Health Care in South Africa:

An Overview of Past and Current Challenges

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Abstract

The health care system in South Africa is a living remnant of apartheid. Divided and disjointed, the system is unable to cope with the significant challenges that exist in the public health of South Africa. Social issues such as poverty, inequality, and xenophobia influence how the health system operates. Health care workers face challenges such as communicable diseases, particularly HIV. Moving forward, the government plans to transition to a single payer nationalized health insurance (NHI) system. NHI will not solve all the problems the system faces, and the government must be diligent in rooting out corruption, incentivizing quality care, and promoting cooperation between the private and public health entities in South Africa.

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Introduction

When Nelson Mandela became the President of South Africa in May of 1994, the world saw the culmination of a decades-long struggle for the first representative government democratically elected by the entire populace of the country of South Africa. For most people in the world, the story of apartheid and its demise fit a narrative of the oppressed overcoming their oppressors and creating a society in which all South Africans could live, work, and thrive. The reality, of course, is much more complicated.

In 1652, the course of history for South Africa was changed forever by the establishment of the first white settlement in the country. What followed was the systematic expansion of white settlements, relocation of native peoples, and forceful subjugation of natives by the white settlers. The discovery of gold and other valuable natural resources resulted in the transformation of the country's economy from a predominantly agricultural to a predominantly industrial one. However, the exploitation of native peoples did not end, but rather was solidified. By the beginning of the twentieth century, South Africa was unified and brought under the dominion of the British Empire. While politically unified, strong regional identities continued to exist both in the native and European communities. While efforts were made to prevent black populations from moving to urban areas, the industrialization of the country resulted in the black population increasing greatly in the first couple decades of the twentieth century (Coovadia et al., 2009).

The perceived threat of the black urban population to white communities brought the conservative, racist National Party to power in 1948. A consolidation and systemization of racial

segregation and discrimination followed, resulting in what was and is commonly known as apartheid. South African citizens were placed into four racial categories on official state documents. These categories were Bantu (black), coloured, Asian (Indian), and European (white). Virtually every aspect of life was influenced by a person's racial classification. This included where a person lived, where they could travel, or whether they could vote. Additionally, the extent to which resources would be allocated for social services was directly related to one's racial classification (Burger et al., 2012).

Detrimental to an integrated, effective health system was the division in public health authorities among the Bantustans (reserves to which bantu peoples were forcibly relocated). This division would make it incredibly difficult to integrate the public health system on a national level even after the fall of apartheid. The African National Congress (ANC) was formed in 1912 and began the fight for the end of apartheid that would last for more than 70 years. The ANC was opposed and repressed by the white minority government for much of the twentieth century. The creation of a national public health system was, and continues to be, a high priority for the ANC (Coovadia et al., 2009).

Prior to the early 1990s, the African population of South Africa existed as a majority population that was not allowed to participate in the governance of the country. South African society was divided, physically and culturally, between the African majority and white minority. The divide extended to the country's health care system. A private system existed largely to serve the white minority, while a public system was created by the government to serve the African community, which lived in intense poverty (Mhlanga & Garidzirai, 2020). This divided system, while not as clear-cut as it once was, exists mostly intact in the present day. While care

has improved since the fall of apartheid, challenges in extending quality care to the entire population remain.

Past Issues

Social Issues

There are numerous social issues that have a significant impact on the efficacy of the health care system in South Africa. Unfortunately, race relations, inequality, unemployment, violence, and poverty all contribute negatively to public health for the nation. Social issues relating to race relations and inequality in South Africa have been well publicized. The effect that these social issues have had on medical care for most residents in South Africa cannot be overstated. In addition to issues relating to race, above-average rates of violence, poverty, and unemployment all have a significant impact on the ability of many citizens to access effective medical care (Coovadia et al., 2009).

