principle of well-being to determine if it in fact is a reasonable argument to use for the qualitative data as well. Powers and Faden identify several concerns with the applicability of the sufficiency principle to well-being. One concern relevant to this research is the challenge of agreeing on the minimum level, particularly for qualitative measures. Some measures regarding well-being have "uncontroversial" thresholds for well-being, such as inadequate shelter or a higher mortality rate (Powers and Faden 2008, 58). However, other measures do not fit into the sufficiency model, in which the minimum requirement to meet is unclear.

Looking then at the specific results of project as well as thinking about which of the dimensions of well-being were affected by the inequalities, one can surmise that the sufficiency principle is not an adequate measure in this case. Health, with regard to this research, is one of these dimensions for which the sufficiency principle cannot apply, as there is no quantitative minimum for 'health.' In the inpatient setting, each individual that comes into the hospital comes in with a different baseline health and different goals for their care. A stage 4 metastatic cancer patient may come to the hospital with the goal of pain control and leaving the hospital on hospice care, while a different patient comes in with pneumonia with the goal of returning home cured.

Thus, each patient has discrete goals of care and minimum health requirements that cannot be summarized by the sufficiency principle as it stands. Inequality in health is a given, as different individuals will have different health experiences. However, this project is examining whether the quality of care negatively impacts the health dimension of well-being, and as every patient has different goals for their health, this dimension can only be examined relative to the other cohort. For example, the results of this study demonstrate that in general, the care of the homeless cohort has a more negative impact on their health relative to the non-homeless cohort. The sufficiency principle cannot apply as there is no cut-off score for the impact on health, but rather how the dimension is affected in different populations.

In addition to health, respect was the other dimension of well-being that is impacted per the results of this research. The argument above does not necessarily apply as well to the respect category, for the amount of respect required for well-being is more contextually and individually based. Powers and Faden address this contextual component. They argue that "sufficiency…will be relative to the level of social organization…[and] there simply is no way that such judgments can be made apart from some understanding of the background conditions that define the parameters of legitimate aspirations for justice" (Powers and Faden 2008, 61). In the context of health care, respect is absolutely necessary for appropriate physician-provider interactions and is not necessarily a factor that can meet a minimum requirement for some patients, with different levels of respect based on wealth and social status. Each patient deserves equal respect as the next, and respect is given in the context of each individual as well. Not every patient and their cultural context can be approached in the same way and garner equal levels of respect. The results from this research demonstrate an example of why context matters. The homeless cohort was much more likely to rank their nurses/doctors unfavorably for communication; one possible rationale for this is that the homeless population simply has a lower education level (a non-significant but general trend shown in the demographics) and therefore did not understand their providers as well as the non-homeless cohort. This explanation demonstrates that while providers were providing *similar* explanations, their communication was not *equitable* and therefore not as respectful toward their patient population, as some in the homeless cohort may have required a more thorough or different type of explanation. Further research and investigation is warranted to explore this claim and decreased rating for communication. Regardless, the context of the situation informs the ethics. In this situation, the sufficiency principle is not an adequate measure, because it assumes a minimum, which does not exist particularly for the dimension of respect.

Although justice, and social justice in general, is the major ethical concern that arises from this research project, one might look at two of the other principles commonly utilized in clinical ethics: autonomy and non-maleficence. While this particular project did not address autonomy specifically in the survey instrument, one can see how infringement on autonomy can relate to the specific results. Often, the homeless cohort ranked communication from nurses and doctors, as well as receiving specific information about their pain treatment and medications significantly lower than did the non-homeless cohort. Within the definition of autonomy addressed in Chapter 2, Beauchamp and Childress specifically mention ‘understanding’ as a vital component to the practice of autonomy. Without adequate information, particularly regarding medications, patients cannot make a truly autonomous choice. Thus, this research is concerning that the healthcare teams unwittingly violated the autonomy of the homeless cohort in this study. Furthermore, Beauchamp and Childress establish the principle of autonomy within the idea of respect: “respect [for autonomy]…involves acknowledging the value and decision-making rights of the autonomous person" (Beauchamp and Childress 2013, 107). If one contextualizes autonomy requiring respect, then once again, one returns to the dimensions of well-being discussed above, as respect is a major dimension violated in the homeless cohort of this study. Thus, while undermining social justice tenants, the healthcare team, perhaps inadvertently, violated the widely valued moral principle of autonomy (Gillon 2003).

