

**Controlling the Spread of AIDS in the South African  
Gold Mining Industry**

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### **Abstract**

This paper examines the complex issue of AIDS by focusing on the South African gold mining industry. It provides a description of the industry and the factors that make miners susceptible to AIDS. The discussion centers around three characteristics of the industry: the nature of the job, the use of migrant labor, and the single-sex living arrangements. The paper also examines current prevention efforts and offers recommendations.

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Man puts an end to the darkness;  
he searches the farthest recesses  
for ore in the blackest darkness.

Far from where people dwell he cuts a shaft,  
in places forgotten by the foot of man;  
far from men he dangles and sways.

The earth, from which food comes,  
is transformed below as by fire;  
sapphires come from its rocks,  
and its dust contains nuggets of gold.

No bird of prey knows that hidden path,  
no falcon's eye has seen it.

Proud beasts do not set foot on it,  
and no lion prowls there.

Man's hand assaults the flinty rock  
and lays bare the roots of the mountains.

He tunnels through the rock;  
his eyes see all its treasures.

He searches the sources of the rivers  
and brings hidden things to light.

Job 28: 3-11

## **I. Introduction**

The Human Immunodeficiency Virus (HIV) was first identified in the United States in 1983. Today, HIV and the resulting Acquired Immune Deficiency Syndrome (AIDS) can be found on almost every continent. In 2003 there were approximately 4.8 million new cases worldwide, thus bringing the total number of people infected to almost 40 million (UNAIDS 2004a). AIDS obliterates the body's natural defenses and causes its victims to waste away from diseases that could otherwise be easily suppressed. AIDS is particularly dangerous because its long incubation period of 5-10 years gives the HIV patient a false sense of health, which may cause the patient to engage in activities that could pass the disease onto others.

### ***What is the impact of the AIDS epidemic?***

The United Nations estimates that there are 14,000 new cases of HIV everyday, 95% of which are in low and middle-income countries. About half of the new cases occur among people 15-24 years old (UNAIDS 2004a). In effect, AIDS is most prevalent in communities where little or no resources are available to minimize the impact of the disease, to provide treatment for those already infected, and to prevent further spread. Also, AIDS is commonly found among people in their working and parenting prime, which adversely affects families and, more broadly, entire economies.

When the breadwinner cannot work due to AIDS, the household suffers a loss of income at the same time that medical or funeral costs increase household expenditures.

The parents and children of the AIDS victims, who under normal circumstances are dependents in the household, must now face the challenges of supporting the family; amazingly, there are households headed by children no older than 9 years old (Campbell and B. Williams 2001). Rather than attend schools, children increasingly find themselves at home taking care of relatives or entering the workforce to supplement or replace the lost income of the sick family member. In the long run, low levels of education will keep these children from high-paying jobs and thus will perpetuate their poverty.

The government and the economy also do not escape the impact of AIDS. In a situation similar to that of individual households, governments must balance a decreasing workforce with increasing healthcare expenditures. Meanwhile, economies suffer because of the pressures that AIDS places on businesses. In addition to losing productivity due to high absenteeism and lack of skilled workers, businesses are also spending more on insurance and benefits. The World Bank estimates that in 24 African countries, AIDS prevents 0.5% to 1.2% of per capita economic growth each year (UNAIDS 2004a).

The study of the AIDS epidemic is complicated and multi-faceted. While those in the hard scientific fields work to find cures, vaccines, or better treatments, social scientists are trying to prevent further spread and to empower populations to cope with the impacts of AIDS. This paper focuses on AIDS in South Africa's gold mining industry. It explores the factors that hinder prevention campaigns and offers policy recommendations designed to alleviate the obstacles.

*Why devote attention to the mining industry?*

AIDS has infiltrated one of South Africa's most important industries. About 15-25% of all mineworkers are infected, compared to South Africa's national average of 21.5% (Macheke and Campbell 1998, UNAIDS 2004b). The relatively high prevalence of HIV among miners leads to the hypothesis that certain aspects of the mining industry make the men more susceptible to the disease than the average person. This paper tests that hypothesis by examining three characteristics closely associated with the industry: the dangerous nature of the job, the migrant labor system, and the all-male housing accommodations.