Poverty and Inequality

Despite having one of the largest economies on the continent of Africa, South Africa continues to deal with a concerningly high poverty rate. In 2014, an estimated 30.3 million South Africans (55.5% of the country's population) lived below the national poverty line of 33 South African Rand (ZAR) per day (Sulla, 2020). About 10.3 million (18.9% of the population) lived below the international poverty line of 12 ZAR per day. In other, non-monetary measures of poverty, 8.2% of the population lacked access to safe drinking water, 4.7% lacked access to proper sanitation services, and 4.1% lacked access to electricity. The proportion of households that had no adults present that had completed primary education was 2.3%, while 1.5% of households had at least one school-aged child that was not enrolled in school.

The issues of poverty described above are not shared equally among the South African population. South Africa has one of the largest income inequalities, measured by the Gini index, of any country in the world, at 63.0 (Sulla, 2020). In addition to the issue of inequality has been a general downturn in the South African economy even before the COVID-19 pandemic (which will be addressed below). From 2010 to 2014, the GDP per capita of the country only grew 0.86%. Worse still, the economic growth of the bottom 40% of earners in the same period was -.11%. The median income for the country also dropped .92% in the same period. While public health care is generally provided free of cost, income levels do have a significant impact on citizens' ability to travel to receive care or get medicines. A stagnant economy and high poverty levels make it less likely that people will be able to receive the care they require.

Violence

Crime, and particularly violent crime, remains a significant issue in the country of South Africa. Violent crime is a significant cause for concern in the country and presents a significant public health challenge. In the 2020-2021 financial year, there were a total of 19,972 murders reported in the country (South African Police Service, 2021). This represents 55 murders every day. This is a murder rate much higher than most of the world, and significantly higher than almost all countries with a similar level of development to South Africa. In addition, there were another 18,707 attempted murders, equaling 51 per day. Also concerning was the rate of assaults, with 143,393 assaults with the intent to inflict grievous bodily harm, equaling 393 per day. Common assaults totaled 149,442, or 409 per day.

In addition to murder and other non-sexual violent crime, South Africa is also a country with an exceptionally high rate of sexual violence. In the 2020-21 financial year, a total of

36,330 rapes were reported (South African Police Service, 2021). In addition, 7,025 sexual assaults were reported. Sexual violence is especially prevalent in the low-income, high-density townships in urban areas around the country (Statistics South Africa, 2018a).

Xenophobia

In 2020, it was estimated that there were nearly three million migrants living in South Africa (United Nations Department of Economic and Social Affairs, Population Division, 2020). South Africa, with one of the most successful and prosperous economies on the continent, has become a destination for migrants from neighboring countries looking for work. Many workers from Zimbabwe, Mozambique, Malawi, and other countries flock to urban areas in South Africa searching for employment. Unfortunately, a persistent xenophobia has accompanied the migration of foreigners into South Africa. Despite having one of the most progressive, democratic constitutions in the world in regard to human rights, stereotypes and misconceptions about foreigners have resulted in migrants not receiving equal treatment to native South Africans in practice (Crush, 2001).

This xenophobia has, unfortunately, extended into the realm of medical care. As an example of this xenophobia, a study found that there is a systemic mistreatment of Zimbabwean migrants in the public health system (Crush & Tawodzera, 2014). The study found that while these migrants have the right to medical care under the South African Constitution (Department of Justice and Constitutional Development, 1996), they were consistently denied treatment and turned away before seeing a doctor (Crush & Tawodzera, 2014). Many times, this was in the form of demanding proof that the person had the right to be in South Africa before care was administered. While many Zimbabwean migrants carry various documents such as various short

or long-term permits, many have either expired documentation or no documentation at all. Without being able to prove the right to be in South Africa, many migrants are turned away regardless of how sick they are.

