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Exploring health disparities in access to health care is a subject of great relevance not only in the United States but also around the world. This dissertation focuses on access to health care in South Africa and perceptions of the government's handling of health care. In order to explore these topics, data from Rounds 1 (2000) and 2.5 (2004) of the Afrobarometer Survey of South Africa were examined.

Logistic regression analysis was used to assess the relationship among four major ethnic groups in the perception of how the government is improving health services and if the respondent had gone without medical care controlling for the independent effects of selected sociodemographic, structure and health care need variables.

Blacks and Coloreds are the most disadvantaged groups in South Africa and despite having less access to medical care, perceive the government to be handling improving health care well compared to Whites. Blacks have a higher probability of going without medical care than any other ethnic group. A positive trend was identified between 2000 and 2004. The percentage of respondents reporting having gone without medical care decreased and the percentage that perceive that the government is handling health care well has increased for all ethnic groups. Although the percentages have improved, the regression analysis shows clear ethnic disparities. Blacks' likelihood of perceiving the government to be handling health care well has decreased, dropping from

eight times more likely to five times more likely than Whites in 2004. Blacks are still more likely than Whites to go without medical care, increasing from 1.5 to 2.0 times more likely in 2004.

Further research is needed to uncover the layers of health disparities currently burdening the country and the disconnect between the reality and perception of health care. The possibility that South Africa is again being divided by ethnic lines and that disparities are a result of these ethnic divides should be explored.

ETHNIC DISPARITIES IN OBTAINING MEDICAL CARE AND PERCEPTION OF HEALTH  
CARE IN POST-APARTHEID SOUTH AFRICA

Zeida Rojas Kon, MPH

APPROVED:

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Major Professor

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Committee Member

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Committee Member

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Department Chair

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Dean, School of Public Health

ETHNIC DISPARITIES IN OBTAINING MEDICAL CARE  
AND PERCEPTIONS OF HEALTH CARE IN  
POST-APARTHEID SOUTH AFRICA

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Zeida R. Kon, MPH

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## CHAPTER 1

### INTRODUCTION

Exploring health disparities in access to health care is a subject of great relevance not only in the United States but also around the world. Many illnesses can be prevented and managed if appropriate access to health care is available. This study focuses on access to health care among citizens in post apartheid South Africa and their perceptions of the government's handling of health care. South Africa's political and economic state has dramatically changed in the past two decades due to the abrupt transition from an apartheid government to a democratic government and an economic recession. These and other major events have shaped the health care system to what it is today.

During the apartheid era, the National Party established what was commonly called The Grand Apartheid, whose goal was to secure White control and promote ethnic separation by classifying all South Africans into White, Black, Colored, or Asian ethnic categories. Apartheid laws and policies affected all aspects of citizen life, including the health sector. Some of the latest research and news reports indicate that health care disparities among South Africans may not have improved as expected. There is also a growing nostalgia to return to the old system (Mattes, Yul Derek, & Sherrel, 2000).

Has health care improved, worsened or remained the same post apartheid among South Africans? How is health care perceived now? In order to explore these questions, data from Rounds 1 and 2.5 of the Afrobarometer, a national survey of South Africans

containing information about South African life, including issues pertaining to health and health care, was examined.

### *Objectives*

The objective of this dissertation is two-pronged. In order to illustrate the most well rounded picture of the health care system in South Africa, both perceptions and reality need to be explored. In many instances reality and perceptions affect each other. For example, if one perceives the health care system to be inadequate, one may not consume as much of it, but rather seek alternative means of health care. This project's findings will contribute to enhancing the evidence available for the economic, cultural, social and structural determinants of access to health care and public health in South Africa.

- A. The first objective is to investigate ethnic disparities in the perception of the health care system in post apartheid South Africa. Perceptions of the health care system among the four major ethnic groups (Blacks, Whites, Coloreds [i.e., those of mixed race], and Asians) will be analyzed using Round 2.5 of the Afrobarometer surveys. In addition, this analysis will be replicated with Round I of the Afrobarometer surveys to make relative comparisons and identify directional trends. There have been several studies examining South Africans' perception of the new government and democracy, but research studying the perception of how the government is handling the new health care system is not as

available (Mattes, 2000). Do South Africans perceive healthcare to have improved, stayed the same or worsened after apartheid?

Hypothesis: Blacks and Coloreds perceive the government to not be handling healthcare well, but to a lesser degree than Whites and Asians.

B. The second objective is to investigate ethnic disparities in obtaining medical care among the four major ethnic groups (Blacks, Whites, Coloreds, and Asians) in post-apartheid South Africa. Has health care access improved, worsened, or remained the same among South Africans after apartheid? Like in the first objective, the analysis will be performed with both Round I and Round 2.5 of the Afrobarometer surveys. There have been many reports documenting post-apartheid South Africa with descriptions of isolated events, national statistics, summaries and testimonials. Few studies have examined the South African health care system using data obtained from surveys of South African citizens.

**Hypothesis 1:** There are substantial disparities in health care access across different ethnic groups.

**Hypothesis 2:** Blacks and Coloreds will have less health care access than Whites and Asians, and they will be the most disadvantaged groups in the study period.

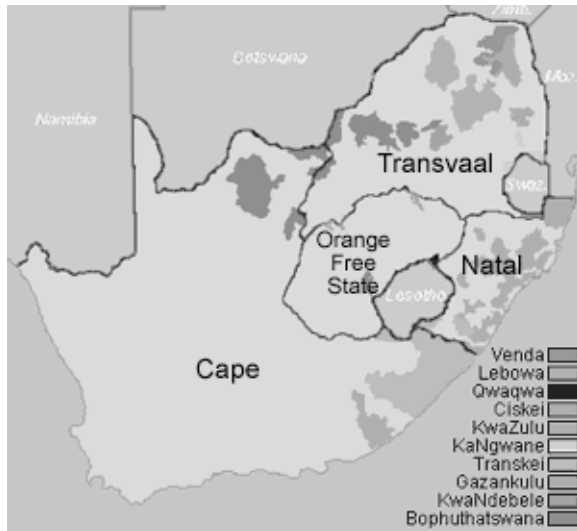
## CHAPTER 2

### LITERATURE REVIEW

#### *History of Apartheid*

South Africa's political and economic state has dramatically changed in the past decade due to the abrupt transition from an apartheid government to a democratic government led by the African National Congress (ANC). During the apartheid era, all South Africans were categorized into the four major ethnic groups seen today. The government prohibited inter-racial marriage, established White, Asian, Black and Colored jobs, and allowed for legal discrimination and many other injustices (Cameron, 2003). South Africa has always been delineated by provinces. During apartheid, there were four provinces (Transvaal, Orange Free State, Natal and Cape) and ten homelands (Venda, Lebowa, Qwaqwa, Ciskei, KwaZulu, KaNgwane, Transkei, Gazankulu, KwaNdebele, and Bophuthatswana) where Blacks were forced to live. The map below illustrates the old delineation of provinces under apartheid (131 SAinfo Reporter 2010).

Figure 1: Provinces During Apartheid



(SAinfo Reporter, 2010)

Blacks were no longer citizens of South Africa but citizens of their respective homelands. After the new democratic government took over in 1994, the four provinces were broken into the nine provinces of today and the homelands disappeared, although most Blacks still live in the same geographic regions and these are still the most disadvantaged areas. The nine provinces are: Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Limpopo, Mpumalanga, Northern Cape, North West and Western Cape.

Figure 2: Provinces After Apartheid



131 SAINfo Reporter 2010

There are four major ethnic groups in South Africa, as stated above, but these are not homogeneous groups. Within, Blacks, there are several sub ethnic groups including: Zulu, Xhosa, Basotho, Bapedi, Venda, Tswana, Tsonga, Swazi and Ndebele. Nor are Whites homogeneous, descending from a variety of ethnic groups including Dutch, Flemish, English, Portuguese and French. Coloreds is the term used for people of mixed race, mainly between Blacks and Whites. Asians encompass a broad range of Asian ethnicity, including Chinese from mainland China, Vietnamese, South East Asians and Indians (SAINfo Reporter, 2010).



Apartheid laws and policies affected all aspects of citizen life, including the health sector. While the vulnerability of patients in health care settings due to asymmetry of information is well understood, in South Africa, this vulnerability was magnified by human rights violations based on race. According to the American Association for the Advancement of Science (AAAS) and the Physicians for Human Rights Organization, the South African health care system not only limited access to health care for Blacks and often ignored quality of care guidelines, but also created an environment where abuses such as refusing emergency care treatment, falsifying medical records, denying or limiting access to Blacks to ongoing medical care and mistreating the mentally ill could occur (Dabis et al., 2000).

Marked disparities in health were documented between Blacks and Whites during apartheid. In 1981, there was one physician for every 330 Whites, while there was only one physician for every 91,000 Blacks. Infant mortality was 20% in the Black population compared to 2.7% in the White population. The life expectancy in 1980 was 55 years for Blacks, 58 years for Colored, 65 years for Asians, and 70 years for Whites. The incidence of tuberculosis in 1985 was 211 in Blacks, 429 in Coloreds, 80 in Asians and 18 in Whites per 100,000 (Centers for Medicare and Medicaid Services, 2004). One of the contributing factors for the stark disparities between the ethnic groups was the access to health care and the segregation of available health facilities. Most doctors practiced in urban areas where socioeconomic levels of residents were higher and could afford the medical fees. This left the homelands with little to no access to proper health care.

Blacks had to travel long distances to overcrowded and understaffed health clinics. Even if a health care facility such as a hospital was available, it is possible that it was designated to another ethnic group; and therefore, a place where Blacks could not seek treatment. In addition to the proximity of medical facilities, the cost of health care was another barrier to accessing health care. Although sliding scale fees were available, most Blacks could not afford those fees and private health insurance was also cost-prohibitive for most (Dabis, 2000).

Although the language of discrimination was taken out of the constitution, individual and corporate attitudes against non-Whites may still persist. After 1994, the new government set priorities to rebuild South African society. These included the improvement of the employment rate and access to quality housing, education, nutrition and health. Programs were developed in order to decrease disparities in these areas. For example, there have been some improvements in the area of policies regarding access to education for all. Although, sharp educational disparities still exist, access to education for all ethnic groups has dramatically improved since 1994. In 1996, 19% of the total population had no education compared to 10% of the population in 2007 (Bradshaw, 2008).

Many researchers have noted that disparities may still exist and discrimination may still play a role in health care. It has been 15 years since the end of Apartheid. Has the health care environment improved, do Blacks and Coloreds have better access to health care and is life in general better for these ethnic groups? How do Whites and

Asians perceive the health care changes post apartheid? These are all questions that need to be answered in order to assess the new health policies put in place after apartheid and to determine the best path to insure the well-being of all South Africans.

### *Health care disparity and equity*

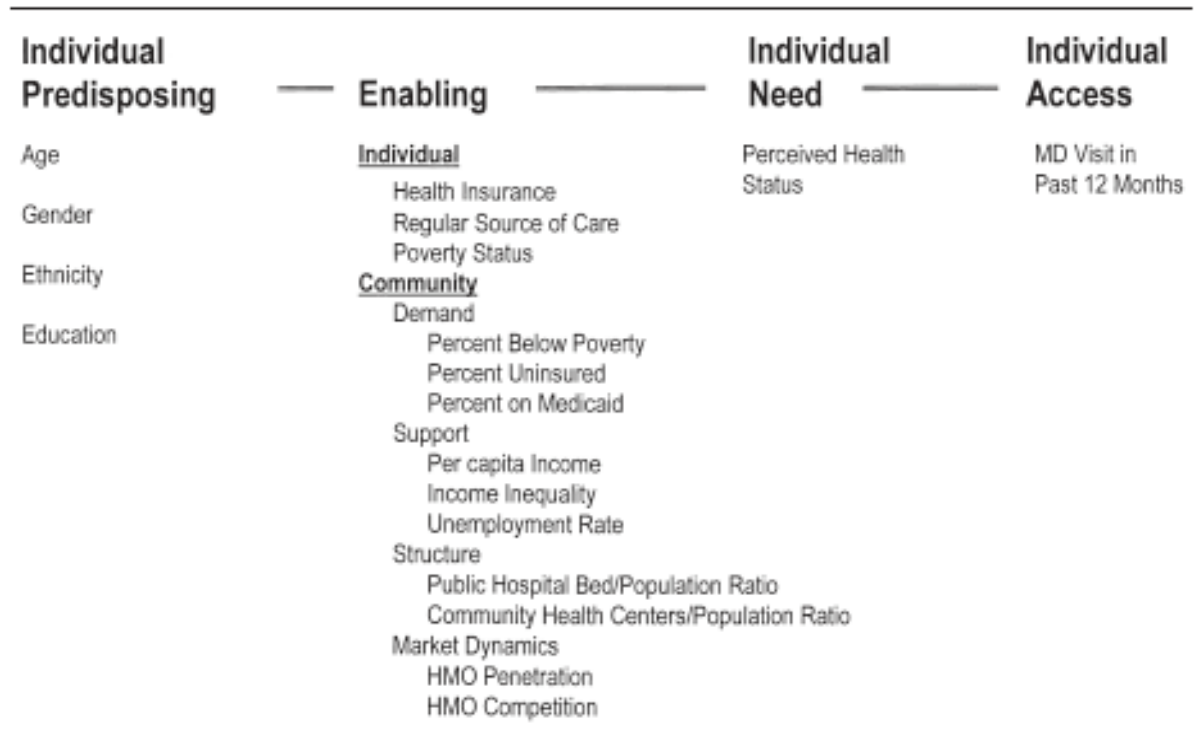
It is difficult to create an environment of complete equality when a society is branded by a long history of injustice and conflict. One of the root issues in health care disparities is health equity. There are two proposed ways to think about health care equity. One is equal access to and utilization of health care for those in equal need of health care, and the other is equal health outcomes (e.g., life expectancy and infant mortality) (Burrows, 2008). In fact, health equity is such a complex phenomenon that it is imperative to look at both sides of the spectrum, accessibility on one end health outcomes on the other end. They are both intrinsically tied together. One of the most popular definitions of health equity is “the absence of systematic disparities in health (or in the major social determinants of health) between social groups who have different levels of underlying social advantage/disadvantage” (P. Braveman & Gruskin, 2003). In South Africa, Whitehead defines the absence of health equity as an environment where the population experiences “differences in health which are unnecessary and avoidable but, in addition, are also considered unfair and unjust” (Whitehead, 1992). Taking the definition of health equity a step further, it is proposed that the root of health inequalities lies in the social determinants of health. The social determinants of health are most commonly measured by factors such as income, education, occupation, gender, race,

ethnicity, degree of urbanization and religion. These factors are frequently used in empirical studies, but there are many other dimensions of measuring disparities in health care. In South Africa, Dahlgren and Whitehead developed a model that highlighted the determinants of health in post apartheid South Africa. The determinants include: general socioeconomic factors, cultural and environmental factors, living and working conditions, social and community factors and individual lifestyle factors (Bradshaw, 2008). The authors did not try to attribute the direction of causality of any of these factors and health but simply stated that these are factors that most influence the health of South African citizens.