The mining industry warrants attention for several reasons. First, the industry employs men from all over southern Africa, and as migrant workers, these men can easily spread the disease far and wide. Barnett and Whitestand (2000) note that migrant-sending countries such as Botswana, Swaziland, and Lesotho have higher HIV prevalence than South Africa. These researchers call South Africa "the crucible for HIV transmission in the region" because men become infected at the mining sites and carry the disease back to the rural communities on visits or at the conclusion of their labor contracts (Barnett and Whitestand, 2000,153). The 195,940 gold miners are crucial targets for lowering overall HIV prevalence rates (Chamber of Mines 2000).

Second, the AIDS epidemic threatens the productivity of an industry that provides vital resources to the world and is of great importance to the economy of South Africa. In addition to being the largest producer of platinum, gold, and

chromium in the world, South Africa is also supplier of 5.7% of the world's coal (Chamber of Mines 2002). The thriving mining industry contributes almost 10% to the country's gross domestic product and is its largest employer. Mining has brought relative wealth for South Africans. While the average gross national income of sub-Saharan Africa is only \$562, that of South Africa stands at \$2,780 (World Bank 2003). A troubled mining industry will adversely affect the economy of South Africa and lower the standard of living for Africa's most developed country.

Given the importance of the industry and the ability of the miners to spread the disease, there needs to be effective programs to prevent AIDS in that community. The first chapter of this paper examines the industry itself, with focus on how the dangerous conditions in the mines, the migrant labor system, and the housing arrangement affect miners. The next chapter then examines prevention efforts currently underway, and the paper concludes with policy recommendations.

## **II. The Mine Environment**

The glittering magnificence of gold hides the ugly reality of the South African gold mining industry. Gold is a precious metal because of its rarity and the immense labor needed to mine it; however, few people truly understand the pressures that miners face (James 1992). During apartheid, black miners endured outright exploitation that threatened their dignity and physical well-being (Moodie 1994; Wilson 2000). The miners received political freedom with the downfall of apartheid, but certain characteristics of the mining industry remain the same. This chapter explores the nature of mining, the migrant labor system, and the housing policies of the industry. The purpose is to show how those three characteristics make miners especially susceptible to HIV.

### ***The nature of mining***

Gold mining is a labor-intensive occupation that requires its workers to use heavy equipment to extract the precious metal from underground. Meshed into rocks thousands of feet below the earth's surface, the gold-bearing reefs are merely inches wide (Moodie 1994). Miners remove the big chunks of rocks, and the gold is separated above ground. For every ton of ore mined, only about five parts per million are actually gold (Chamber of Mines 2003a).

Mine shafts up to 2.4 miles deep and elaborate networks of tunnels lead miners to the gold deposits (Chamber of Mines 2003a). Descending deep into the earth's surface is an intimidating act in itself, for it may take a miner up to three hours by elevator, train, and foot to get to the work site (James 1992). The cramped, dusty

space is noisy from the heavy machinery and hot from the heat released by the rocks. The temperature may at times reach 113°F (Chamber of Mines 2003a), and although there are ways to reduce the heat, the temperature still remains at an uncomfortable level (James 1992).

The work is physically taxing, and miners are subjected to a host of diseases. Tuberculosis, muscular skeletal injuries, hearing loss, and dermatological conditions are a few examples (Marcus 2001). In an interview, a 23 year-old miner complained about swollen feet, an aching head, and sore body at the end of his 10-12 hour days (Campbell and B.Williams 1999). If work conditions are causing that much pain for the young man, then the implication is that older miners are even more miserable.

In addition to the physical effects associated with mine work, there are also psychological impacts (Campbell 2003; Marcus 2001; Moodie 1994). Most often mentioned in the literature on mining is the constant fear of injuries or death that can result from rock falls, equipment mishaps, ventilation problems, or accidental explosions (Marcus 2001). One miner explains, “Whenever you go down the shaft, you are not sure that you will come out alive. You don’t want to think about it. But it keeps coming” (Moodie 1994, 16). Such fears are affirmed by the miners’ eyewitness accounts of accidents or by the sights of the dead or injured being brought to the surface (Campbell 2003). In interviews, many miners reported classic symptoms of post-traumatic stress disorder (Campbell 2003).

The constant fear from not knowing who might be injured or die next has made fatalism a common belief among miners (Campbell 2003; Watchempino 1980).