The problems for migrants seeking medical attention do not end with having to present documentation. Many migrants also have reported a pattern of deliberate discrimination due to having different home languages than South African health care workers (Crush & Tawodzera, 2014). Because most migrants from Zimbabwe speak different home languages than the health care workers in public clinics throughout South Africa, many will attempt to speak the local language (such as Zulu in many cases). Most migrants do not speak much Zulu, however, and the potential for miscommunication is massive. While many South Africans and Zimbabwean migrants speak English, the use of English can bring about a negative response by the workers, who, in many cases, publicly bring attention to the foreign nature of the migrant seeking treatment. In addition to the potential for public abuse and humiliation by health care workers, the study also found that migrants face the fears of being arrested or deported by police when traveling to and from health clinics. This creates another barrier to those migrants who are seeking medical attention and shows again how the promise of the right to health care in the Constitution is being undermined by xenophobia in many communities.

Divided Health Care Systems

Like most aspects of society in South Africa, health care developed not as a unified national system, but as a disjointed, localized series of facilities and services that catered to specific demographics of patients. This happened not only organically due to geographic separation, but purposefully at the governmental level. The 1919 Health Act gave responsibility

for hospital and curative care to the four provinces, while relegating primary and preventative care to individual local authorities (Coovadia et al., 2009). The result of this action was a much stronger focus on hospital and curative care by the national government, with systemic neglect and underfunding of primary and preventative care. While it is impossible to quantify the cost in public health and economic cost of this one-sided focus, the cost in both areas is likely high. By the time the National Party came to power in 1948, the fragmentation of health services between various governmental agencies was well established, and the National Party did nothing to change this. The public system remained underfunded and underdeveloped for many decades thereafter.

During apartheid, the South African Government was content to allow two almost completely independent health care systems function in South Africa. Significant gains have been made in integrating and reconciling the systems since the fall of apartheid in the 1990s. However, many challenges still exist. There continues to be large racial disparities not only in health care, but also in income and poverty, which are mutually dependent on health care. Lack of integration between the two health care systems presents several issues, one of which is the transfer of knowledge between the systems. While most of the research and innovation occurs in the private sector, knowledge and treatments are not likely to move from the private sector to the public sector in an efficient and timely way. Given the government's great strides, there is hope that improvements will continue to be made in this area to improve health care for all South Africans (Mayosi et al., 2012).

During the apartheid regime, there was a deliberate conflation of the systems by the government in order to mask the racial disparity in health care spending. This conflation hid the

astounding disparity in spending on health care between the white and black populations. A study found that in 1988, health care expenditure for the entire nation equaled about 5.7% of gross national product (GNP). This was a greater amount than the World Health Organization's target of 5% of GNP being spent on health care. When spending is divided between white populations and black, however, a different story is told. The proportion spent on whites equaled 13-14% of GNP, which was actually a higher proportion than what was spent in the United States at the time. The proportion spent on blacks, however, was only equivalent to 3-3.5% of GNP, well below the World Health Organization's target of 5% (McIntyre & Dorrington, 1990). By combining the numbers, the white minority government controlled by the National Party was able to tell the world that health care spending in South Africa was much higher than what the reality was for a majority of the population.

Another problem with the division of the public and private health care systems is a lack of medical personnel in the public sector. Since jobs are generally lower-paying and provide less opportunity for advancement, there is a lack of talented medical personnel entering the public health system (Coovadia et al., 2009). This lack of qualified, knowledgeable medical personnel leads to less care and worse outcomes. Contributing to this issue is that while the government has promulgated policies with the intent to improve health care, these policies are often implemented unevenly, and without the stewardship and oversight necessary to bring about their full potential. This lack of stewardship and oversight of the public health care system further discourages potential medical personnel from entering the public sector.

Communicable Diseases

Communicable diseases represent a significant challenge to public health in South Africa. Many of the issues described above, including lack of proper sanitation or lack of access to safe drinking water, contribute to the transmission and perpetuation of communicable diseases in South Africa. The proportion of deaths in South Africa caused by communicable diseases reached a recent peak of 48.1% of all deaths in 2005 (Statistics South Africa, 2018b). The proportion then slowly declined through 2018, when it was 28.8%. Although declining, the number of deaths in South Africa caused by communicable diseases continues to be high compared to other developing countries. There are many diseases that contribute to this total, but some of the most prominent are influenza and pneumonia, HIV, and tuberculosis.