The Andersen model, which was developed in the late 1960s by Andersen and Newman, is the most widely used model to identify determinants of health (R. Andersen & Newman, 1973). The purpose of the model was to enable the understanding of “why families use health services; to define and measure equitable access to health care; and to assist in developing policies to promote equitable access to health care” (Bradley, 2002). The model illustrates how health services use is determined by societal factors, health services factors, and individual factors. Individual factors include the need to use health services, enabling factors and predisposing factors. Need is defined as the “individuals’ perceived and evaluated functional capacity, symptoms, and general state of health” (Bradley, 2002). Enabling factors include “family and community resources and accessibility of those resources”. These are the factors that would enable someone to obtain medical care. Predisposing factors are identified as the social determinants of

health including age, sex, marital status, education, race/ethnicity, and occupation. In addition, the predisposing factors include beliefs such as the attitudes and perceptions toward health services, knowledge about the health care system and their own health, values and cultural norms. Predisposing factors shape our perception of health care and may help researchers understand how and why (or why not) people access care (R. Andersen & Newman, 1973; R. M. Andersen, 1995; R. M. Andersen, 2002; Bradley, 2002). Below is the pictorial representation of the Andersen Model and how each contributing factor influences health care access.

Figure 3: Individual & Community Predictors of Access to Medical Care for Low-Income Pop.



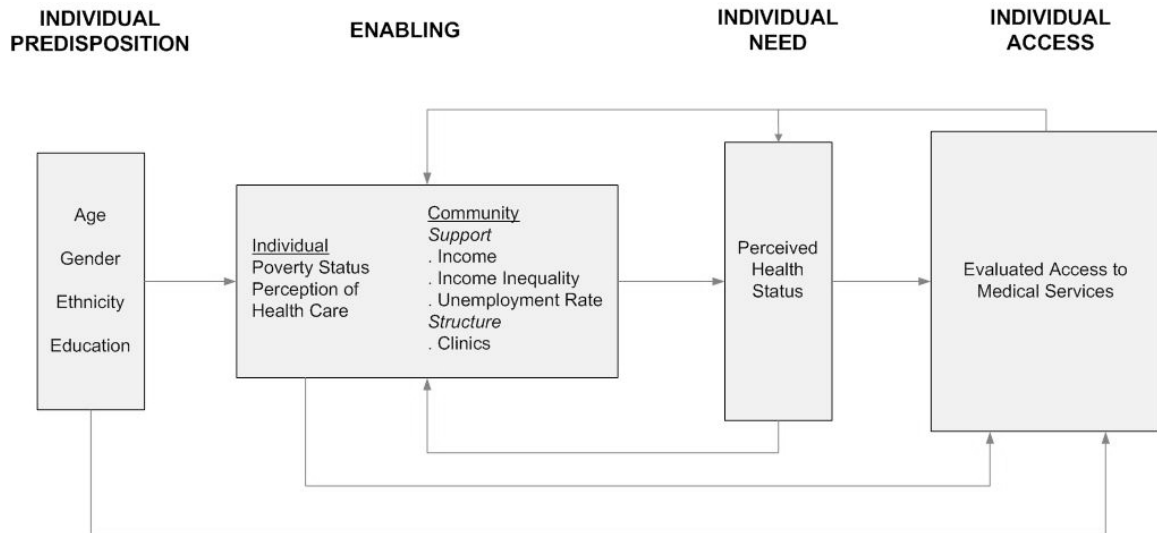
**FIGURE 1 Individual and Community Predictors of Access to Medical Care for Low-Income Populations**

(Andersen, 2002)

The complex interaction of these factors and other social derivatives may place individuals in situations and environments that limit opportunity for advancement and contribute to poor health status. There is growing evidence for the strength of social determinants and other predisposing factors to not only affect health status, but also the overall perception of health and health care (Marmot, 2002; Marmot, 2006; Burrows, 2008; Graham, 2004).

This study will utilize the Andersen model illustrated above as its conceptual framework. It aligns well with the objectives of this study and will aid in exploring the contributing factors that explain disparities in access and perception of health care. Below is an illustration of the application of the 2001 Andersen model with the variables chosen for this study.

**Figure 4: Individual and Community Predictors of Access to Medical Care in South Africa**



At the macro level, there is a clear association between health and the overall socioeconomic makeup of a country. The steeper the socioeconomic slope, the greater the disparities in health. In middle-income developing countries like South Africa, there is a growing gap between the poor and the rich. As a result, there may be growing disparities in health between the different socioeconomic groups (P. A. Braveman,

Egerter, Cubbin, & Marchi, 2004; Burrows, 2008).

This situation is not unique to South Africa. The socioeconomic and health gap is growing in many developing and even industrialized countries like the United States. One aspect of social determinants that is not often measured is degree of discrimination. As in South Africa, a similar history of ethnic discrimination played out in the United States. Sociological surveys continue to demonstrate high levels of ethnic discrimination and segregation (Williams & Jackson, 2005). Ethnic discrimination has been associated with poorer physical and mental health (Borrell, Kiefe, Williams, Diez-Roux, & Gordon-Larsen, 2006). Reviews of empirical research have also shown a strong link between discrimination and health through forms of institutionalized mechanism of discrimination, such as the geographic and social marginalization of a group (Ahmed, 2007).

Although the policies of discrimination and segregation have been abolished in the United States, the remnants of these policies are still evident. For example, African Americans and Whites tend to live in separate neighborhoods that are socioeconomically divergent. The vestiges of this unfortunate history are seen not only in the geographic allocation of African Americans, but also their health status, social networks, and access to opportunities to rise from their socioeconomic status and related factors such as education. In addition, the influence of discrimination has been studied as a causal factor in explaining disparities in the major health outcomes and the incidence/prevalence of major chronic diseases, acute illnesses and mental health (Bibbins-Domingo, 2009;



Borrell, Castor, Conway, & Terry, 2006; Chadiha, Proctor, Morrow-Howell, Darkwa, & Dore, 1995; Coker et al., 2009; Foulds, Williams, & Gandhi, 2006; Harper et al., 2004; Morrow-Howell, Chadiha, Proctor, Hourd-Bryant, & Dore, 1996; Thompson, 2002; Whitehead, Callaghan, Johnson, & Williams, 2009). Some researchers suggest that public health professionals should focus on increasing the opportunity for overall healthy living rather than focus on specific health disparities, because it is by creating opportunities for socioeconomic advancement (improving neighborhood safety and availability of jobs, creating opportunities for educational advancement, etc.) that one can permanently improve one's health and obtain desirable health care (Acevedo-Garcia & Osypuk, 2008; Ahmed, Mohammed, & Williams, 2007; Borrell, Kiefe, 2006; Williams, 2005).

The Institute of Medicine (IOM) convened in 2007 to discuss the importance of strengthening the research of ethnic/racial disparities in the United States. The resulting report highlighted health disparities and inequalities experienced by all minority groups in the U.S. A special focus was granted to geography on health disparities, health disparities in business and major proposed causes of health disparities among ethnic groups (Institute of Medicine of the National Academies, 2009). It is important to analyze health equity in the United States, given the gaps in health care access, the variations in health care literacy and socioeconomic levels. One of the key research papers in the discussion of health disparities is Murrays' 'Eight Americas'. There are growing health disparities by geographical sectors, race/ethnicity, gender, and

sociodemographic status (Murray, 2006). This can be compared with international inequities in access to healthcare. It is because of the worldwide environment of health disparities that research on this topic is important.

Given the severity of the ethnic discriminatory history of South Africa and the gross disparities in health between the major ethnic groups, the effects of race and socioeconomic status may be larger. A closer look at how race and socioeconomic status (SES) influence health is warranted at this point after looking at the overall picture of health care disparities and equity. It is relatively clear that there are health disparities between major ethnic groups all over the world, including South Africa and the U.S. Looking at the U.S. as an example, overall Blacks experience poorer health than Whites. This fact is evident, but what is missing is the causal piece. Can this be explained by race or SES or both? Many studies have reported that when controlling for either, the other is still significant (Farmer & Ferraro, 2005). There are two hypotheses that attempt to build a framework in which to study the interaction between race and SES. One is called the Minority Poverty hypothesis (Billingsley, 1992; Willie, 1989), which poses that Blacks (or any severely disadvantaged group) experience great challenges to health and well being due to poverty and race. These challenges are present from birth to old age. This theory is supported by Wilson's "truly disadvantage" (Wilson, 1987). The second theory focuses on return on investment. It states that minority groups do not experience the same return on certain investments as Whites. For example, the investment in education and increase in income do not pay off as much as it does in Whites in terms of health.

Minority groups have been documented to experience diminishing returns on investments in education and other sociodemographic factors. Farmer found that the greatest disparity in self-rated health was greatest at the highest SES levels concluding that Blacks did not have the same improvement in self-rated health as Whites as they moved up the SES ladder (Farmer & Ferraro, 2005). There are a limited number of studies that address this dilemma. As in most things, it is probably a complex combination of the two. Continuing research in this area is crucial for the understanding of the relationship between health, race and SES.

### *Health care in South Africa*

South Africa provides a fascinating environment in which to perform health disparity research with its distinct ethnic/racial populations, its past policies and practices of ethnic discrimination, and its current efforts to eliminate disparities. Lessons learned in South Africa can be translated to other societies with similar ethnic/racial differences and growing disparities like the United States.

After the relatively quick transfer to a democratic government in 1994, it was important to build a cohesive society in which the government worked for all peoples. For this reason, it was thought that the choice of health care system was crucial for social tranquility and progress. In 1995, Benatar and Rensburg concluded that South Africa had a choice of three health care paths: 1. “a two-tier health care system dominated by an elitist, open-ended, and exorbitantly expensive private sector, which disables medical schools and undermines a public sector struggling to provide adequate primary and

secondary services to a poor majority”, 2. “a totally socialized health care system concerned almost exclusively with primary health care”, 3. “progress toward some kind of national health system- (whether national health insurance or a national health service), which, through an appropriate blend of high quality public and private, as well as primary, secondary, and tertiary services, could provide more equitable access to health care and improve the health of many who are currently marginalized” (Benatar & van Rensburg, 1995). As history has demonstrated, South Africa moved and is moving closer toward the first path. Currently, there are two health care systems in South Africa: one that is largely publicly funded that serves most South Africans and a privately funded health care system that serves the small percentage of people who are able to afford it, mainly Whites and Asians. Most of the national health expenditure was allocated to building a medical infrastructure that was ultimately used by urban inhabitants and the privately insured. Privately insured patients still pay a highly subsidized fee for medical care and receive tax benefits for their contributions to the private health sector. In 1992/1993, right before the end of apartheid, 59% of doctors, 93% of dentists, and 89% of pharmacists worked in the private sector (Kahn & Marseille, 2000).

The competition between the private and public sector still exists as medical professionals are choosing to work in the more profitable private sector. The public sector is increasingly overburdened, as most of the population cannot afford to utilize the private sector. It is tasked with providing medical care for 80% of the population, while the private sector treats just 20%, who are mostly middle and upper class citizens that

have private insurance. This is despite the fact that most resources continue to flow toward the private sector. This disparity can be seen in drug expenditures. Out of the R8.25 billion spent on drugs in 2000, only 24% of this was spent on the public sector (R59.36 spent in public sector vs. R800.29 spent in private sector) (SouthAfrica.info, 2008). For this reason, 40% of pharmacists still choose to work in the private sector even though they serve only 20% of the population. In addition, the majority of the 40% choose to work in Gauteng, one of the most affluent regions of South Africa (SouthAfrica.info, 2008).

In addition to the seemingly inequitable distribution of resources, subsidies are given to the private sector. These subsidies include tax concessions to insurance companies (medical scheme companies) and tax subsidies to employers who offer medical schemes to their employees. Proposals have been introduced in the South African government that attempt to decrease subsidies to the private sector, including increasing charges to medical scheme members at public sector hospitals and improving billing procedures. One of the proposals that has been successfully passed is called 'community service'. It mandates that all new physicians dedicate one year to the public sector before they can move to the private sector (D. McIntyre & Gilson, 2000).

One example of the disparities in distribution of resources by province is seen in the availability and quality of health clinics. The 2000 Survey of South Africa reported an increase in the availability of telephones in most clinics (80.5% of fixed clinics have telephones). Disparities across provinces are common: 59.4% of fixed clinics in the

North West province have telephone service compared to 100% of clinics in Free State, Gauteng, and Western Cape. Communication constraints are even worse in mobile and satellite clinics. Sixty percent of satellite and mobile clinics in the Northern province do not have telephone access. Forty percent of these clinics in KwaZulu Natal also do not have telephone access. The majority of fixed clinics have electricity (92%). Nonetheless, a large percentage of clinics in less affluent provinces do not have electricity available to them (22% in North West, 14% in Eastern Cape and 12.5% in Northern Province).