With its emphasis on the inevitability of events, fatalism keeps miners from dwelling on the fact that they could be the next victims of a horrible accident. A fatalistic outlook underscores the lack of self-determination that miners feel in regard to their well-being.

How do fatalism and a low sense of self-determination relate to the high prevalence of HIV among miners? The theory is that individuals are more likely to adopt health-promoting behaviors when they possess a strong sense of self-determination (Campbell 2003). A low sense of self-determination leaves people feeling powerless and undermines the message that safe sexual practices can prevent HIV. For miners, that sense of self-determination is forfeited because of the persisting discomforts and fears on the job. With fatalism persisting, miners are driven to seek pleasure in the present and to disregard the consequences of their actions. As one miner explains, “The dangers and risks of the job we are doing are such that no one can afford to be motivated with life—so the only thing that motivates us is pleasure” (Campbell 2003, 31).

With fatalism driving the men to seek pleasure, it is important that there are appropriate outlets for relaxation. Because mining sites tend to be in isolated areas, the pleasures most readily available are alcohol, marijuana, and sex (Campbell 2003; Moodie 1994). Some mining companies offer sporting facilities onsite, but miners say they prefer to unwind at the local bars, where they can socialize with each other and meet women (Macheke and Campbell 1998). Miners must find more positive

recreational outlets than alcohol, as research confirms that substance use incite high-risk sexual activities (Leigh and Stall 1993).

Fatalism is not the only negative consequence of the dangerous and stressful conditions. Another outcome is a masculine identity centered on macho characteristics (Campbell 2003; Moodie 1994). These macho characteristics, such as bravery or persistence, arise from the way in which miners console each other against the incapacitating fear of mine work. For example, they tell each other that it is the man's responsibility to provide for the family, or they praise each other by saying that only the strong and determined can endure the work (Campbell 2003; Moodie 1994). Some macho characteristics help miners cope with their fears, but others, like the desirability of having multiple sexual partners, can place miners at risk of getting HIV (Campbell 2003).

Exacerbating the on-the-job stress and isolation that lead miners to seek women is the migrant labor system, which removes miners from their families and other stabilizing social networks. The following section explains the migrant labor system as another characteristic of the mining industry that places miners more at risk of HIV.

### ***The migrant labor system***

The use of migrant labor dates back to 1889 and involves men within and beyond South Africa (Gebrekristos and Lurie 2003). The majority of international miners come from bordering Botswana, Lesotho, Swaziland, and Mozambique, though there are also those from eastern and western Africa (Barnett and Whitestand

2000). Miners are generally from rural areas and have little education. Working under contract, these men stay near the mining sites and are only allowed to visit home according to company policies. These policies may allow miners to go home monthly, quarterly, or twice annually (Gebrekristos and Lurie 2003).

Quantitative research shows that the migrant labor system contributes to the AIDS epidemic (Gebrekristos and Lurie 2003). In a group of migrant men, non-migrant men, and the partners of each group, HIV prevalence was found to be lowest among men who spent the most time with their partners. As for the women, HIV prevalence was highest for those who received the most visits from the men. The implication is that migrants contracted HIV from casual sexual encounters and brought it back to their long-term partners (Gebrekristos and Lurie 2003). In the same study, couples who stayed together all year had the lowest rate of infection. These findings led to the conclusion that being spatially separated from one's partner increases the likelihood of casual affairs, which in turn raises the risk becoming infected with HIV (Gebrekristos and Lurie 2003).

Smit (2001) observes that the migrant labor system impacts family dynamics (Smit 2001). Being separated from each other for long periods of time reduces the feelings, understanding, or communication between the people in a relationship (Smit 2001). While the men are away, women gain more responsibilities and authority than usually allowed in their patriarchal society (Smit 2001). Miners may find it difficult to regain the full responsibilities after having gotten used to living as bachelors at the

mines (Smit 2001). For their part, the women would have to reorient themselves to a more subservient role.

The migrant labor system also breeds infidelity (Gebrekristos and Lurie 2003). Quite frequently, miners would have serious or semi-serious relationships with someone near the mines while still maintaining a relationship with the person back home (Moodie 1994; Smit 2001). Why miners are promiscuous can be examined in terms of them trying to find an outlet for the stress that comes from their hard work, or it could be explained simply that the men are answering their biological calling without having anyone near by to stop them.