Influenza and Pneumonia

While not commonly mentioned among infectious diseases that contribute significantly to natural causes of death, influenza and pneumonia fit that category. From 2016-2018, influenza and pneumonia together represented the seventh leading natural cause of death in South Africa (Statistics South Africa, 2018b). The impact of pneumonia is especially tragic due to the disproportionate danger that the disease causes to young children. Because both influenza and pneumonia are highly treatable, it is of immense interest to health care workers to improve diagnostic practices in public clinics in South Africa.

In severe cases of pneumonia, studies have shown that the most likely pathogens responsible are *Streptococcus pneumoniae* or *Haemophilus influenzae* (Mulholland & Nguyen, 2015). Because these bacteria represent most of the severe pneumonia cases worldwide, there have been significant efforts to bring vaccinations to countries that have significant mortality associated with pneumonia. These include Hib and pneumococcal conjugate vaccines (PCVs),

which directly counter the most prominent bacteria that lead to pneumonia. Difficulties arise in determining the actual prevalence and number of deaths due to pneumonia because of a few factors. First, the medical community lacks a clear definition of what constitutes pneumonia. There are broad definitions that include many respiratory diseases, and there are narrow definitions that become so restrictive that only respiratory illness caused by *Streptococcus pneumonia* can be considered pneumonia. Another challenge is that many of the places in South Africa and globally that have the highest prevalence of pneumonia have the least ability to diagnose it correctly. This includes local areas that are served primarily by public health clinics. Thankfully, the future of pneumonia prevention, diagnosis and treatment seems bright, with increasing distribution of vaccines and an increasing awareness and urgency by health care professionals to reduce the burden of the disease on young patients and the broader public. From the introduction of the pneumococcal conjugate vaccine in South Africa in 2009 to 2021 there has been a 33% reduction in pneumonia mortality for children aged younger than 11 months and a 23% reduction in pneumonia mortality for children aged one to four years (Kleynhans et al., 2021).

HIV

Human immunodeficiency virus (HIV) is, sadly, synonymous with Sub-Saharan Africa. South Africa is certainly no exception to this rule. The recent history of South Africa would be impossible to tell without mentioning the immense impact that HIV has had on the country. After being first introduced into the country in the 1980s, HIV spread dramatically in the 1990s. Between 1990 and 2005, the prevalence of HIV rose from a mere 0.7% to 30.2% (Simelela et al., 2015). This rise in HIV coincided with the building of a new country after the fall of apartheid in

1994. Unsurprisingly, HIV was not initially a focus for the fledgling government. The newly elected, ANC-led government was focused primarily on social issues and dismantling vestiges of the oppressive regime that had preceded it. As a result, HIV was allowed to spread nearly unchecked for many years. While progress has been made recently, HIV remains a significant cause for concern for South Africa. From 2016-2018, HIV was the fifth leading cause of death in South Africa, and this is only when it was considered the primary cause of death (Statistics South Africa, 2018b).

The South African Government's response to HIV has been, in a word, inadequate. Cultural misconceptions and stereotypes hampered an effective understanding of the virus, as they did in much of the world. Homosexuality was taboo to the South African public at the time HIV was spreading, and the idea that HIV was solely a problem for the homosexual community resulted in a lack of focus on the issue. When the virus began spreading among people of all sexual orientations, attention grew. Initially, with knowledge of the virus being minimal, the focus was on safe sex practices and prevention of transmission (Simelela et al., 2015). Eventually, a response began in earnest to combat the virus. Unfortunately, not all efforts were successful or helpful. Virodene was a drug that was developed within South Africa, but it was quickly rejected by the scientific community, and served only to break public trust that the government could handle the outbreak.