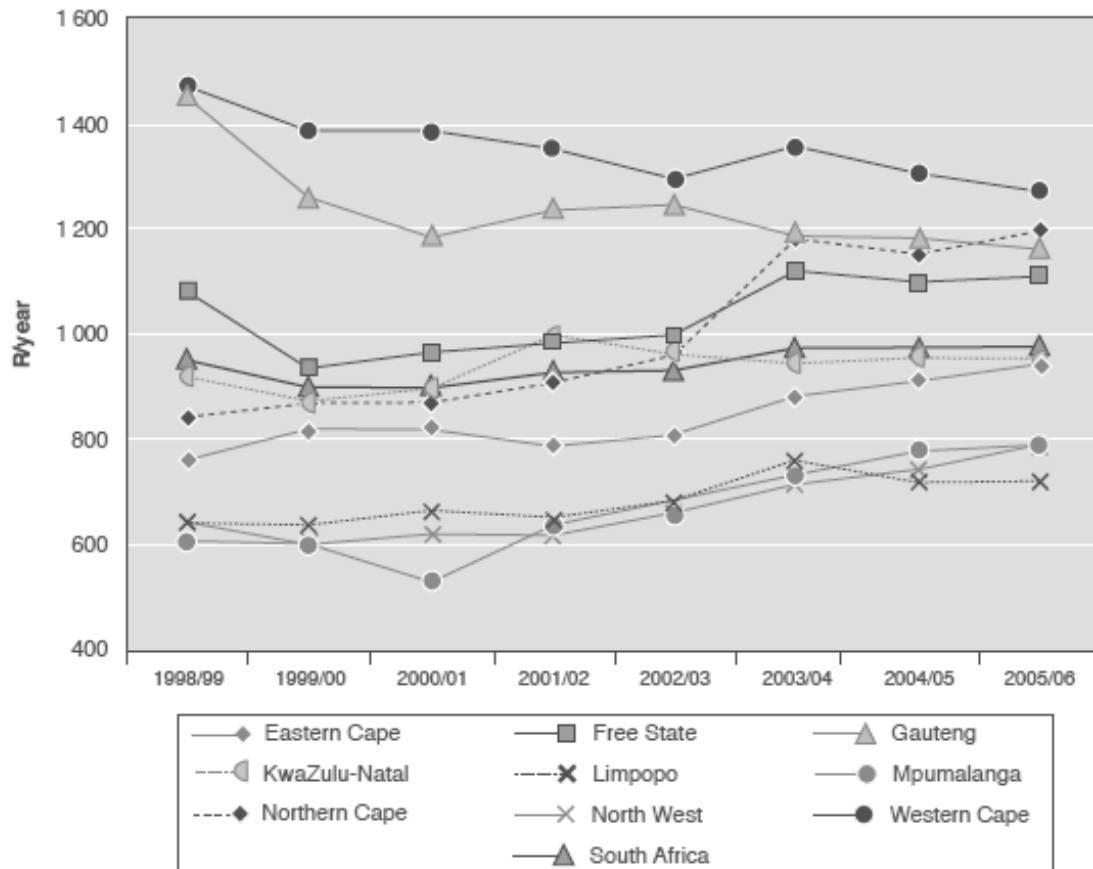
Reliable water availability continues to be a challenge. Nearly 13% of satellite clinics still depend on water delivered by a tanker, 5% of satellite clinics obtain water from a river or dam and 12% of fixed clinics rely on rainwater. Another challenge area is the availability of a flush toilet in the clinic. Thirty percent of fixed clinics in Eastern Cape, 19% in the North West and 13% in Northern Province do not have flush toilets while all clinics in Free State, Gauteng and other more affluent provinces have at least one flush toilet.

Due to the emphasis on primary health services (PHS), there have been some improvements in the availability of certain services offered by clinics. These include immunizations, family planning, postnatal care, antenatal care and STD and TB care. Certain provinces have seen better improvements than others. Even though the availability of services is still lower than in more affluent provinces, KwaZulu Natal, Eastern Cape and North West have seen the sharpest increases in the availability of services (Ntuli, 2000).

Disparities by province are also seen in patient load. Nurses at clinics in the less affluent provinces of KwaZulu Natal and Northern Cape have a patient load of 600 per month which translates to 25 per day whereas nurses in more affluent provinces the patient load per month is 400 or 16 per day. The availability of doctors has improved since 1994 except in KwaZulu Natal and Western Cape where the percentage of clinics visited by doctors in the last month has decreased. In 1997, the figure was 86%. By 2000, it had dropped to 65%. In Western Cape, the drop was not as dramatic but it did decrease from 77% to 68% within those three years (Ntuli, 2000). There is uneven allocation of resources, especially public health resources, by region. Regions such as Eastern Cape, one of the poorest parts of the country, are allocated fewer health resources and experience the poorest health outcomes. The wealthiest regions, such as Gauteng and Western Cape, receive more health resources and in turn have good health outcomes. The figure below speaks to the disparities in the distribution of resources among the provinces as seen by per capita expenditure (Ijumba, 2004).

Figure 5: Per Capita Expenditure (Rand/Yr, real 2003 prices)

Figure 1: Per capita expenditure (R/year, real 2003 prices)



(Ijumba, 2004)

Health care financing was one of the central focus areas of the newly elected democratic government in 1994, and its catalysis was the pursuit of equity. Specifically, the goal was to achieve equity in the areas of primary health care and health care financing. But since 1994 there has been a tug-of-war between the desire to redress the inequalities left behind by apartheid and the introduction of fiscal federalism and macro-economic policy. The leading macro-economic policy was introduced in 1996 as the



Growth, Employment and Redistribution Strategy (GEAR). It was developed to spark economic growth in South Africa through private investment, improvements in productivity and better export competitiveness. It also promised to reduce the public sector deficit and maintain tight monetary and fiscal policies. Unfortunately, along with these seemingly economically sound policies came constraints to health sector financing. It placed limits on the expansion of public sector expenditure. The reasoning behind that was that public expenditure growth must be lower than overall economic growth. Since in the 1990s economic growth was mixed and South Africa entered a recession in the last decade, this economic policy failed. The sum of the new fiscal policies and budgeting process has stalled the progression toward equity. The 2000 South African Health Survey identified some of the ways the path towards equity had been derailed: 1. Decentralization of budgetary authority to provinces made decisions around the provincial health allocation hostage to local politics, 2. The focus of conditional grants is related to levels of care and not to equity, 3. The budgeting process does not give explicit concern to equity in health sector funding across provinces, and 4. The Department of Finance inter-provincial resource allocation formula downplays equity concerns by including components and weightings that favored richer provinces (Ntuli, 2000). Intra-provincial inequities continue to grow, in part, encouraged by current health policy (Ijumba, Day, & Ntuli, 2004).

The expenditure per capita by the private sector compared to the public sector has risen sharply in the last decade. Due to the increase in cost of private health care, medical schemes (private health insurance) coverage is getting more and more expensive. It is estimated that the increase is mostly attributed to rises in non-health expenditures like administrative costs, health care management fees and broker fees. This scenario sounds eerily familiar. South Africa will soon encounter the same problems that the U.S. has with rising cost of health care and the cascade of health care challenges that flow from it.

The health care system continues to suffer from not only the burden that HIV/AIDS has created and the shortage of public sector funding, but also from the exodus of health workers from the public to the private sector or abroad. Health workers have steadily moved to the private sector or abroad to seek better pay and better work environments. Since the move to the District Health System, which will be explained in further detail below, workers have also experienced what has been called ‘transformation fatigue’. Health workers have grown weary of the changes and shuffling of responsibility (Ijumba, 2002). But despite these challenges the DHS has survived and has begun to take hold as both health care providers and patients better understand its purpose.

Because of its penetrating reach into all aspects of South African society, it is important to discuss the effects of HIV/AIDS on the health care system. The prevalence of the disease has somewhat stabilized in the last decade between 2001 and 2009. The percentage of people between the ages of 15-49 who are HIV+ increased only slightly

from 15.3 to 17%. The percentage of HIV+ people in the total population increased by approximately one percentage point from 9.3% to 10.6%, which translates to a total of 5.21 million South Africans. (Statistics South Africa, 2009) This disease has been an undercurrent influencing all aspects of life in South Africa (Ntuli, 2000). It was speculated that there would be fewer and fewer people reaching older age in the Black population due to AIDS deaths. This was reflected by the 2008 life expectancy projections. The life expectancy of Black men was 22 years less than that of Whites, 18 years less than Asians and 13 years less than Coloreds (Barron & Roma-Reardon, 2008).

Although the campaign against HIV/AIDS is now very well established and there seems to be a stabilization of HIV/AIDS numbers, life expectancy has not similarly improved. In November of 2009, the South African Institute of Race Relations reported that South Africa is one of only six developing countries where life expectancy has fallen in the last two decades. The average life expectancy declined from 62 years in 1990 to 50 years in 2007 and it is projected to continue to decline. There is also a clear association between the provinces with the highest HIV rates and declining life expectancies. For example, KwaZulu Natal has the highest prevalence of HIV and also the lowest life expectancy, 43 years. The leading causes of death in these provinces are all associated with HIV/AIDS, namely tuberculosis, influenza/pneumonia and various opportunistic infections (UN Office for the Coordination of Humanitarian Affairs, 2010).

South African leadership ignored the spread of HIV/AIDS for many years after the ANC took over in 1994 under Nelson Mandela's leadership. Mandela had an insurmountable task in transitioning South Africa into an era of democracy. HIV/AIDS

was not on the priority list. In the mid 1990s there was an opportunity to prioritize the disease and to bring an end to the rumors and misconceptions that fueled the spread of the virus. Unfortunately president Thabo Mbeki's blatant denial of the problem led to some disastrous years in which policies that attempted to address the problem were all but discarded, confusion about the disease and its spread caused panic and stigma and the incidence and prevalence of the virus had the time to grow into the epidemic that South Africa is still trying to control (Barron & Roma-Reardon, 2008).

There have been few studies that have measured health care access in the current South African system and the researchers dedicated to the study of this are also very few. Lalloo highlighted the issue of access to health in South Africa in terms of the influence of race and class in 2004 (Lalloo, Myburgh, Smith, & Solanki, 2004). This was the first time that access was measured since the new policies under the Reconstruction and Development Program were initiated and has not been fully studied since. The policies' goals were to improve health and access to health care and to address the inequities that had been inherited from the Apartheid era. The researchers utilized the second Kaiser National Household Survey on health inequalities in South Africa, 1998 to assess the impact of the new policies. The first round of the survey was administered in 1994 and a second survey has not been administered. The goal of these surveys was to document the public's "awareness, perceptions, and attitudes toward health policy, health status, health care utilization, access and barriers to health care as well as quality of health care services" (Lalloo, 2004). According to this study there is a disconnect between perceived access and actual access. The main predictor of perceived access was race.

Blacks (OR 5.03) (CI 3.76-6.74), Coloreds (OR 3.06) (CI 2.20-4.26) and to a lesser extent, Indians (OR 2.44) (CI 1.54-3.86) were more likely to feel that access had improved between 1994 and 1998 than Whites. The main predictor of actual access was socio-economic status (SES). Those in the low and middle SES classes were less likely (OR 0.71 and OR 0.64 respectively) (CI 0.56-0.91; CI 0.49-0.83 respectively) to access care when sick compared to their high SES class counterparts (Lalloo, 2004).

### *Perception*

Most authors have concluded that the state of the health system for Blacks has not improved substantially since apartheid and that extensive work must be done to comply with new constitutional regulations of equality and access to health care, but how do South Africans perceive the new healthcare system (Baldwin-Ragaven, London, & De Gruchy, 2000; Benatar & van Rensburg, 1995; Bloom & McIntyre, 1998; Charasse-Pouele & Fournier, 2006; D. McIntyre, Muirhead, & Gilson, 2002; McIntyre, DI 2000; SouthAfrica.info, 2008)? This is an important question to ask because it is essential that citizens support wholly, if not in part, the different structures put in place for a society to function. A democracy without people supporting it and carrying it out will not stand for long. As Richard Rose and his colleagues have stated, “if political institutions are the hardware of a democratic system, what people think about democracy and those institutions constitute the software of that system. And as all systems designers know, software is just as important as hardware” (Rose, Mishler, & Haefpfer, 1998). In the same way, a health care system without people supporting it will not be a health care

system that meets the needs of its clients and is not sustainable.

Health perception is defined as the individual's view of his health, whether he views himself as being in a healthy state or ill state. It represents the feelings, ideas, and beliefs that one has about his health. These perceptions differ from person to person and may not accurately reflect that individual's actual health status (Connelly, Philbrick, Smith, Kaiser, & Wymer, 1989; Betancourt, Green, Carrillo, & Ananeh-Firempong, 2003; Davies & Ware JE, 1981). Perceptions of health care are defined in a similar fashion. Perceptions of health care reflect the feelings, ideas and beliefs that an individual has about the health care system. They also differ from person to person, but the cumulative perception of the system may reflect the actual status of health care. Cultural norms and social environment may also shape perception of both personal health status and the health care system (Roman, Griswold, Smith, & Servoss, 2008; Shavers, Shankar, & Alberg, 2002).

As discussed above, South Africa's ethnic disparities are not unique. The United States has experienced a similar history of institutional discrimination and is still suffering the effects of these policies. It is due to this history that African Americans may distrust the health care system and/or health care providers. Distrust, cultural differences in understanding and explaining illnesses, and history of hospital/clinic segregation and discrimination may all influence perception of the health care system as a whole and may therefore act as barriers to access to health care (Berry, 2006). These perceptions are simultaneously influenced by values, knowledge, attitudes, health beliefs, the quality of services received in the past and the sense of control over treatment.

Researchers have explored other factors related to perception that may act as barriers to health care that include social relationship between majority and minority groups, and group loyalty to autonomous institutions in the racial or ethnic minority community (Barsdorf & Wassenaar, 2005; D. McIntyre & Gilson, 2002).

Myburgh studied patient satisfaction with health care providers in South Africa as it is influenced by race and socioeconomic status. Studies on patient satisfaction and patient perception of health care in South Africa are still limited. The researchers used the second Kaiser National Household Survey on health inequalities in South Africa, 1998 described above. More Whites (61%) felt they received excellent care compared to Blacks (31%), Colored (38%) and Indian (38%). SES was also significantly related to satisfaction levels. Those in the high SES class reported better care than did those in the middle and low SES classes. The study also reported that more than half the respondents in the high SES group (54%) felt that they received excellent care compared with 38% of those in the middle income group and 26% of those in the low income group (Myburgh, Solanki, Smith, & Lalloo, 2005).

It is interesting how perception can directly or indirectly influence health. In a study by Moren-Cross, perceived neighborhood characteristics, such as barriers to services, deprivation of the neighborhood and social disorder, can be related to poor behavioral outcomes in children (Sarkin, 1999). The same can be said about physical health outcomes, such as the prevalence of diabetes, cardiovascular disease, cancer, and communicable diseases. Poorer perceptions of quality of life and the health care system

can lead to poor health outcomes (Ahmed et al., 2007; Choi, 2003; Ngom, Binka, Phillips, Pence, & Macleod, 2001; Pillay, 2001; Thompson, 1996; Thompson, 2002).