Infidelity may be damaging to relationships, but in the case of miners, it could be deadly because as they have sexual relationships with multiple partners, miners rarely use condoms (Jochelson, Mothibeli, and Leger 1991; Campbell 2003). This lack of condom use has made STDs especially common in the mining community (Jochelson, Mothibeli, and Leger 1991; Hunt 1989). Being itself a sexually transmitted disease, HIV could become as prevalent as other STDs if this pattern of no condom use persists.

Not only is the migrant labor system harmful to individuals and relationships, but it also contributes to poverty in rural areas. Mining life presents miners with the temptations of drugs, alcohol, and women. Without family there to check their behavior, miners are more likely to be distracted from their purpose for coming to the mines, which is to financially support the people back home (Campbell 2003; Moodie 1994). Even when remittances are steady, households in rural areas already tend to

be impoverished (Smit 1991); therefore, it is disastrous for the rural families when miners stop sending money home.

Many women have also become migrants as a result of the impoverished conditions in the rural areas. The search for a job usually leads nowhere, and many women become commercial sex workers to earn a living (Campbell 2003). The large number of sex workers near mining sites means more temptations for miners. Given the fact that miners rarely use condoms, the sexual relationships between miners and workers are likely to involve the transference of STDs and AIDS. In order to prevent AIDS in the mining community, commercial sex must be reduced. Reducing commercial sex requires alleviating poverty in the rural areas. In turn, reducing poverty means changing the migrant labor system.

### *Living conditions*

Mining companies have provided housing for their workers since gold was discovered in South Africa in 1886 (Moodie 1994). The types of housing provided have evolved over the years. In the beginning, miners lived in huts near the mine shafts. By the early 20<sup>th</sup> century, closed compounds were built. They consisted of barrack-like buildings arranged to form the perimeter of a square. In the center of the square would typically be the changing rooms, washrooms, a kitchen, and bar (Moodie 1994). Miners could visit nearby towns, but a gate on one side of the compound allowed management to monitor movement. Today, mine housing is less militaristic than before, and the term “hostels” is used in place of “compounds.”

The terrible conditions in these housing facilities have been and continue to be a source of anguish for miners. The compounds, which housed only male miners, were dirty, overcrowded, and lacked privacy. In the early compounds, there may have been 40-80 people sharing a 25 feet by 16 feet room (Moodie 1994). The newer accommodations tend to have more open floor plans and fewer people per room. At Anglo-American mines, for example, eight miners share a room that has a common sitting-dining room area (Moodie 1994). It must be noted, though, that mining companies update their facilities at a different pace; even though conditions have improved on some mines, that does not mean that all miners now have satisfactory housing (Crush and James 1991). Dirtiness, overcrowding, and lacking privacy are still how most miners describe their living quarters today (Campbell 1997).

Around 1987, mining companies announced that they would begin moving a large portion of miners into owner-occupied family housing units (Crush and James 1991). While that was the news that many miners had been waiting for, observers predicted that depopulating the compounds would move at a glacial pace (Crush and James 1991). There were doubts because of the large capital investments it would take to convert old compounds to family units. Also, the alternative housing options were thought to be unaffordable to most miners. Almost two decades later, 70% of miners still live in hostels (NUM 2003).

The decision to move miners from the hostels was in response to the growing militancy of the workers. One of the original purposes of the compounds was to allow management to control unionization and other political activities (Moodie

1994). By 1987, it was clear that the compounds facilitated organizing activities, hence the announcement by the companies that they intended to provide other housing options for miners (Crush and James 1991).

The new impetus to move miners from the single-sex hostels is AIDS. Family housing would be the structural support needed for miners to change their risky sexual behavior (Gebrekristos and Lurie 2003). It would mitigate the effects of the migrant labor system by allowing sexual partners to be near each other, which would reduce promiscuity (Gebrekristos and Lurie 2003).

Many entrenched characteristics of the gold mining industry encourage risky behaviors from miners. First is the physically demanding and dangerous nature of mining. First-hand experience underground convinced a scholar that “no human being ought to work there” (James 1992, 27). Despite the conditions, miners must work there to provide for their families. It has been estimated that in addition to supporting immediate family, remittances directly or indirectly help four to five members of the miner’s extended family (James 1992).