Eventually, trials began using antiretroviral drugs (ARVs), which were given to pregnant mothers, in a program called the prevention of mother to child transmission (PMTCT) of HIV (Simelela et al., 2015). While the treatments were deemed effective by scientists and the South African Government, the government pursued a phased approach, wanting more testing done in

more areas to confirm effectiveness. Complicating the conflict between those who wanted the drugs rolled out quickly and those who were more hesitant was the greater conflict occurring between the public and the president at that time, Thabo Mbeki. Mbeki was seen as denying a link between HIV and AIDS, a view which was considered dangerously antiscientific. While Mbeki's views did not ultimately prevail, they did create conflict and politicization around the issue of HIV. This conflict and politicization cost time and likely lives in the battle against HIV.

Eventually, the government committed to antiretroviral treatment (ART) for adults and children (Simelela et al., 2015). A comprehensive plan was developed and has been implemented, resulting in the testing and treatment of millions of South Africans. While the cost of the government's initial lackadaisical response cannot be overstated, the hope for a future with ART treatment for all who require it in South Africa seems possible. Largely due to the decisive action the government has taken in recent years, HIV rates have finally started to decline (Statistics South Africa, 2018a).

Tuberculosis

Tuberculosis is another important communicable disease that continues to plague South Africa. From 2016-2018, tuberculosis was the number one cause of natural deaths in South Africa, causing 6% of all natural deaths in the country in 2018 (Statistics South Africa, 2018b). In addition to being a dangerous disease on its own, tuberculosis is a significant complicating factor in those who already have HIV. Given this, tuberculosis has become a major focus for public health in South Africa, where HIV rates, as discussed in the previous section, are exceptionally high.

One complicating factor in managing tuberculosis is the rise of drug-resistant and multidrug-resistant strains of tuberculosis. The most severe drug-resistant tuberculosis, extensively drug-resistant (XDR) tuberculosis, has been on the rise in South Africa. In 2012, there were more than 1,500 cases of XDR tuberculosis reported in South Africa (Sarita et al., 2017). With this type of tuberculosis being difficult and expensive to treat, it is of significant concern to health officials and health care professionals in South Africa.

Current Challenges and Solutions

The health care system in South Africa faces significant challenges for the future. These, as discussed above, include the social issues of inequality, poverty, unemployment, and violence and the systemic challenges of having a divided system in which there are effectively two classes of medical patients. Twenty-eight years after apartheid was abolished and a representative government was sworn in, the remnants of a society divided in almost every way have lived on in the way health care functions in the country. As the government attempts to improve public health and strives to make the system more equitable and effective, there is vigorous debate as to which path(s) should be chosen.

It has long been the government's position that a nationalized health care plan will be the future of health care for South Africa. Since the establishment of the new South African Constitution, the right to health care has been the technical law of the land, while not being the actual reality for many citizens. While National Health Insurance (NHI) certainly has the potential to improve access to care for a significant segment of the population, it would be foolish to suggest that any one solution will resolve all the nation's issues surrounding the health care system. This section, then, will only serve to examine possible actions that could be taken,

and assess the ability of these actions to impact the efficacy and accessibility of care in the country.

National Health Insurance (NHI)

Since assuming power in 1994, the ruling African National Congress (ANC) has advocated a national health insurance scheme that would effectively do away with the current bifurcated system. There has been debate about National Health Insurance (NHI) in South Africa since the policy has been promoted. Much can be learned about the possible effects of implementing NHI in South Africa by looking at other low-income countries that have enacted similar policies. While it is possible to increase care and funding for care, this poses significant risks, particularly regarding efficiency and distribution of care. NHI also has the potential to drive costs up, as private medical facilities will now be charging the government. It is possible to mediate these risks, but the solution to the health care problem in South Africa will need to be larger than NHI.

Established in the Constitution of South Africa (Department of Justice and Constitutional Development, 1996) is the right to health care for all citizens. Furthermore, the Constitution stipulates that the legislature is responsible to pass legislation that will realize this right for all citizens. Since the Constitution was adopted, many proposals have been put forward and edited to create a nationalized health system. Despite the ANC having unified control of the government, no nationalized health care law has yet been passed.