As mentioned above, how people perceive democracy and its institutions are crucial for proper functioning of the system, including the health care system. How do people perceive the government and life after apartheid? In a study by Mattes based on the cross-national survey research project known as the Southern African Democracy Barometer (SADB), researchers identified various obstacles to a strong and durable democracy in South Africa. Citizens' perceptions of the government are becoming more pessimistic and their support and participation in the system is low compared to neighboring countries. This is despite the fact that South Africans hold a better understanding of the concept of democracy as compared to citizens of neighboring countries. Thirty-one percent of Blacks feel that the current government is completely democratic, in contrast to 15% of Coloreds, 12% of Whites and 0% of Indians (Mattes et al., 2000).

In reference to satisfaction with government performance on various issues, South Africans' satisfaction has decreased since 1994. This finding can be explained by the "Churchill Hypothesis" which states that people's satisfaction with a democratic government does not solely rely on their love of democracy, but on whether or not they perceive that it is better than what they had before or better than other alternatives (Mattes, 2000). Most people arrive at this conclusion by assessing their life as compared to what it was before. The respondents were asked questions concerning equality, crime



and violence, access to basic necessities, standard of living, as well as, the extent to which they feel their lives are better or worse than under apartheid. Study findings demonstrate that most South Africans perceive that the new democratic regime has brought about improvements in personal and political freedom (freedom from arbitrary arrest (75%), freedom of speech (77%), freedom of association (84%), and freedom to vote (84%). Ironically, people report feeling that they have more personal and political freedoms than they report possessing greater equality and quality of life. As seen in the table below, the researchers surveyed South Africans on various issues related to freedom and rights. By identifying the respondents' ethnicity, they were able to make distinctions between the perceptions held by each ethnic group.

<u>Figure 6: Perceived Increases in Freedom and Rights in the New South Africa</u>					
	Total (%)	Black (%)	White (%)	Colored (%)	Indian (%)
Anyone can freely say what he/she thinks	77	86	37	74	54
People can live without fear of being arrested	75	83	37	76	45
Everyone is treated equally and fairly by government	60	64	15	42	7
People are safe from crime and violence	21	25	2	16	0
People have adequate standard of living	39	47	10	27	4
People have access to basic necessities (food/water)	51	57	25	46	17
* % Better/Much Better  (Mattes, 2000)					

Interestingly, a pairing trend can be observed in these data. Blacks and Coloreds often perceive issues similarly, sometimes contrasting with the perceptions of Whites and Indians. For example, 64% and 42% of Black and Coloreds respectively perceive that everyone is treated equally and fairly by the government in contrast to 15% and 7% of Whites and Indians.

While most South Africans perceive life under the new democratic government as better than under apartheid, there is a growing nostalgia for the old regime. Twenty-three percent of the total sample surveyed rated the apartheid system as better than the current one, 8% rated them the same and 69% rated the current government as better than the apartheid system (out of scale of 0-10, where 0 is the worst form of government, 5 is neutral and 10 is the best form of government). Differences in the perception of the current government versus the apartheid government are seen when it is broken up by race. Fifteen percent and 41% of Blacks and Coloreds respectively gave apartheid a better rating compared to 51% of Whites and 62% of Indians. Seventy-nine percent and 49% of Blacks and Coloreds respectively gave the current government a better rating compared to 30% and 26% of Whites and Indians. Nonetheless, all ethnic groups overwhelmingly rated crime and safety after apartheid poorly. Ninety-two percent of Whites feel that crime and personal safety has deteriorated over the years after apartheid; so did 58% of Blacks, 44% of Coloreds and 71% of Indians (Mattes, 2000).

Trust in those that govern a nation's citizens is an important element to a stable society, a trust that the government is working for the people and for the betterment of quality of life. South Africans' trust in the government has waned over the years. For

example, in the Mattes study, respondents were asked to rate their trust in the different government entities. Only 25% of Blacks, 11% of Whites, 22% of Coloreds and 19% of Indians trusted their local government. In addition, respondents were asked to rate the government's performance on various societal issues such as creating jobs, managing the economy and improving health services. In the area of job creation, only 11% of Blacks, 6% of Whites, 8% of Coloreds and 4% of Indians thought that the government was doing fairly well/very well. In improving health services, 51% of Blacks 13% of Whites, 31% of Coloreds and 4% of Indians thought the government was doing fairly well/very well. A pairing trend was evident in the outcomes of several variables, including ensuring prices remain stable, reducing crimes, improving health services, addressing educational needs, and managing the economy. Blacks and Coloreds consistently rated government performance better than Whites and Indians. For example, in managing the economy, 31% and 23% of Blacks and Coloreds respectively thought that the government was doing fairly well/very well, in contrast to 14% and 9% of Whites and Indians (Mattes, 2000).

Economic redistribution and equality after apartheid was one of the most important challenges of the new government. After years of biased allocation of goods, it is difficult to achieve economic equality. In fact, only 23% of South Africans believe that the government is doing a good job at narrowing the income gap between the ethnic groups. One of the most telling opinions is that of the preference of the current government system over the apartheid system and vice versa. Only 12% and 9% of Whites and Indians respectively thought that the current system is more effective in the

way it performs than the old system, in contrast to 47% and 27% of Blacks and Coloreds respectively. All four ethnic groups had similar opinions of the corruption level of the current government. Twenty-nine percent of Blacks, 20% of Whites, 28% of Coloreds and 11% of Indians think that the current system is less corrupt than the old system. Forty-three percent of Blacks, 11% of Whites, 28% of Coloreds and 11% of Indians thought the current system was more trustworthy than the old system. By looking at these data, one may be able to conclude that most citizens of South Africa do not perceive the current system to be superior to the old system. It may not be any more trustworthy or any less corrupt (Mattes, 2000).

#### *Health Care Policy Environment*

It is key to assess the implementation of new policies in South Africa and to inform policy makers on the effectiveness and impact of these policies. The South African Health Review is a survey done yearly that serves as a “knowledge resource on the development of the national health system, and to contribute to the assessment of the implementation of health policies” (Health Systems Trust, 2009). The reports that have been produced using this survey have given this paper and other research studies the perspective needed to evaluate the health care system. Since 1994, many new policies and regulations were enacted to reduce health disparities that were created during the apartheid era. Unfortunately, with respect to the most basic prerequisite for equity in the health care sector and health care financing, the trend toward increased equity that took place during the first few years of the democratic government appears to have reversed.

The National Health Accounts Project revealed that since 1997 there have been declines in the public per capita funding of health care, increased inequity in provincial resource allocation and even a decline in per capita funding of primary health care. In 1998, there was a re-regulation of the Medical Schemes Act in order to promote equity through encouraging risk pooling and preventing the “dumping” of private patients on the public sector. In addition, the Act attempted to reach health financing equity between the major provinces. The conversation of a comprehensive Social Health Insurance was invigorated in 2000 through new policies affecting the public health sector; in particular, the transformation of local government to establish a District Health System (DHS). The Municipal Structures Amendment Act of 2000 transferred a substantial amount of the health care authority to the local government to establish the DHS. This also allowed for more of the public health care responsibility to fall onto local governments. Not surprisingly, there was a strong push against this because it was thought that this would encourage further fragmentation of the health system. In order to address this issue, the Minister of Health and Members of the Executive Council for Health demarcated the new local government boundaries. The number of municipalities was reduced from 834 to 285. Although this made sense conceptually to reduce fragmentation, it created its own challenges. It caused confusion for staff allocation and the role of each municipality that was absorbed. Some health districts were now too large to be manageable and had to be divided into smaller sub-districts. According to the 2000 South African Health Review, the move to a District Health System caused not only confusion, but duplication of services, wasted effort and time, and has had a negative impact on the morale of already

overburdened health workers , specifically those in the public health care sector (Ntuli, 2000).

The most recent South African Health Review (2008) indicates that the public health care sector continues to be under-funded and under-staffed. There are still major disparities in services and funding between the different health districts and growing disparities between the public and private sector. In addition, there are the external pressures of HIV/AIDS and other communicable diseases that continue to burden the public system. Although the health care picture is bleak, there have been some important policies put in place whose impact cannot be measured yet, but may have promising outcomes. Some of these include: the Nursing Act of 2005 that introduces community service for nurses, the mandate for community service for new doctors, the establishment of rural and scarce skill allowances to attract and retain health workers in rural areas, the creation of the National Community Health Worker Policy Framework (NCHWPF) which provides community health workers to primary health facilities, and a new wage structure for nurses (Barron & Roma-Reardon, 2008).

### *Significance*

This project's findings will contribute to enhancing the evidence available for the multifaceted determinants of access to health care and public health including economic, social and structural factors in South Africa. As stated above, few studies have examined South Africans' access and perception of the health care system using data obtained from surveys of its own citizens. As mentioned above, the seminal study in this area of

concentration is the 2004 Lalloo et al. study of access to health care in South Africa. This study was performed using 1998 data and based on the findings of the investigator, there has not been another more recent investigation to assess access to health care in South Africa.

With the lingering effects of apartheid influencing the health of the nation, it is important to document improvement, if any, in access to health care among different ethnic groups. News reports and other non-academic reports abound about the state of the government, economy and health care, but there is a need for scientific data to confirm these reports. This project will examine important predictors of health care access and perception of the health care system. Based on the definition of perception used in this paper, the tumultuous history of South Africa may influence how citizens perceive health care. As discussed earlier, it is valuable to analyze the effects of discrimination on perceptions of health care in the U.S. for a comparable history. The vestiges of this unfortunate history are seen from the geographic allocation of Blacks and Whites, to sociodemographic status, to health status, to social networks. These factors may influence perception of health care among other aspects of society.

South Africa provides an environment in which to perform health disparity research with its distinct ethnic/racial populations, its past policies and practices of ethnic discrimination, and its current efforts to eliminate disparity. It may be possible that lessons learned in South Africa can be translated to other societies with similar ethnic/racial differences and growing disparities, such as the United States.

## CHAPTER 3

### METHODOLOGY

#### *Data Sources*

The data for this study comes from the 2000 and 2004 Afrobarometer survey of South Africa, entitled: “The Afrobarometer: Round 2.5 Survey of South Africa, 2004” and “The Afrobarometer: Round 1 Survey of South Africa, 2000” (Jones, 2005). They are two of a series of surveys administered between 2000-2004. The other survey is entitled “The Afrobarometer: Round II Survey of South Africa, 2002”. They were developed and administered by the Afrobarometer network, which includes a consortium of social scientists from 16 African nations and Michigan State University. These surveys are national probability samples that represent a cross-section of the voting-age population of South Africa. Random selection was used in every stage of sampling; the survey was administered in all provinces of South Africa in proportion to the relative size of each province and ethnic group in the national population.

The surveys include questions addressing respondents’ current economic situation, their perceptions of the government’s handling of the national economy, what they believe to be the major political and social issues facing the country, and their political involvement and trust in government and business entities. In addition, the survey compared individuals’ perceptions of various issues during and after apartheid. The survey questions also examined sociodemographic characteristics, access to health care,



and other factors that may influence health, such as the presence of a health clinic and piped water in the community.

### *Study Population*

The samples are comprised of 2400 individuals divided among South Africa's major ethnic groups. The 2000 survey samples are comprised of 2200 individuals. For the purpose of this study they are grouped into four ethnic groups: Whites (n=277); Blacks (n=1719); Coloreds (n=269), who are of mixed White and Black descent; and Asians (grouping South Asian, East Asian, n=134), who are predominantly Indian and Chinese.

### *Measures*

Marital status was measured as married or not married (widowed, divorced, never married) and gender was male or female (0-male, 1-female). All respondents were older than 18 years. The weighting variable (WITHINWT) adjusted the distribution of the sample to account for oversamples or undersamples with respect to province and ethnicity.

### *Dependent & Independent Variables*

The first objective focuses on one dependent variable: 'How well is government improving health services'. The question is stated: How well would you say the government is handling improving health services? The possible responses include: very badly, fairly badly, fairly well, very well and don't know.

The second objective focuses on one dependent variable: how often the respondent went without medical care. The question is stated: Over the past year, how often, if ever, have you or your family gone without medicine or medical treatment? The possible responses include: never, just once or twice, several times, many times, always, and don't know.

The data are adjusted for the following variables: respondent's age, gender, education level, have gone without food, have gone without water and have gone without income. In addition, the dependent variable was adjusted for the presence of a clinic in the surrounding community and the respondent's health status and province. Health status was measured as the respondent's perception that his/her health has reduced the amount of work he/she would normally do in the past year. The availability of health clinic reflects the level of health care infrastructure in the vicinity.

Improving health services was grouped as follows: 0- badly (government is doing a bad job of improving health care; 1- well (government is doing well in improving health care). Going without medical care was categorized as 0- no (never gone without care) and 1- yes (have gone without care).

Education was divided into 4 categories: (0) none or informal education, (1) primary school (2) secondary school, and (3) university or postgraduate education. Responses for having gone without food, water and income were regrouped as 0-never and 1-yes (have gone without food/water/income). The presence of a clinic was coded into two categories 0-no, 1-yes (there is a clinic in the area). Health status was coded as 0-never (health status has never reduced the amount of work one regularly does) and 1-yes (health status

has reduced the amount of work one regularly does). The nine provinces of South Africa were included: Gauteng, North West Limpopo, Limpopo, Mpumalanga, Free State, Eastern Cape, Western Cape, northern Cape and Kwazulu Natal. Western Cape was chosen as the reference group because it has the largest percentage of Whites and is one of the most affluent provinces.

The decision to include the sociodemographic, attitude and perception variables chosen for the logistic regression analysis was based on the Andersen Model. (See the Diagram on pg.12 and 13) Specifically focusing on the predisposing characteristics—Age, Gender, Ethnicity, Education, enabling factors—Individual (Income variables), Community (Clinic in survey areas), and individual need (perceived health status). In addition, this study highlights Andersens’ Initial Measures of Access, specifically on equitable and inequitable access. According to Andersen, equitable access is measured by demographic characteristics and need. Inequitable access is measured by social structure, health beliefs and enabling factors (R. M. Andersen, 1995; R. M. Andersen, 2002).