Beauchamp and Childress continue their discussion of autonomy, postulating that respecting autonomy is both a negative as well as a positive obligation (Beauchamp and Childress 2013, 107). As a negative obligation, Beauchamp and Childress describe that individuals should not be controlled and constrained by other people; people do not need to infringe on others' lives (107). As a positive obligation, they argue that autonomous decision making requires adequate information disclosure by professionals or experts; in other words, providers must actively provide sufficient information in order to uphold the principle of autonomy (107). It is within the realm of the positive obligation component that this research demonstrates fault. While providers are not attempting to control their patients and prevent autonomous choice, providers may simply not have the energy or the time to discuss all of the side effects of a new medication with their patients. Alternatively, as this research hypothesizes, healthcare providers did not provide adequate information and communication toward the homeless cohort due to implicit bias arising from the historical stigma toward homeless individuals. Thus, the stigma and bias against the homeless population may lead to a violation of autonomous decision making by healthcare providers within the inpatient setting.

Another major principle of biomedical ethics relevant to this project is non-maleficence. The principle of non-maleficence, again, is the idea that health providers must follow the Hippocratic oath and "do no harm" (Beauchamp and Childress 2013, 150). William Frankena highlights the differences by dividing the theory into four components: 1) One should not inflict harm or evil. 2) One should prevent harm or evil. 3) One should eliminate harm or evil. 4) One should do good (Frankena 1973). According to Beauchamp and Childress, many ethicists often cite the first division as non-maleficence and the last three as beneficence, as the last three divisions involve action on the part of the provider (Beauchamp and Childress 2013, 151).

Some might argue that while the injustices toward the homeless cohort in this research may violate ethical tenants of justice and autonomy, non-maleficence is not involved as the participants are not actively *being harmed.* However, this argument is founded on the idea that harm is bodily injury. Beauchamp and Childress describe harm differently. Harm can come about by violating an individual's rights, treating an individual unjustly, or having an adverse effect on another's interests (Beauchamp and Childress 2013, 153). Additionally, harm is not necessarily wrong or unjustified, particularly when thinking about harm that goes against another individual's interests (Beauchamp and Childress 2013, 153). Beauchamp and Childress go on to further characterize rules specific to non-maleficence, and they lay out 5 rules: "1) Do not kill. 2) Do not cause pain or suffering. 3) Do not incapacitate. 4) Do not cause offense. 5) Do not deprive others of the goods of life" (Beauchamp and Childress 2013, 154). Within these rules, one can see the relationship of the results of this research to non-maleficence. First, "do not cause offense," is implicated in the research as was discussed above when reflecting on the respect dimension of well-being. Given that the homeless cohort recognized sub-par communication and responsiveness from their healthcare team, one might infer that this cohort additionally felt some element of offense stemming directly from their team. One can even see this reflected in the question regarding nurses treating the patient with courtesy and respect; nearly one-quarter of the homeless cohort marked this question unfavorably. While it was not necessarily statistically significant with the non-homeless cohort, the fact that nearly 25% of these participants felt not treated with respect is ethically noteworthy. Within this question, the data implies that many in the homeless cohort were harmed and caused offense by their healthcare team, violating the principle of non-maleficence.

However, the impact of non-maleficence is more profound when approaching the fifth rule laid out by Beauchamp and Childress: “do not deprive others of the goods of life” (Beauchamp and Childress 2013, 154). The phrasing of this element of non-maleficence is highly reminiscent of the social justice dimensions of well-being discussed by Powers and Faden. The arguments above show how these results reflect the negative impact of the dimensions of health and respect, and one can see that these two dimensions can easily be labeled as “goods of life.” Thus, the results of this research highlight a violation of non-maleficence occurring subversively through inequities and social injustice.