The latest bill, first introduced in the National Assembly in 2019, aims to finally establish an equitable health system for all South Africans. The overarching goal of the bill is to establish a national fund that will have mandatory prepayment (National Health Insurance Bill, 2019). The

fund will cover the health care costs for all South African citizens, permanent residents, refugees, and all children (children of illegal immigrants included). The bill also establishes that the fund will become the single purchaser and single payer of health care services. This means the state-established fund will be the only customer for health care services in the country. Additionally, the bill gives the fund's board the authority to determine the correct cost of health care services for which the fund will pay.

Crucially, the bill will, if implemented, only allow private health insurance as complementary coverage for services not covered by NHI (National Health Insurance Bill, 2019). This means the bill will, effectively, result in the extinction of private health insurance. Private health insurance has long been seen as a privilege that most of the country cannot afford, and the government sees the elimination of private health insurance as a key step towards achieving health equity in the country. When the idea of public health care was first introduced into the public discourse after the fall of apartheid, resistance to the idea was strong from those who had private health insurance (Bachman, 1994).

Contributing to doubts about the feasibility of a system such as NHI is the government's failure to bring an end to corruption and mismanagement at many levels, including in health care (Rispel et al., 2016). Corruption continues to be an issue that plagues the health care system of South Africa. Corruption and bad governance also hurt the morale of health care providers and discourage potential health care workers from entering the public health sector. There are efforts being undertaken to combat corruption, but further legislation and penalties for those found guilty of corruption need to be developed. This is especially true if South Africa moves toward a

nationalized health care system that is even more centralized, as more centralization will increase opportunity and incentive for corruption.

Public-Private Partnership

South Africa has a long history of racism, discrimination, and racial disparities. It has been found that race is still an important factor in predicting the need for public health care in South Africa. Black South Africans are by far the most likely to require public health care in South Africa. Distantly following this group was Coloreds, Indians, and finally Whites. While there were other variables that influenced the likelihood that a person required public health care, it is apparent that a majority of Black South Africans simply cannot afford private insurance or paying for private care out of pocket (Mhlanga & Garidzirai, 2020).

Medicine

When apartheid fell in the early 1990s, most of South Africa’s population did not have access to effective health care. This lack of provision extended to drugs. In 1997, South Africa’s drug prices were among the five highest in the world (Zuma, 1997). There was no national strategy to combat high drug prices. Additionally, there was significant disparity in the allocation of resources spent on medicine between the white and black populations. Despite efforts to improve access to quality medicines for all sectors of the population, recent research suggests there remain barriers to accessing medicine for the poorest parts of the population. These barriers include the distance a person has to travel to access medicines, cost of medicines, and the real or perceived differences in quality of medicines provided by the public health system as compared to those provided by the private health care system (Perumal-Pillay & Suleman, 2017).

One area where significant improvements can be made is in the actual medicines that are prescribed and used. Generic medicines are generally more affordable than name brand medicines. In a country like South Africa, where much of the population lives in poverty, access to and trust in generic medicines is important to increase access and use of these medicines. Clear differences were shown between the actual quality of various generic medicines and the perception of their quality. All generic medicines tested passed tests for quality, while a significant portion of those questioned believed that name brand medicines are of a higher quality than their generic counterparts (Patel et al., 2012). Health care providers could be a part of the solution, convincing their patients that the generic medicines are of adequate quality.

While changing patient perceptions of generic medicines is key to increasing their use, this is only part of the solution necessary. There are many important policy considerations for the use of generic medicines. In the United States, for instance, generic medicine companies are allowed to start developing drugs and can apply for approval before the original drug manufacturer's patent has expired. This allows the generic brand producer to introduce the generic form of the medicine to market immediately after the name-brand patent expires. Decreasing the time of generic drug approval by the government entity responsible can also allow the savings associated with generic drug use to start sooner (King & Kanavos, 2002).