### *Analysis*

#### 1<sup>st</sup> Objective

The dependent variable ‘How well is government improving health services’ will be examined to investigate perceptions of health care by ethnicity. Differences among the various independent variables for the four ethnic groups will be analyzed by the Mantel-Haenszel  $\chi^2$ . Logistic regression analysis will be used to assess the relationship among

the four ethnic groups in 'How well is government improving health services' with and without controlling for the independent effects of selected sociodemographic, structure and health care need variables.

## 2<sup>nd</sup> Objective

The dependent variable 'Have gone without medical care' will be examined to analyze going without health care by ethnicity. Differences among the various independent variables for the four ethnic groups will be analyzed by the Mantel-Haenszel  $X^2$ . Logistic regression analysis will be used to predict differences among the four ethnic groups in 'Have gone without medical care', with and without controlling for the independent effects of selected sociodemographic, structure and health care need variables. As mentioned above, the analysis incorporated the sampling design of the 2004 Afrobarometer survey of South Africa (WITHINWT) using the svy procedures in Stata. All statistical analyses will be performed using the Stata 11 system.

The 2004 data are the most recent data in the survey series to explore the objectives of this study. For a point of comparison, data from a previous round of the same survey is examined. Identical statistical analyses were performed with data from the 2000 cross-sectional survey to identify any changes in access and perception between 2000 and 2004. This was done simply to make relative comparisons and identify directional trends, if any. The discussion will center around relative improvements in health care access and perception since apartheid and in recent years.

## CHAPTER 4

### RESULTS

The 2004 Afrobarometer Survey of South Africa data showed substantial ethnic/race disparities in the perception of how the government was handling health care and in going without medical care. Looking at the perception first, 63% and 52% of Blacks and Coloreds perceive the government to be doing a good job improving health care, followed by 42% of Asians and 23% of Whites. When asked if they had gone without care in the past year, 49% of Blacks responded that they had gone without needed care followed by 23% of Coloreds, 16% of Whites and 12% of Asians.

Table 1 presents the distribution of sociodemographic, structure and health care need variables for the four ethnic groups. The ethnic breakdown of the sample was 72% Black, 12% White, 11% Colored, and 6% Asian. All comparisons were significant at the .01 level across ethnic groups except gender, which were evenly distributed throughout.

The majority of Black respondents were young (18-30 yrs -44%) and they had the smallest percentage of older people (60+ yrs -11%). Whites, on the other hand had an age range that was more evenly distributed (10-30yrs, 21%; 31-45yrs, 27%; 61+, 26%). They had the largest percentage of people over 60yrs. The Coloreds population aligned more with the Black population where most were young (18-30yrs, 29%; 31-45yrs, 32% and 61+, 18%). Asians, like Whites, also reflected a more evenly distributed range of ages (18-30yrs, 28%; 31-45yrs, 29%; 46-60yrs, 25% and 61+yrs, 18%).

Regarding education, Blacks and Coloreds had the largest percentage of people that had no education or informal education (none/informal- 7% for Blacks and Coloreds). In addition, they had the largest percentage of respondents with only primary school education, which is the equivalent of elementary school in the U.S. (primary- 27% for Blacks and 26% for Coloreds). When looking at university education or more, only 2% of Blacks and Coloreds responded had achieved this level of education compared to 15% and 10% of Whites and Asians respectively.

When asked if they had gone without income in the past year, 68% of Blacks responded that they had gone without any income followed by Coloreds (36%), Asians (34%), and Whites (20%). When asked if they had gone without food in the past year, 50% of Blacks responded that they had gone without food followed by Coloreds (28%), Whites (13%) and Asians (10%). When asked if they had gone without water in the past year, 42% of Blacks responded that they had gone without water followed by Whites (12%), Coloreds (10%) and Asians (9%).

In clinic availability, Asians ranked the highest: 71% of respondents had a clinic in their neighborhood followed by Coloreds (47%), Blacks (36%) and Whites (35%). Regarding whether health or lack of health has reduced the amount of work usually done, 63% of Blacks reported that their lack of health had reduced the amount of work they are usually able to do followed by 52% of Coloreds, 42% of Asians, and 23% of Whites. It is also interesting to see the distribution of each ethnicity among the different provinces of South Africa. Most Whites are concentrated in Gauteng (42%) and Western Cape (20%) and most Asians are concentrated in Gauteng (21%) and KwaZulu Natal (76%).

While most Coloreds inhabit Northern Cape (22%) and Western Cape (55%).

Table 1.1 Number and percent of selected sociodemographic characteristics of South Africans by Race (N=2400), 2004

	<b>Total Number (%)</b>	<b>Black (N=1082)</b>	<b>White (N=227)</b>	<b>Colored (N=252)</b>	<b>Asian (N=87)</b>	<b>P- value</b>
<b>Total Sample</b>	2400					
<b>Race</b>	2399	1719 (71.7)	227 (11.6)	269 (11.2)	134(5.6)	
<b>Age(&gt;18yrs)</b>	2396					0.0001
18-30	921 (38.4)	749 (43.7)	57 (20.6)	78 (29)	37 (27.6)	
31-45	714 (29.8)	514 (30)	74 (26.7)	87 (32.3)	39 (29.1)	
46-60	434 (18.1)	270 (15.7)	73 (26.3)	57 (21.2)	34 (25.4)	
61+	327 (13.7)	182 (10.6)	73 (26.35)	47 (17.5)	24 (17.9)	
<b>Gender</b>	2399					0.947
Male	1201 (50.1)	861 (50.1)	138 (49.8)	132 (49.1)	70 (52.2)	
female	1198 (49.9)	858 (49.9)	139 (50.2)	137 (50.9)	64 (47.8)	
<b>Education</b>	2399					0.0001
None or Informal schooling	172 (7.2)	150 (8.7)	0	19 (7.1)	3 (2.2)	
Primary school	564 (23.5)	466 (27.1)	4 (1.4)	70 (26.0)	24 (17.9)	
Secondary school	1567 (65.3)	1068 (62.1)	230 (83.0)	175 (65.1)	94 (70.2)	
University/Post-graduate	96 (4.0)	35 (2.0)	43 (15.5)	5 (2.0)	13 (9.7)	

Table 1. 2 Number and percent of selected sociodemographic characteristics of South Africans by Race (N=2400), 2004

	<b>Total Number (%)</b>	<b>Black (N=1082)</b>	<b>White (N=227)</b>	<b>Colored (N=252)</b>	<b>Asian (N=87)</b>	<b>P- value</b>
<b>Income Status</b>	2397					0.0001
Have not gone without income	1033 (43.1)	551 (32.1)	222 (80.14)	171 (63.6)	89 (66.4)	
Have gone without income	1364 (56.9)	1166 (67.9)	55(19.9)	98 (36.4)	45 (33.6)	
<b>Without Food</b>	2397					0.0001
Have not gone without food	1417 (59.1)	861 (50.1)	241 (87)	194 (72.1)	121 (90.3)	
Have gone without food	980 (40.9)	856 (49.9)	36 (13)	75 (27.9)	13 (9.7)	
<b>Without Water</b>	2398					0.0001
Have not gone without water	1601 (66.8)	992 (57.7)	244 (88.1)	243 (90.3)	122 (91.0)	
Have gone without water	797 (33.2)	726 (42.3)	33 (11.9)	26 (9.7)	12 (9.0)	



Table 1. 3 Number and percent of selected sociodemographic characteristics of South Africans by Race (N=2400), 2004

	<b>Total Number (%)</b>	<b>Black (N=1082)</b>	<b>White (N=227)</b>	<b>Colored (N=252)</b>	<b>Asian (N=87)</b>	<b>P- value</b>
<b>Health clinic in PSU/EA*</b>	2195					0.0001
No	1336 (60.9)	1002 (63.8)	167 (65.5)	132 (52.8)	35 (29.4)	
Yes	859 (39.1)	569 (36.2)	88 (34.5)	118 (47.2)	84 (70.6)	
<b>Health Status</b>	2385					0.010
Health has not reduced amount work usually done	1560 (65.4)	1113 (65.3)	202 (72.9)	167 (62.1)	78 (58.2)	
Health has reduced amount of work usually done	825 (34.6)	592 (34.7)	75 (27.1)	102 (37.9)	56 (41.8)	
<b>Province</b>	2399					0.0001
Gauteng	504 (21.0)	338 (19.7)	115 (41.5)	23 (8.6)	28 (20.9)	
North West	203 (8.5)	182 (10.6)	16 (5.8)	5 (1.9)	0	
Limpopo	216 (9.0)	209 (12.2)	7 (2.5)	0	0	
Mpumalanga	160 (6.7)	150 (8.7)	8 (2.9)	0	2 (1.5)	
Free State	160 (6.7)	137 (8.0)	18 (6.5)	5 (1.9)	0	
Eastern Cape	292 (12.2)	252 (14.7)	17 (6.1)	23 (8.6)	0	
Northern Cape	124 (5.2)	52 (3.0)	14 (5.1)	58 (21.6)	0	
Western Cape	272 (11.3)	65 (3.8)	56 (20.2)	149 (55.4)	2 (1.5)	
Kwazulu Natal	468 (19.5)	334 (19.4)	26 (9.4)	6 (2.2)	102 (76)	

Table 1. 4 Number and percent of selected sociodemographic characteristics of South Africans by Race (N=2400), 2004

	<b>Total Number (%)</b>	<b>Black (N=1082)</b>	<b>White (N=227)</b>	<b>Colored (N=252)</b>	<b>Asian (N=87)</b>	<b>P- value</b>
<b>DV: Govt. Improving health</b>	2347					0.0001
Badly	1041 (44.3)	635 (37.5)	208 (76.8)	122 (48.4)	76 (57.6)	
Well	1306 (55.7)	1057 (62.5)	63 (23.2)	130 (51.6)	56 (42.4)	
<b>DV: Going without care</b>	2389					0.0001
Never gone without care	1433 (60)	876 (51.2)	232 (84.1)	207 (77)	118 (88.1)	
Have gone without care	956 (40)	834 (48.8)	44 (15.9)	62 (23)	16 (11.9)	

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M-H Chi Square: There are a total of 10 comparisons in this table. \*Significant at  $\mu$  .01 level

Table 2 presents two sets of logistic regression analyses, the unadjusted model and the adjusted model. Results show the associations between the explanatory variables and the perception that the government is doing well in improving health care in South Africa. Factors significantly associated with a higher probability of perceiving that the government is doing well include Black race and Colored race, as well as living in Mpumalanga and Eastern Cape. Blacks are over five times more likely than Whites to perceive that the government is doing well and Coloreds are nearly three times more likely. Those living in Mpumalanga and Eastern Cape are nearly two times more likely. The factor associated with a lower probability of perceiving that the government is doing well in improving health care is having gone without food. Those who are going without food are 0.68 times less likely to perceive that the government is doing well in improving health care.

Table 2. 1 Results of logistic regression analyses (Odds Ratios and 95% Confidence Intervals) of respondents who perceive that the government is doing well in improving health care in South Africa

<b>Variable</b>	<b>Unadjusted OR (95% CI)</b>	<b>Adjusted OR (95%CI)</b>
<b>Ethnicity</b>		
Whites	1.00	
Blacks	5.1** (3.72, 7.25)	5.41** (3.57, 8.20)
Coloreds	3.31** (2.17, 5.05)	2.66** (1.60, 4.42)
Asians	1.91 (1.14, 3.19)	1.59 (0.87, 2.93)
<b>Age (years)</b>		
18-30		1.00
31-45		1.00 (0.77, 1.30)
46-60		0.74 (0.53, 1.05)
61+		0.75 (0.51, 1.11)
<b>Gender</b>		
Male		1.00
Female		1.09 (0.89, 1.36)
<b>Education</b>		
None		1.00
Primary		0.99 (0.61, 1.61)
Secondary		0.87 (0.53, 1.42)
University+		1.03 (0.47, 2.26)

Table 2. 2 Results of logistic regression analyses (Odds Ratios and 95% Confidence Intervals) of respondents who perceive that the government is doing well in improving health care in South Africa

<b>Variable</b>	<b>Unadjusted OR (95% CI)</b>	<b>Adjusted OR (95%CI)</b>
Have gone without food		0.68* (0.51, 0.90)
Have gone without water		0.75 (0.57, 1.00)
Have gone without income		1.14 (0.87, 1.50)
<b>Clinic</b>		1.08 (0.86, 1.36)
<b>Health status</b>		0.83 (0.65, 1.05)
<b>Province</b>		
North West		0.98 (0.63, 1.52)
Limpopo		1.45 (0.97, 2.18)
Mpumalanga		1.76* (1.10, 2.79)
Free State		1.39 (0.83, 2.32)
Eastern Cape		1.74* (1.12, 2.70)
Northern Cape		1.69 (0.97, 2.96)
Kwazulu Natal		1.23 (0.88, 1.73)
Western Cape		1.50 (0.95, 2.39)

\*significant at .05 level, \*\*significant at .01 level

Table 3 also presents two sets of logistic regression analyses, the unadjusted model and the adjusted model. Results show the associations between the explanatory variables and going without medical care in South Africa. Factors associated with a higher probability of going without medical care in the past year include being Black, going without food, going without water, going without income and living in KwaZulu Natal. Blacks are nearly two times more likely than whites to go without medical care. Those who are going without food are nearly three times more likely to go without medical care. Those who are going without water are over five times more likely to go without medical care. Those who are going without income are over two times more likely to go without care. In addition, those living in KwaZulu Natal are nearly two times more likely to go without medical care.