The results from this research demonstrate that the homeless individuals participating in the study report receiving inferior care that negatively impacts several of the dimensions of well-being which are arguably necessary components for social justice. Furthermore, the results may violate some of Kant’s more theoretical deontological ethics, such as one of his major maxims of treating each person as an end and never as a means. Beyond these theoretical ethical infringements, one can see that disparity in communication, patient satisfaction and provider responsiveness, can erode an already damaged history of trust in the medical field by a marginalized population. This continuing lack of trust can fuel the cycle of injustice in medical care and outcomes for marginalized populations, particularly the homeless. The homeless are already disenfranchised; this population, more than any other, needs the support and quality care of the medical profession to aid them and contribute some small aspects of well-being to their already destitute conditions.

This study calls attention to the implicit bias that is manifesting through the care of providers, even at safety-net hospitals such as Grady Hospital that care for the most underserved people in Georgia. Although implicit bias is challenging to address, an open dialogue with providers is the first step. Hospital systems can utilize measures already in place to monitor the effects of implicit bias. Many hospitals already use the HCAHPS questionnaire and have the data; perhaps analysts can begin by looking at sub-populations within these safety-net hospitals to see disparities in care. Apart from just analyzing and appreciating the data, hospital systems can make an effort to spread awareness of the impact of implicit bias through either mandatory employee trainings or Grand Rounds sessions. Many providers do not recognize that they are exhibiting bias in their care; therefore, by repeated teaching session and lectures regarding the effects of implicit bias, providers may begin to at least be more cognizant and decrease disparity on their end. Furthermore, these hospitals can try to empower their own patient population. One of the key issues seen in the data is that the homeless cohort received much less information regarding medications and side effects. One possible aim to improve this is by posting flyers in every patient room that promote advocating for oneself as a patient. If every patient saw a pamphlet telling them they should know what medication they are receiving and the side effects, perhaps patients themselves can ask and rectify this disparity. However, an effort should be made on the provider side as well as the patient side, and a greater emphasis on information disclosure should be praised and promoted throughout the teaching element of the hospital.

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Appendix 1: Survey Instrument

Introduction: We would like to ask you some questions about your healthcare team. This includes your nurses, doctors, and medical students. We would also like to ask you your experiences with care here at Grady.

Instructions: Please indicate how much you agree or disagree with the following statements about your healthcare team and your medical care at Grady. Again, this includes nurses, doctors, and students. We are asking for you to make your best guess.

Name: _______________________________ MRN:__________________________
Date:___________________

	Strongly Disagree	Disagree	Agree	Strongly Agree	I don't know
Q1. My healthcare team never doubts my health needs.	☐	☐	☐	☐	☐
Q2. My healthcare team takes my health concerns seriously.	☐	☐	☐	☐	☐
Q3. I feel my healthcare team has spent enough time trying to get to know me.	☐	☐	☐	☐	☐
Q4. I can reach my healthcare team when I need to.	☐	☐	☐	☐	☐
Q5. I can get enough of my healthcare team's time if I need it.	☐	☐	☐	☐	☐
Q6. I worry about whether my healthcare team has the right skills to take good care of me.	☐	☐	☐	☐	☐
Q7. My healthcare team needs to communicate with each other more.	☐	☐	☐	☐	☐
Q8. I have been frustrated by lack of communication among the members of my healthcare team.	☐	☐	☐	☐	☐
Q9. The healthcare team at this place listens to me.	☐	☐	☐	☐	☐
Q10. This place tries to help me with things I might need right away, like food, shelter or clothing.	☐	☐	☐	☐	☐
Q11. The people who work at this place seem to like working with people who have been homeless.	☐	☐	☐	☐	☐

Q12. Staff at this place treats some patients worse if they think that they have addiction issues.	☐	☐	☐	☐	☐

Instructions: The next questions are about your experience with the care you received from the NURSES on your team.