COVID-19

South Africa reported its first case of COVID-19 in March of 2020. Soon after, a travel ban and lockdowns were initiated (Chitiga-Mabugu et al., 2021). This did not stop the spread of the disease, and COVID-19 continued to spread throughout the country. While almost no country has been immune to the virus, South Africa's economy was strained even before the pandemic

struck. Unemployment, a constant issue for the country, had risen to 29.1% in the third quarter of 2019 (Statistics South Africa, 2019). Just as concerning, the poverty rate in 2019 was over 49% and inequality had remained among the highest levels in the world. It is important to understand the strain the pandemic had on every aspect of society in the country, including the health care system.

COVID-19, as with almost every country in the world, has presented a unique set of challenges to the health care system in South Africa since the first reported case in 2020. As of January 22, 2022, South Africa has had a total of 3,572,860 COVID-19 cases, and a total of 93,846 deaths due to COVID-19 (World Health Organization, 2022). As with many developing countries, the nation's already-struggling health system has failed to adequately cope with the additional strain caused by the global pandemic. Complicating the response to COVID-19 is the country's many other diseases that already occupy much of the attention and resources of the health system.

COVID-19 Impact on Handling of Other Diseases

The COVID-19 pandemic has had a significant impact on South Africa's ability to test for, treat, and prevent other diseases. As in many other countries, the pandemic has discouraged many from seeking diagnosis and treatment of conditions that are not related to COVID-19. In a country where other diseases that have significant mortality rates are common, the result of the pandemic is amplified. While it is difficult to quantify the exact magnitude of deaths that are tangentially related to the COVID-19 pandemic, there have been studies that help give an idea of the secondary effects the pandemic has had on health in the country.

HIV discussed earlier is a primary cause of death in South Africa. One of the top causes of HIV-related deaths each year in South Africa is cryptococcal meningitis. Cryptococcal meningitis is present primarily in patients with advanced-stage HIV. Cryptococcal antigen (CrAg) is a biomarker that is highly specific to cryptococcal disease, and it can be detected in the blood weeks or months before cryptococcal meningitis symptoms present. Among a public network of laboratories, routine CrAg screening has been implemented. A report by the National Institute for Communicable Diseases (2020a), however, found that the number of CrAg tests performed each week after lockdowns began in the spring of 2020 was significantly lower than the average number of tests performed each week before the lockdowns began. Additionally, while the proportion of positive tests increased, the total number of positive tests decreased significantly. This, assuming the number of people in the country with the CrAg biomarker did not spontaneously decrease, suggests that the proportion of people getting tested and treated for this serious HIV-related complication decreased significantly due to the lockdowns imposed due to COVID-19 and the stress the pandemic put on the country’s health system.

Another disease previously discussed with a significant impact on overall health and mortality in South Africa is tuberculosis. There were an estimated 301,000 cases of tuberculosis reported in 2018, with the number of deaths due to tuberculosis being estimated at 63,000 (National Institute for Communicable Diseases, 2020a). The primary tool used to diagnose tuberculosis is the Xpert MTB/RIF Ultra assay. Before lockdown, an average of 47,520 tests were performed each week. After lockdown was implemented in April 2020, the average number of tuberculosis tests performed each week decreased to 24,574. This amounted to a 48% decline in the average number of tuberculosis tests performed each week nationwide. The average

number of positive tests per week before the lockdown was 3,710. After the lockdown was implemented, this decreased to 2,473, a 33% decrease. Some of this decrease in positive tests could be due to an actual decrease in transmission because of lockdowns. However, it is also probable that there are positive cases that have gone untested and untreated due to patients not seeking care. More research will need to be done after the pandemic is over to determine the effect of the COVID-19 pandemic on treatment of other communicable diseases.

COVID-19 continues to be a massive concern in South Africa, with new variants arising all the time. While the country attempts to deal with the pandemic socially and economically, the health care system continues to struggle to manage the surges of the virus that continue to happen. As of late January 2022, only 41% of the adult population has been fully vaccinated (Department of Health, 2022). Surveys from the early days of vaccine availability in the country suggested that South Africans, on average, were less willing to consider receiving a COVID-19 vaccine (Cooper et al., 2021). In this review of several surveys, it was found that vaccine hesitancy in South Africa was an inherently social, rather than individual, phenomenon. Indicators such as age, race, economic status, education, geographical location, and political affiliation were all strong predictors of vaccine acceptance or hesitancy. It was also found that vaccine hesitancy specific to the COVID-19 vaccine was consistent with a hesitancy of vaccines in general.