Table 3. 1 Results of logistic regression analyses (Odds Ratios and 95% Confidence Intervals) predicting having gone without medical care in the past year, 2004

<b>Variable</b>	<b>Unadjusted OR (95% CI)</b>	<b>Adjusted OR (95%CI)</b>
<b>Ethnicity</b>		
Whites	1.00	
Blacks	4.68** (3.24, 6.75)	1.83** (1.15, 2.91)
Coloreds	1.54* (1.01, 2.54)	1.47 (0.81, 2.70)
Asians	0.77 (0.36, 1.63)	0.63 (0.24, 1.71)
<b>Education</b>		
None		1.00
Primary		1.11 (0.65, 1.990)
Secondary		1.05 (0.61, 1.81)
University+		1.17 (0.50, 2.71)
<b>Income status</b>		
Have gone without food		2.82** (2.09, 3.80)
Have gone without water		5.28** (3.90, 7.16)
Have gone without income		2.26** (1.67, 3.06)

Table 3.2 Results of logistic regression analyses (Odds Ratios and 95% Confidence Intervals) predicting having gone without medical care in the past year, 2004

<b>Variable</b>	<b>Unadjusted OR (95% CI)</b>	<b>Adjusted OR (95%CI)</b>
<b>Clinic</b>		1.02 (0.77, 1.35)
<b>Health status</b>		1.15 (0.85, 1.54)
<b>Province</b>		
North West		1.48 (0.87, 2.54)
Limpopo		0.89 (0.54, 1.46)
Mpumalanga		1.14 (0.67, 1.95)
Free State		1.32 (0.71, 2.45)
Eastern Cape		1.48 (0.86, 2.56)
Northern Cape		1.21 (0.65, 2.27)
Kwazulu Natal		1.90* (1.26, 2.85)
Western Cape		1.07 (0.58, 1.92)

\*significant at .05 level, \*\*significant at .01 level

Table 4, 5, and 6 present the results from the analysis performed with the 2000 data. These analyses are included to compare results from the 2004 data. This will be discussed in subsequent sections. Table 4 presents the distribution of sociodemographic, structure and health care need variables for the four ethnic groups for the 2000 sample. The ethnic breakdown of this sample was 71% Black, 15% White, 10% Colored, and 5% Asian. All comparisons were significant at the .01 level across ethnic groups except



gender, which was evenly distributed throughout and not included in this table.

Looking at the dependent variables by race, 51% and 33% of Blacks and Coloreds perceive the government to be doing a good job improving health care, followed by 14% of Whites and 5% of Asians. When asked if they had gone without care in the past year, 70% of Blacks responded that they had gone without needed care followed by 39% of Coloreds, 26% of Whites and 24% of Asians.

The distribution of each ethnicity among the different provinces of South Africa is very similar to the distribution in 2004. Most Whites are still concentrated in Gauteng (49%) and Western Cape (19%) and most Asians are concentrated in Gauteng (12%) and KwaZulu Natal (88%). While most Coloreds inhabit Northern Cape (26%) and Western Cape (53%).

Table 4.1 Number and percent of selected sociodemographic characteristics of South Africans by Race, 2000

	<b>Total Number (%)</b>	<b>Black (N=1560)</b>	<b>White (N=227)</b>	<b>Colored (N=252)</b>	<b>Asian (N=87)</b>	<b>P-value</b>
<b>Total Sample</b>	2200					
<b>Race</b>	2200	1560 (70.9)	320 (14.6)	220 (10)	100(4.6)	
<b>Age(&gt;18yrs)</b>	2200					0.0001
18-30	526 (23.9)	390 (25.0)	76 (23.8)	40 (18.2)	20 (20.0)	
31-45	1318(59.9)	997 (63.9)	168(52.5)	104 (47.3)	49 (49.0)	
46-60	334 (15.2)	169(10.8)	75(23.4)	63 (28.6)	27 (27.0)	
61+	22 (1.0)	4(0.3)	1 (0.31)	13 (5.9)	4 (4.0)	
<b>Education</b>	2200					0.0001
None or Informal schooling	290 (13.2)	236 (15.1)	2 (0.6)	44(20.0)	8 (8.0)	
Primary school	191 (8.7)	155 (9.9)	1 (0.3)	22 (10.0)	13 (13.0)	
Secondary school	1410 (64.1)	981 (62.9)	221 (69.1)	138 (62.7)	70 (70.0)	
University/Post-graduate	309 (14.1)	188(12.1)	96(30.0)	16(7.3)	9 (9.0)	

Table 4. 2 Number and percent of selected sociodemographic characteristics of South Africans by Race, 2000

	<b>Total Number (%)</b>	<b>Black (N=1560)</b>	<b>White (N=227)</b>	<b>Colored (N=252)</b>	<b>Asian (N=87)</b>	<b>P-value</b>
<b>Income Status</b>	2194					0.0001
Have not gone without income	776 (35.4)	324 (20.8)	248 (78.0)	133 (60.5)	71 (71.0)	
Have gone without income	1418 (64.6)	1232 (79.2)	70 (22.0)	87 (39.6)	29 (29.0)	
<b>Without Food</b>	2198					0.0001
Have not gone without food	1057 (48.1)	563 (36.1)	261 (82.1)	147 (66.8)	86 (86.0)	
Have gone without food	1141 (51.9)	997 (63.9)	57 (17.9)	73 (33.2)	14 (14.0)	
<b>Without Water</b>	2194					0.0001
Have not gone without water	1378 (62.8)	775 (49.8)	310 (97.2)	197 (90.4)	96 (96.0)	
Have gone without water	816 (37.2)	782 (50.2)	9 (2.8)	21 (9.6)	4 (4.0)	
<b>Health Status</b>	2191					0.0001
Health has not reduced amount work usually done	1082 (49.4)	713 (45.9)	194 (61.2)	120 (54.6)	55 (55.0)	
Health has reduced amount of work usually done	1109 (50.6)	841 (54.1)	123 (38.8)	100 (45.4)	45 (45.0)	

Table 4. 3 Number and percent of selected sociodemographic characteristics of South Africans by Race, 2000

	<b>Total Number (%)</b>	<b>Black (N=1560)</b>	<b>White (N=227)</b>	<b>Colored (N=252)</b>	<b>Asian (N=87)</b>	<b>P-value</b>
<b>Province</b>	2200					0.001
Eastern Cape	320 (14.6)	272 (17.4)	24 (7.5)	24 (11.0)	0	
Free State	140 (6.4)	116 (7.4)	20 (6.2)	4 (1.8)	0	
Gauteng	496 (22.6)	344 (22.1)	124 (38.8)	16 (7.3)	12 (12.0)	
KwaZulu Natal	412 (18.7)	284 (18.2)	36 (11.3)	4 (1.8)	88 (88.0)	
Mpumalanga	132 (6.0)	116 (7.4)	16 (5.0)	0	0	
Northern Cape	100 (4.6)	28 (1.8)	16 (5.0)	56 (25.5)	0	
Limpopo	196 (8.9)	188 (12.1)	8 (2.5)	0	0	
North West	164 (7.5)	148 (9.5)	16 (5)	0	0	
Western Cape	240 (10.9)	64 (4.1)	60 (18.8)	116 (52.7)	0	
<b>DV: Govt. Improving health</b>	2184					0.0001
badly	1271 (58.2)	758 (48.8)	271 (86.3)	147 (67.4)	95 (95.0)	
well	913 (41.8)	794 (51.2)	43 (13.7)	71 (32.6)	5 (5.0)	
<b>DV: Going without care</b>	2198					0.0001
Never gone without care	909 (41.4)	462 (29.6)	236 (74.0)	135 (61.4)	76 (76.0)	
Have gone without care	1289 (58.6)	1097 (70.4)	83 (26.0)	85 (38.6)	24 (24.0)	

M-H Chi Square: There are a total of 9 comparisons in this table. \*Significant at  $\alpha$  .01 level

Table 5 presents two sets of logistic regression analyses, the unadjusted model and the adjusted model using the 2000 sample. Results show the associations between the explanatory variables and the perception that the government is doing well in improving health care in South Africa. Factors associated with a higher probability of perceiving that the government is doing well include being Black, Colored, Asian and having a clinic in the area, living in North West, Limpopo and Free State provinces. Factors associated with a lower probability of perceiving that the government is doing well in improving health care include being older than 30, being university educated, having gone without water, and having poor health (measured by health reducing the amount of daily work usually done). In addition, living Eastern Cape and KwaZulu Natal is associated with lower probability of perceiving the government to be doing well in improving health care.

**Table 5.1 Results of logistic regression analyses (Odds ratios and 95% Confidence Intervals) predicting the perception that the government is doing well improving health care in South Africa, 2000**

<b>Variable</b>	<b>Unadjusted OR (95% CI)</b>	<b>Adjusted OR (95%CI)</b>
<b>Ethnicity</b>		
Whites	1.00	
Blacks	6.6** (4.71, 9.25)	8.13** (5.37, 12.33)
Coloreds	3.04** (1.98, 4.67)	2.35** (1.26, 4.39)
Asians	0.33* (0.13, 0.86)	2.39* (1.25, 4.56)
<b>Age (years)</b>		
18-30		1.00
31-45		0.55** (0.43, 0.71)
46-60		0.55** (0.39, 0.79)
61+		0.19* (0.05, 0.71)
<b>Gender</b>		
Male		1.00
Female		0.95 (0.78, 1.16)
<b>Education</b>		
None		1.00
Primary		0.83 (0.55, 1.27)
Secondary		0.90 (0.66, 1.22)
University+		0.60* (0.39, 0.90)

**Table 5.2 Results of logistic regression analyses (Odds ratios and 95% Confidence Intervals) predicting the perception that the government is doing well improving health care in South Africa, 2000**

<b>Variable</b>	<b>Unadjusted OR (95% CI)</b>	<b>Adjusted OR (95%CI)</b>
<b>Income Status</b>		
Have gone without food		0.86 (0.68, 1.09)
Have gone without water		0.74* (0.59, 0.94)
Have gone without income		1.24 (0.95, 1.62)
<b>Clinic</b>		1.48* (1.20, 1.83)
<b>Health status</b>		0.79* (0.64, 0.98)
<b>Province</b>		
North West		1.65* (1.09, 2.50)
Limpopo		2.05** (1.37, 3.07)
Mpumalanga		1.13 (0.72, 1.77)
Free State		2.84** (1.79, 4.49)
Eastern Cape		0.58* (0.41, 0.82)
Northern Cape		0.69 (0.40, 1.22)
Kwazulu Natal		0.52** (0.37, 0.73)
Western Cape		1.55 (0.96, 2.50)
*significant at .05 level, **significant at .01 level		

Table 6 also presents two sets of logistic regression analyses, the unadjusted model and the adjusted model using the 2000 sample. Results show the associations between the explanatory variables and going without medical care in South Africa. Factors associated with a higher probability of going without medical care in the past year include being Black, going without food, going without water, going without income, and having poor health. In addition, living in Eastern Cape and KwaZulu Natal is associated with a higher probability. The factor associated with a lower probability of going without medical care is being Asian, being highly educated and living in Northern Cape.



**Table 6.1 Results of logistic regression analyses (Odds ratios and 95% Confidence Intervals) predicting having gone without medical care in the past year, 2000**

<b>Variable</b>	<b>Unadjusted OR (95% CI)</b>	<b>Adjusted OR (95%CI)</b>
<b>Ethnicity</b>		
Whites	1.00	
Blacks	1.85** (1.59, 2.12)	1.46* (1.00, 2.16)
Coloreds	0.36 (0.05, 0.78)	0.60 (0.31, 1.16)
Asians	0.01 (-0.46, 0.43)	0.39* (0.20, 0.75)
<b>Age (years)</b>		
18-30		1.00
31-45		0.99 (0.74, 1.32)
46-60		0.72 (0.48, 1.08)
61+		1.56 (0.48, 5.08)
<b>Gender</b>		
Male		1.00
Female		1.03 (0.82, 1.30)
<b>Education</b>		
None		1.00
Primary		1.28 (0.74, 2.23)
Secondary		0.62* (0.42, 0.91)
University+		0.50* (0.31, 0.82)

**Table 6.2 Results of logistic regression analyses (Odds ratios and 95% Confidence Intervals) predicting having gone without medical care in the past year, 2000**

<b>Variable</b>	<b>Unadjusted OR (95% CI)</b>	<b>Adjusted OR (95%CI)</b>
<b>Income Status</b>		
Have gone without food		3.26** (2.52, 4.21)
Have gone without water		2.38** (1.77, 3.20)
Have gone without income		3.71** (2.82, 4.88)
<b>Clinic</b>		1.24 (0.96, 1.60)
<b>Health status</b>		2.09** (1.63, 2.68)
<b>Province</b>		
North West		0.99 (0.62, 1.60)
Limpopo		0.66 (0.42, 1.06)
Mpumalanga		1.17 (0.68, 2.02)
Free State		0.72 (0.45, 1.17)
Eastern Cape		2.40** (1.55, 3.72)
Northern Cape		0.51* (0.28, 0.92)
Kwazulu Natal		2.26** (1.48, 3.46)
Western Cape		2.11 (1.22, 3.65)
*significant at .05 level, **significant at .01 level		

### *Changes over time*

Comparing the results from Table 4 to Table 1 of the 2000 and 2004 survey, there was a similar breakdown of each ethnic group sample where the majority of the total sample is Black (71%), followed by Whites (15%), Coloreds (10% ) and Asians (5%). Age was also distributed similarly with young people making up the largest percentage of the sample for Blacks (18-45years- 89%) and Coloreds (18-45years- 65%). Unlike the 2004 distribution for age, young people make up the largest percentage of the sample for Whites and Asians as well (18-45years- 77%; 18-45- 69%, respectively).

The percentage of people that perceive the government to be handling health care well increased for all ethnic groups comparing the results from the 2000 and 2004 survey: Blacks (from 51% to 63%), Whites (from 14% to 23%), Coloreds (from 33% to 52%) and Asians (from 5% to 42%). The percentage of people who have gone without medical care has decreased for all ethnic groups comparing the results from the 2000 and 2004 survey: Blacks (from 70% to 49%), Whites (from 26% to 16%), Coloreds (from 39% to 23%) and Asians (from 24% to 12%).

Educational attainment has improved for all ethnic groups compared to the 2000 survey results. Blacks have gone from 15% having no education to 7% in 2004. Whites have improved from 2% having no formal education to 0%. Coloreds have improved from 20% to 7% having no formal education and Asians from 8% to 2%. It seems that

those that would have reported no formal education are now reporting that they have a primary school education. The percentages for each ethnic group in secondary education have more or less remained the same. There is some movement at the university level. There are less people reporting to have a university education in 2004 as compared to 2000. Among Blacks, 12% reported having a university education in 2000. In 2004 this number dropped to 2%. Among Whites, the percentage of university educated people decreased from 30% to 16%. For Coloreds, this number dropped from 7% to 2%. In contrast, the percentage of people reporting university education among Asians increased slightly from 9% to 10%.