	Never	**Sometimes**	**Usually**	**Always**	**N/A**
Q13. During this hospital stay, how often did nurses treat you with courtesy and respect?	☐	☐	☐	☐	☐
Q14. During this hospital stay, how often did nurses listen carefully to you?	☐	☐	☐	☐	☐
Q15. During this hospital stay, how often did nurses explain things in a way you could understand?	☐	☐	☐	☐	☐
Q16. During this hospital stay, after you pressed the call button, how often did you get help as soon as you wanted it?	☐	☐	☐	☐	☐

Instructions: The next questions are about your experience with the care you received from the DOCTORS (including medical students) on your team.

	Never	**Sometimes**	**Usually**	**Always**	**N/A**
Q17. During this hospital stay, how often did doctors treat you with courtesy and respect?	☐	☐	☐	☐	☐
Q18. During this hospital stay, how often did doctors listen carefully to you?	☐	☐	☐	☐	☐
Q19. During this hospital stay, how often did doctors explain things in a way you could understand?	☐	☐	☐	☐	☐

Instructions: The next questions are about your experience while in the hospital.

	Yes	**No**
Q20. During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan?	☐	☐

Q21. How often did you get help in getting to the bathroom or in using a bedpan as soon as you wanted?	**Never** ☐	**Sometimes** ☐	**Usually** ☐	**Always** ☐	**N/A** ☐
Q22. During this hospital stay, did you have any pain?	**Yes** ☐	**No** ☐			
Q23. During this hospital stay, how often did the healthcare team talk with you about how much pain you had?	**Never** ☐	**Sometimes** ☐	**Usually** ☐	**Always** ☐	**N/A** ☐
Q24. During this hospital stay, how often did the healthcare team talk with you about how to treat your pain?	**Never** ☐	**Sometimes** ☐	**Usually** ☐	**Always** ☐	**N/A** ☐
Q25. During this hospital stay, were you given any medicine that you had not taken before?	**Yes** ☐	**No** ☐			
Q26. Before giving you any new medicine, how often did your healthcare team tell you what the medicine was for?	**Never** ☐	**Sometimes** ☐	**Usually** ☐	**Always** ☐	**N/A** ☐
Q27. Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?	**Never** ☐	**Sometimes** ☐	**Usually** ☐	**Always** ☐	**N/A** ☐

Finally, we would like to collect some information about you.

Q28. What is your age in years? _____

Q29. What is your gender? Male Female Other

Q30. What is your reason for coming to the hospital?
____

Q31. What is your highest grade or year of school you completed?

________ 8th grade or less ________ Completed 9th-11th grade ________ Graduated/GED
________ Some college or 2-year degree ________ 4-year college degree
________ Graduate School

Q32. Are you of Spanish/Hispanic/Latino origin or descent? Yes No

Q33. What is your race?
___White
___Asian
___Native Hawaiian or other Pacific Islander
___Black or African American
___American Indian or Alaska Native
___Other (please specify) _________

Q34. What language do you mainly speak at home? English Spanish Other _______________

Q35. In the past 30 days, how many days have you lived:
_______ on the street/park/bench _______ in an emergency shelter _______ in temporary/transitional shelter _______ in a supervised group home _______ in an independent apartment
_______ in a shared home _______ in an independent home

Q36. If you could choose, where would you like to live?
_______ on the street/park/bench _______ in an emergency shelter _______ in temporary/transitional shelter _______ in a supervised group home _______ in an independent apartment
_______ in a shared home _______ in an independent home

Q37. Do you currently receive... (per month)?

SSI	$_________
SSDI	$_________
Food stamps	$_________
DHS	$_________
Veterans benefits	$_________
Public assistance	$_________
Income from employment	$_________
Other income	$_________

Q38. In general, how would you rate your overall health?
Excellent Very Good Good Fair Poor

Q39. In general, how would you rate your overall mental or emotional health?
Excellent Very Good Good Fair Poor

Q40. Over the past 2 weeks, how often have you been bothered by either of the following problems?

Little interest or pleasure in doing things
Not at all Several days More than half the days Nearly everyday

Feeling down/depressed/hopeless
Not at all Several days More than half the days Nearly everyday

Q41. How many times in the past year have you had 5 or more drinks in a day? ______________

Q42. How many times in the past year have you used an illegal drug or prescription medication for non-medical purposes? ______________