To combat vaccine hesitancy, Cooper et al. (2021) recommended a focus on communication and more thoughtful handling of how COVID-19 vaccine news is covered. In addition, more care should be taken on addressing legitimate concerns the public may have about the effectiveness and safety of COVID-19 vaccines. While much attention has been given in the

news to the idea that disinformation and conspiracy theories are the driving forces behind vaccine hesitancy, this is not actually the case. Instead of dismissing questions of vaccine efficacy and safety as foolish or unscientific, the concerns should be addressed thoughtfully and thoroughly. The review mentioned above found that after the roll-out of the AstraZeneca vaccine was stopped, public trust in vaccines decreased significantly. Instead of thoughtfully explaining that the roll-out was stopped because the vaccine was found not to be effective against the COVID-19 variant in the country, communication was unclear and led to more worries that all COVID-19 vaccines were unsafe for the public.

Conclusion

South Africa is a country with a unique, and in many ways tragic, history. While not alone in dealing with issues such as colonialism and race relations, South Africa has had a particularly difficult time reconciling the many social issues that were created by its history. After several centuries of occupation, war, oppression, segregation, and struggle, immense effort is being made to create a more inclusive, more progressive society for all South Africans. This has come in the form of a democratically elected, representative government bound by a progressive constitution focused on human rights. One of the rights the constitution guarantees, health care, is still a considerable distance from being a reality for most citizens of the country.

Many South African citizens face significant social, economic, and cultural barriers to having access to quality medical care. With unemployment and poverty high, many South Africans are simply unable to travel to health clinics or pharmacies to get treatment or medicines. Even when citizens can travel to public clinics, they may be forced to stand in line for hours or even days to see a worker for diagnosis and/or treatment. Additionally, there is a significant

xenophobic aspect of the public health system that discourages or prevents many foreign migrants from receiving the health care they need. When citizens can access public health clinics, they often find that the clinics are understaffed and underfunded. Finding and retaining talented health care workers remains a significant challenge, especially when the public system is forced to compete with the private system for highly educated health care providers. This is especially true in primary care clinics, which are funded at much lower levels than hospitals in the public system. Even when research is completed in private hospitals and research institutions, many of the new techniques and treatments are not transferred to the public system, resulting in a distinct disparity in the quality of care between those that can afford private insurance and those that cannot.

Communicable diseases remain a significant challenge to public health in South Africa. While on the decline, the rates of communicable diseases remain high on a global scale and contribute to increased mortality and a lower life expectancy in the country. Many of the systemic issues plaguing the health system are revealed in the diagnosis and treatment of prominent infectious diseases. These diseases include pneumonia, HIV, and tuberculosis, among others. For the prevention, diagnosis, and treatment of these diseases to be improved, the larger systemic issues of the health system will need to be addressed. Prevention cannot occur without reduced poverty and increased access to safe water and sanitation. Diagnosis and treatment cannot occur without more reliable access to health clinics and pharmacies.

There remains much work to be done to extend affordable, quality medical care to the entire populace of South Africa. Continuing the current divided system will fail to bring quality care to those reliant on the public sector. While the government is intent on enacting a national

insurance plan (NHI), there are other significant hurdles that remain to be addressed. Competent government leaders will need to take responsibility for the system they control, and corruption and mismanagement will need to be eradicated for any system to survive. Further examination of specific issues within South Africa's existing system needs to be completed. In addition, outside observers need to be consulted to determine specific steps the government of South Africa can take to improve health outcomes in the country. Improvements have been made since the fall of apartheid, but the dream of a truly equal society in South Africa has yet to come to fruition, at least on the issue of health care.

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