Blacks, Whites and Coloreds' income status all have improved since 2000. Blacks reporting that they have gone without income dropped from 79% to 68%. Whites reporting that they have gone without income dropped from 22% to 20%. Coloreds reporting having gone without income decreased from 40% to 36%. In contrast, Asians reporting that they have gone without income increased from 29% to 34%.

The rates of going without food have improved for all ethnic groups. The percentage of people that reported having gone without food for Blacks decreased from 64% in 2000 to 50% in 2004. Similarly, the percentage of people who reported having gone without food for Whites dropped from 18% to 13%. For Coloreds, this percentage dropped from 33% to 28% and for Asians it decreased from 14% to 10%.

The results for going without water comparing the 2000 and 2004 surveys are interesting in that it was not what was expected. The percentage of people who reported

going without water dropped for Blacks, remained the same for Coloreds, but increased for Whites and Asians. Blacks reporting they had gone without water decreased from 50% in 2000 to 42% in 2004. Coloreds reporting they had gone without water stayed at about 10% for both years. Whites reporting to have gone without water increased from 3% to 12% and Asians this percentage also increased from 4% to 9%.

Health status as measured by the influence of health or lack of health on daily work has improved for ethnic groups as compared to the results of the 2000 survey. Blacks who reported that health has reduced the amount of daily work usually performed decreased from 54% in 2000 to 35% in 2004. Whites who reported that their health has reduced the amount of daily work also decreased from 39% to 27%. Coloreds reporting that their health has reduced the amount of daily performed dropped from 45% to 38% and in Asians this percentage dropped from 45% to 42%.

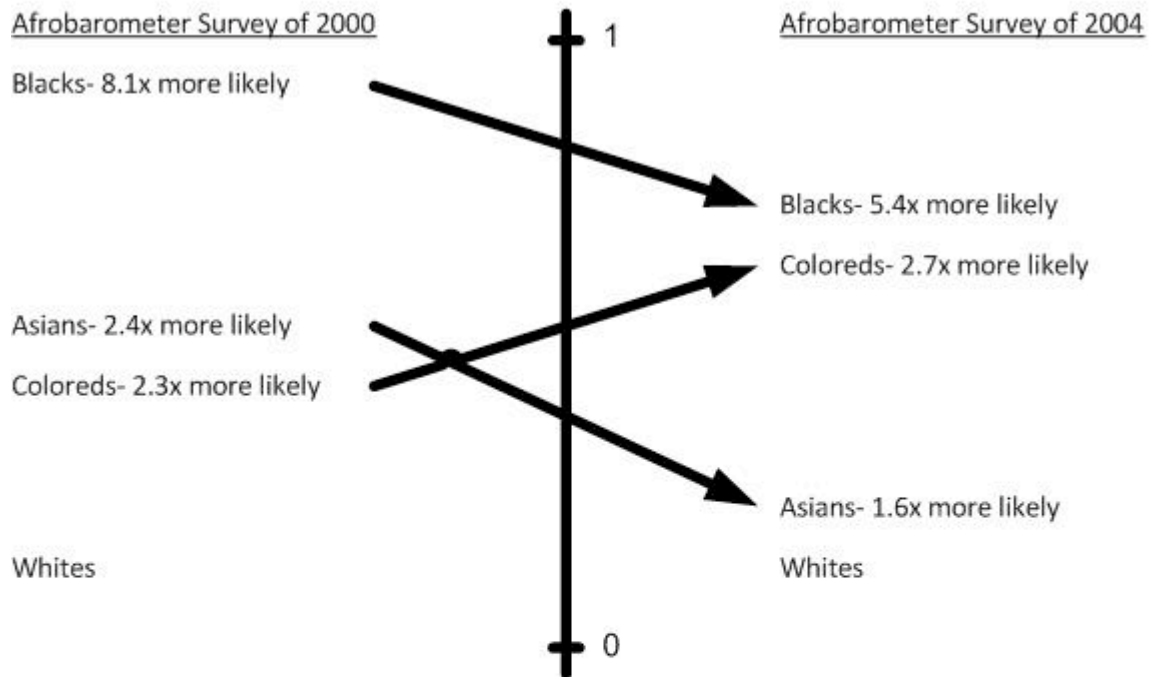
It is interesting to compare the results from the logistic regression analysis in Table 5 and Table 2 of the 2000 and 2004 survey. In 2000, Blacks were over eight times more likely than Whites to perceive that the government is doing well compared to five times more likely in 2004. In 2000, Coloreds were over two times more likely to perceive that the government is doing well and this did not change significantly in 2004. In 2000, Asians were over two times more likely compared to only 1.6x more likely in 2004. The number of factors associated with a lower probability of perceiving that the government is doing well improving health care was greater in 2000 as compared to 2004 where only going without food and income was included. In 2000, being older than 30

years (85%-67% less likely), having a secondary and university educational level (over 40% less likely than those that have no formal education), going without food (27% less likely) and water (27% less likely), having a poor health status (30% less likely) and living in Eastern Cape (40% less likely) and KwaZulu Natal (50% less likely).

This section will compare the results from the logistic regression analysis in Table 6 and Table 3 from the 2000 and 2004 survey. In 2000, Blacks were 1.5 times more likely than Whites to have gone without medical care compared to 1.8x more likely in 2004. In 2000, Asians were approximately 60% less likely compared to 30% less likely in 2004. In 2000, Coloreds were 30% less likely to go without medical care compared to 1.5x more likely in 2004. In 2000, those going without food were over three times more likely to go without care compared to 2.8 times more likely in 2004. In 2000, those going without water were 2.4 times more likely to go without care compared to over five times more likely in 2004. In 2000, those going without income were nearly four times more likely to have gone without care compared to just over two times more likely in 2004. Health status was not significant in 2004, but in 2000 those who had a poor health status were over two times more likely to have gone without care. In 2000, those who had a secondary school education and above were approximately 50% less likely to go without medical care, but in 2004 education was not a significant contributing factor.

The illustration below depicts the comparisons made between the 2000 and 2004 reports for perception of the government handling health care and going without medical care.

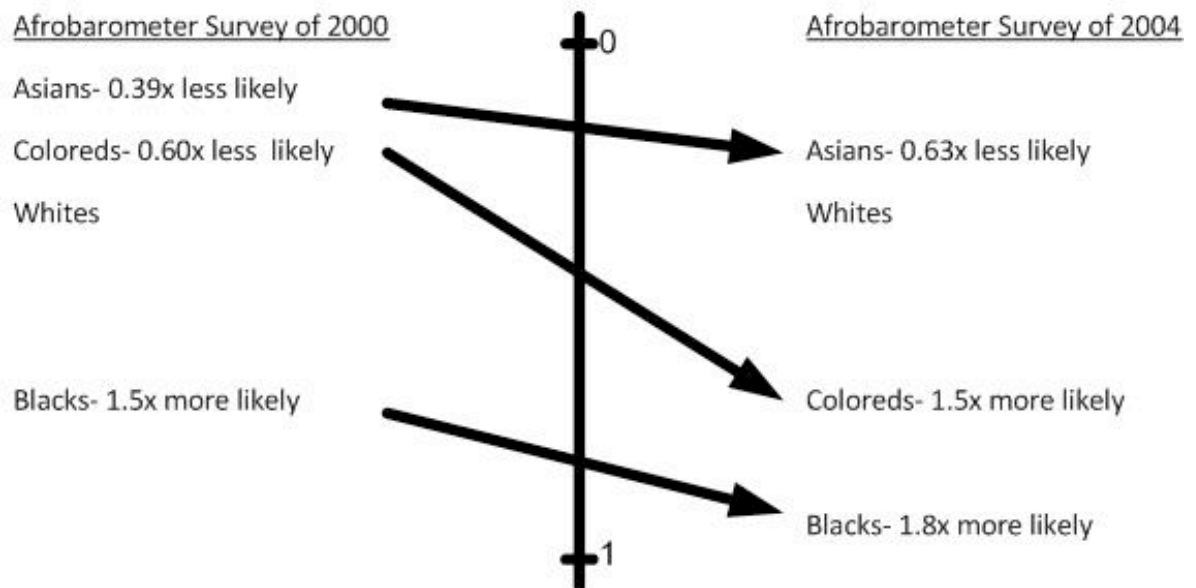
**Figure 7: Odds Ratio of respondents who perceive that the government is doing well in improving health care in South Africa, 2000 & 2004**



**Significant Contributing Factors**

Age	Have gone without food
Education	Have gone without water
Have gone without food	Province
Have gone without water	
Clinic	
Healthstatus	
Province	

**Figure 8: Odds Ratio of respondents who have gone without medical care, 2000 & 2004**



**Significant Contributing Factors**

Have gone without food  
 Have gone without water  
 Have gone without income  
 Health status  
 Province

Have gone without food  
 Have gone without water  
 Have gone without income  
 Province



## CHAPTER 5

### DISCUSSION

South Africa has endured a history of ethnic struggles; and since 1994, its government has attempted to rectify the mistakes made during apartheid. As mentioned earlier in this paper, health care and ethnic disparities were a normal part of society during apartheid. The ratio of physician to patient was much higher for Blacks than for Whites. Infant mortality, incidence and prevalence of infectious diseases and mortality rates were all higher in Blacks and Coloreds as compared to Whites and Asians. Access to health care was limited. Black and Colored homelands had limited resources and infrastructure that could sustain healthy living. Unfortunately, the process of redressing these inequalities may take longer than originally expected due to the deep seeded policies, perception and cultural norms that were established during apartheid. This study has tried to address the questions of whether health care has improved for the most disadvantaged peoples in South Africa and has South Africans' perception of how government is handling health care changed.

The results of this dissertation reflect significant ethnic disparities. Blacks and Coloreds continue to be the most disadvantaged groups in South Africa. Whites and Asians continue to be the most affluent and healthiest populations. The pairing trend of Blacks/Coloreds and Whites/Asians holds true in various categories. This will be discussed subsequently. There is a significant ethnic disparity in having gone without medical care. Nearly half of the Black population has gone without care compared to

only 16% of Whites and 12% of Asians. A large percentage of Coloreds (23%) have gone without care, but not as large as in the Black population. Interestingly, perception of health care seems to indicate that Blacks and Coloreds are satisfied with their health care. The majority of Blacks and Coloreds perceive the government to be doing well in improving health care, in contrast to 23% of Whites. There may be many reasons for this, but the most likely is that health care has improved for the most underserved population (Blacks and Coloreds) relative to what they had experienced during apartheid. This relative improvement justifies a positive response to the question of how health care is perceived despite having to go without health care compared to other ethnic groups. This is supported by the 2008 statistical release publication by the government of South Africa. It reports that levels of satisfaction with healthcare services have increased across provinces since 2002, except in Gauteng, Free State and Western Cape, which is the home for most Whites (Statistics South Africa, 2008).

The results of this study confirm that there are still significant sociodemographic disparities among the four major ethnic groups in South Africa. Adjusting for these sociodemographic variables and health status, the results of the regression analyses demonstrate that Blacks and Coloreds, despite having less access to medical care, perceive the government to be handling improving health care well compared to Whites. As mentioned above, this may be due to the relative improvement in health care since the apartheid era. Ethnic disparities in medical care have decreased and this will be discussed in further detail when looking at changes over time. Various sociological theories put this phenomenon in different perspectives but one in particular is closer to

explaining the disconnect between reality and perception. The Contact Theory proposed in 1947 and again in 1954, states that “bringing members or opposing groups together under conditions involving cooperation, equal status, and personal acquaintance can improve attitudes toward the other group and facilitate intergroup harmony” (Saguy, Tausch, Dovidio, & Pratto, 2009). Recent research has observed that positive contact does not only influence attitudes toward the opposite group, but also perception of intergroup inequality. It has been shown that in South Africa that positive contact between Blacks and Whites is associated with decreased support for social policies that promote ethnic equality (Saguy, Tausch, Dovidio, & Pratto, 2009). Positive contact may inadvertently produce overly optimistic perceptions about aspects of society that in reality are still unequal and unjust. This may partially explain why Blacks and Coloreds perceive the government to be handling health care well. Contact theory may help explain this phenomenon, but regardless of positive contact between ethnic groups, severe deprivation of basic needs will influence the way someone perceives health care. As demonstrated in this study, those who had gone without food were less likely to perceive the government doing well in handling health care.

Adjusting for the effects of sociodemographic variables and health status, Blacks still have a higher probability of going without medical care than any other ethnic group. This may be due to differences in certain socioeconomic variables, in particular, going without food, going without water, and going without income. The above rationale can be applied here. Basic necessities like food, water and income will not only influence

perception of health care but also take priority over seeking medical care. As illustrated in Table 1, Blacks and Coloreds have the highest percentage of people going without these basic needs. They may not seek medical care as often due to financial reasons that include the cost of care, the cost of transportation to a health care facility, the cost of follow-up treatment, and the cost of time (time that could be spent working or securing food and water). This result is supported by the Whitehall studies in London. The first publications out of the Whitehall studies showed the inverse relationship between grade of employment of British civil servants and coronary heart disease (CHD) factors and mortality. They were able to demonstrate that the lower the grade of employment the higher the risk of CHD. The lower grade employees had less leisure time for relaxation or physical activity. They had to work to obtain basic needs and for this reason their priorities were different. Unlike the higher grade employees, who prioritized leisure activity and healthy behaviors like exercise and regular medical care, the lower grade employees prioritized work and providing for family (M. G. Marmot, Rose, Shipley, & Hamilton, 1978). Numerous studies following the Whitehall studies have further confirmed the association between socioeconomic status and health (Fuhrer et al., 2002; M. Marmot, 2006; M. Marmot, 2002; M. G. Marmot et al., 1991). These studies have become the foundation of ethnic and socioeconomic disparities studies worldwide.

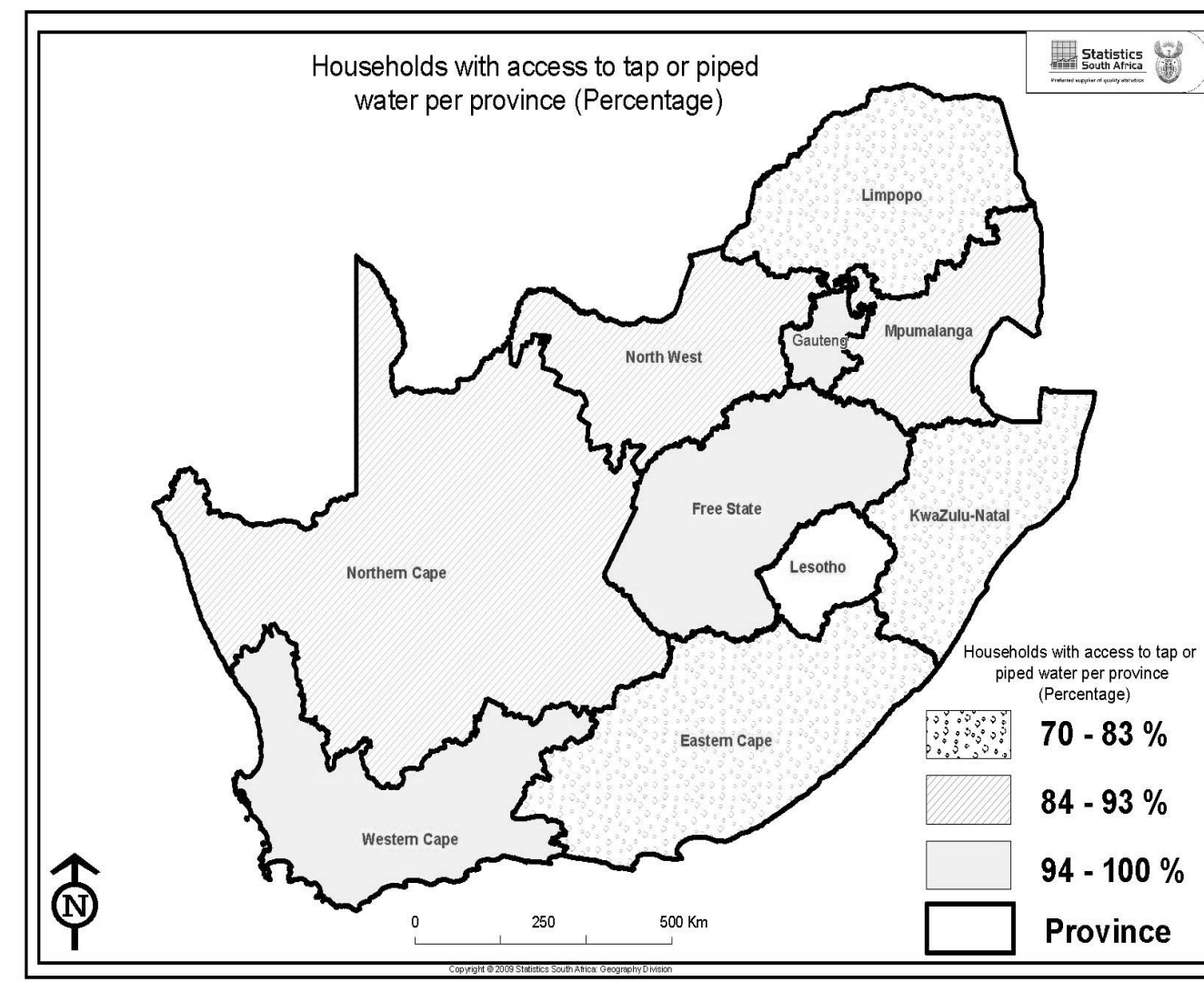
There are other notable sociodemographic and health status disparities that warrant discussion. All races reported some form of financial hardship in the past year, but Blacks, Coloreds and Asians stand out. Nearly 70% of Blacks had gone without

income in the past year followed by 36% of Coloreds and 34% of Asians. This is an interesting result particularly for Asians, because for the most part, Asians in South Africa are not poor. They have similar educational attainment as Whites and align themselves with Whites in socioeconomic status. What makes them different is that many Asians are entrepreneurs and this may reflect the normal fluctuations in business cycles. They are probably more likely to report to have gone without income when their only source of income is from business. The last decade has brought South Africa its first recession since the ANC took over in 1994. Currently, the unemployment rates are 29% for Blacks, 21% for Coloreds, 11% for Asians, and 5% for Whites. Asians may have been more likely than Whites to report going without income in this type of economic recession (Statistics South Africa, 2008).

Unlike going without food, where a pairing trend between Blacks/Coloreds and Whites/ Asians was noted, a larger percentage of Blacks experience going without water than does any other ethnic group. This may be due to geography and allocation of resources. Certain areas have more frequently unreliable piped water delivery systems or derive water from communal taps than do other areas. These areas include rural neighborhoods and overpopulated areas where the majority of Blacks live. There has been a significant increase in the percentage of households who use off-site water sources including the neighbor's tap, a communal tap, or borehole from 16.7% in 2002 to 20% in 2008 and the percentage of those who receive piped water from their municipalities decreased from 78.9% in 2004 to 74.8% in 2008 (Statistics South Africa, 2008). The map below shows the percentage of households with access to tap or piped water per

province. The provinces of Limpopo, KwaZulu-Natal and Eastern Cape are the provinces with most households going without access to water. These provinces are also home to most of the Black population in South Africa.

Figure 9: Households with access to water per province



(SouthAfrica.info, 2008)

There is a significant age differential by race where Blacks and Coloreds were mostly young and Whites and Asians had a more even age distribution. Nearly 74% of Blacks were under the age of 45 and 44% of these were under 30 years of age. Sixty-one percent of the Colored population was under 45 years. As discussed in the background, this may be due to the rampant spread of HIV/AIDS in these populations and the rise of infectious diseases that comes with a HIV-compromised immune systems.

There were also significant disparities in education. As in age, there was a pairing trend between Blacks/Coloreds and Whites/Asians. Blacks and Coloreds had the largest percentage of people who obtained only up to a primary school education, 35% for Blacks and 33% for Coloreds. In contrast, Whites and Asians had the largest percentage of people having a university education or above; 16% for Whites and 10% for Asians compared to only 2% of Blacks and Coloreds

Finally the question was asked if the respondent's health or lack of it reduced the amount of daily work that they usually performed. More Asians reported that their health had reduced the amount of work usually done (42%) than did the other ethnic groups. Whites had the lowest percentage of people reporting that their health had reduced their amount of daily work (27%). To address some of the determinants of health discussed in this paper, the government has tried to alleviate poverty and consequently improve health by implementing social assistance programs, employment programs and other social service programs. Culture is a very important piece that needs to be fully considered in order to achieve equitable health care. South Africa is a multicultural society with four major ethnic groups, but embedded in these groups is a myriad of traditions, customs,

languages, ideals, and of course, health behaviors. These cultural differences must be acknowledged in the pursuit of equitable health care. Environmental conditions include some of what has been discussed already in this paper: access to clean water and food, access to shelter, access to proper sanitation, but it also considers modern health hazards like industrial pollutants. For example, asbestos mines in the Northern Cape were shut down after 1994 due to health concerns that affected its workers, which were predominantly Blacks. Blacks make up the overwhelming majority of mine workers (Schaay & Sanders, 2008).

The health status results of this study may also be due to differences in employment for each ethnic group. Asians may have the luxury of missing work due to illness if they own their own business or work at a business place that offers sick days or vacation. Blacks, on the other hand, may be less healthy than Asians, but do not have the ability to miss work so they continue working even if sick. Given the unemployment rate among Blacks, it is not surprising that fear of losing a job due to absenteeism exists (Statistics South Africa, 2010).

Province was included in the logistical regression model to control for any effects of geography and the concentration of ethnic groups in certain areas. In terms of perception of the government doing well in improving health care, Mpumalanga and Eastern Cape were the most likely to perceive that the government is doing well. Both of these provinces are predominantly Black. This aligns with the results for Black's perception of health care. In terms of access to medical care, KwaZulu Natal was the



province that was more likely to go without care. This also aligns well with the demography of the area.

### *Changes Over Time*

Given the changes that have occurred in South Africa in the last decade, it is interesting to see the changes in perception and access to medical care in just the four years between 2000 and 2004. Health care has changed monumentally since apartheid, but there was also a major change to health care policy in 2000. As discussed in this paper, the creation of the District Health System was a significant change carried out through the Municipal Structures Amendment Act, which transferred health care authority from the national government to local governments. This act reorganized the way health care was delivered and how health care policies were enacted thereafter.

New economic, political, social and health care policies were enacted in order to strive toward equity within all aspects of society. Although equity has not yet been reached, as demonstrated in this study, there is a perception that South Africa is moving in the right direction. Between 2000 and 2004, the percentage of people reporting having gone without medical care decreased for all ethnic groups. Blacks experienced the most dramatic decrease from 70% to 49%. Although 49% is still nearly half of the Black population, this trend shows that the changes made in the last decade have made a positive impact on access to health care. While a causal association can not be established, a positive trend was identified in the four years between 2000 and 2004. The same can be said for the perception of how the government is handling health care. The

percentage of people that perceive that the government is handling health care well increased for all ethnic groups. Blacks and Whites experienced approximately a 10 percentage point increase. Coloreds experienced nearly a 20 percentage point increase. Asians experienced the most substantial increase from 5% in 2000 to 42% in 2004.

Although the percentage of respondents that perceive that the government is handling health care well has increased for all ethnic groups, controlling for sociodemographic variables and health status, Blacks' likelihood has decreased from 2000 to 2004, dropping from eight times more likely than Whites to five times more likely than Whites. This may point to improvements in education, access to basic services and income for Blacks. As those factors improve, their perception of different aspects of society including health care may change negatively. Asians' likelihood to perceive the government doing well as also decreased from 2000 to 2004. This may have to do with the overall perception of the government, specifically how the government is handling the economy during the recession. Coloreds' perception increased slightly from 2.4x to 2.7x more likely. Unlike in 2004, in 2000 there were more sociodemographic factors that significantly explained differences in perception. Respondents older than 30 years, with a university education, or who had gone without food or water in 2000 were less likely to perceive that the government was doing well in handling health care. The question that remains after observing differences in results of the logistic regression analyses of the two survey years is: Have the factors that influence perception of health care evolved from including sociodemographic variables to

increasingly being explained by ethnicity? The percentage of people who reported going without care decreased in 2004, but Blacks are still more likely than Whites to go without medical care, actually increasing from 1.5 to 1.8 times more likely in 2004. In contrast, the likelihood of those going without food and income to have gone without medical care decreased from 2000 to 2004 and the trend for health status has also improved. Notably, Coloreds are 1.5x more likely than Whites to have gone without medical care compared to 0.60 times more likely in 2000, but these odds ratios are not significant.

Most sociodemographic indicators have improved between 2000 and 2004 with the exception of going without water. Fewer people reported not having any formal education in 2004 for all ethnic groups. Unfortunately, fewer people are obtaining a university education for all ethnic groups, except Asians. Fewer people are reporting going without income for all ethnicities except for Asians who reported an increase of 5 percentage points. This shows the importance that Asians in South Africa put on education. Even when they are experiencing financial difficulties, they still find a way to obtain educations for themselves and their families.

Going without food rates improved for all ethnic groups, but there may have been some deterioration in the provision of other basic necessities like clean piped water. A large percentage of Blacks had gone without water for both survey years, but the percentage has increased specifically for Whites and Asians. The reason for this is not clear, but general deterioration of the management of these services and the location of the respondent may be a factor. Some areas with piped water still experience breaks in

water provision and according to government statistics there has also been an increase in communal taps in some areas (Statistics South Africa, 2008).

Comparing the results of the logistic regression analysis of both survey years gives a slightly different perspective of health care access and perception in South Africa. These results may align themselves to the idea that race/ethnicity may be playing a larger role in 2004 than it did in the past. However, the likelihood of those going without water to have gone without medical care increased from 2 times more likely to over 5 times more likely in 2004. This may reflect the deterioration of the provision of certain services in South Africa. Overall, the results of this study support what other studies have discovered when trying to answer the question of whether disparities can be explained by ethnicity or socioeconomic status or both. Like in other studies, when controlling for either, the other is still significant.

### *Limitations*

Additional variables that address type of health care, where and how often it is accessed might more accurately represent access to health care after apartheid. Similarly, there may be other variables that more accurately depict how South African citizens perceive the health care system, such as the perception of specific health care services. However, the variables used in this study were the best available. The Afrobarometer surveys are one of the largest and most comprehensive surveys carried out in South Africa. The 2000, 2002 and 2004 study years are the only surveys available to date.

As in most survey research, one can only statistically control for those variables that have been measured as part of the survey. Therefore the effect of unknown factors is a consideration. For this reason it is important to discuss and set as the backdrop the overall environment of the country including the economy, government, social interactions between the ethnic groups, education, and health care. Are the citizens generally happy and do they think that life now is better than under apartheid? The implications of such unknown factors should be explored in future studies.

Finally, this study analyzed the responses of the four major ethnic groups in South Africa included in this survey. But there are groups within groups that have distinct cultures, beliefs, traditions, and even language. It is important to note that there may be differences within each ethnic group and this should be explored in future studies.

#### *Policy implications*

Admittedly, South Africa has come a long way since the time of apartheid. Disparities have decreased markedly in all sectors of society through policies that have attempted to redress the harsh inequalities of its past. This was and is not an easy road for any country whether it is a third world country, a developing country like South Africa or an industrialized country like the United States. In fact, like South Africa, the United States overcame an era of ethnic turmoil but it still struggles with deep ethnic disparities not only in health, but many socioeconomic areas such as income and education. The U.S. is still considered an economic powerhouse despite its recent economic challenges and equity has still not been reached. Although South Africa has

reversed some of the injustices committed during apartheid such as blatant discriminatory policies, it still has a long journey ahead.

Further research is needed that can uncover the layers of health disparities currently burdening the country and the disconnect between the reality of ethnic disparities and the perception of health care. Why do Blacks and Coloreds perceive the government to be handling health care well when in reality they have significantly less access than Whites and Asians? It is partially explained by the relative improvement in health care in comparison to what they had experienced during apartheid. This phenomenon may also be partially explained by the contact theory, but there may be other factors at play that need to be uncovered in order to reach health equity. Disparities in and the possible mismanagement of the provision of basic services like clean water, food and sufficient income, warrants a thorough review and policy intervention. Without these basic necessities, improving health care access is futile. After the progress made in the first years of the democratic government, it is unfortunate to speculate that South Africa may be experiencing a reversal of the achievements in equity. Academic, health and policy research should explore the effects of current health and economic policy, specifically the District Health System and the Growth, Employment and Redistribution Strategy that may be hampering the progress towards equity among ethnic groups and provinces.

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