In sum, the mining existence is characterized by stress and loneliness. Adding to the strain are crowded and dirty living conditions. An effect of those negative realities of mine life is the tendency of miners to adopt a sexual lifestyle involving multiple partners and rare condom usage, both of which increase their chances of getting HIV. The migrant labor system spatially separates miners from important sources of social support that could prevent such behaviors. Prevention programs must, therefore, seek to improve the living and working environment of miners.

### **III. Prevention Efforts**

This chapter explores the rationality behind current HIV prevention efforts. Stakeholders share the common goal of controlling the spread of HIV/AIDS, but their opinions differ concerning where to direct limited resources. The first section discusses two different priorities: convincing people to stop risky behaviors and improving social conditions. The second section then describes the ABC campaign, which reflects that first priority and is the approach used for curbing HIV infection among miners.

#### ***A. Persuading and enabling approaches***

Prevention efforts have centered around two goals: changing people's behaviors and promoting an environment that allows those behavioral changes to take place (Tawil, Verster, and O'Reilly 1995). The two approaches differ in their opinion of who is responsible for preventing HIV infection (Campbell 2003). With the first approach, the responsibility rests on the individual to make the necessary lifestyle changes. Meanwhile, the latter approach recognizes the greater role of society. The second approach says that though the individual may have the willpower to change behavior, social conditions ultimately determine how much change can actually occur.

The method that focuses on individuals arose from several factors, one of which is the stigma of AIDS. Unlike other major diseases like cancer or tuberculosis, AIDS has the negative connotation of being the disease of homosexuals, prostitutes, or drug addicts. The stigma of AIDS varies from one society to another, but in

general, unaffected individuals tend to view it as a self-induced disease, brought on by unsanctioned sexual activities or illegal drug use. This outlook then leads to the belief that HIV/AIDS patients never would have contracted the disease had they behaved more responsibly (Shilts 2000).

Another source of the individual-oriented approach to prevention is Western cultures' emphasis on the ability of individuals to control their own fate (Campbell 2003). The focus on the individual's powers has led to the conclusion that individuals also can be proactive in health matters. A former United States Surgeon General estimated that mortality depends 20% on genetics, 10% on medical care, 20% on environmental factors, and 50% on individual behavior and lifestyle (D. Williams 1990). In that equation, the large percentage of control given to the individual contradicts with the view popular among sociologists, which is that individual actions are limited by social conditions (Link and Phelan 1995; D. Williams 1990).

Since Western countries are the biggest funders of HIV prevention and treatment programs, the programs often reflect the Western view that individuals play a major role in affecting health outcomes (Campbell 2003). Prevention campaigns focus on presenting facts about HIV/AIDS to vulnerable populations. The belief is that knowledge about AIDS will discourage them from risky behaviors. The presumption is that behavior can be easily manipulated, and that any rational person would stop engaging in risky activities if made aware of the consequences.

The widely promoted ABC campaign tells people to abstain, be faithful, and use condoms. The message is that delaying sexual activities and limiting the number of partners will reduce the likelihood of HIV infection, as will the consistent and correct use of condoms. The ABC campaign empowers people by showing them that each person has the ability to stave off infection by making prudent choices in sexual activities.

Campbell (2003) points out that at times, knowing the risk factors of AIDS may still result in risky behaviors. Critics of the ABC campaign see it as evidence that behavior is not always of the individual's choice but is also influenced by existing social conditions (Campbell 2003; Tawil, Verster, and O'Reilly 1995). Socioeconomic status and cultural and religious orientation are some factors that exert strong influence over individual behavior. Consequently, HIV prevention programs should also work to ensure that the social environment is such that would enable the population to adopt safe sexual behavior. The following section examines in more detail the ABC campaign, for it is the approach being used worldwide.

### ***The ABC campaign***

Uganda, one of the few success stories in the world, pioneered a three-pronged approach called ABC: Abstain, Be faithful, Condom use. The fact that infection rate in Uganda has decreased from more than 30% in the early 1990s to about 6% in the last year shows the effectiveness of the approach ("Uganda's Leaders" 2004).

With the ABCs of prevention, information about HIV/AIDS is presented to persuade people that the prescribed behaviors are absolutely necessary. Abstinence and fidelity not only are moral issues but also important lifestyle changes that can prevent HIV. The consistent and correct use of condoms is another life-saving habit. The message of the program is that prudent sexual behavior can minimize the risk of HIV infection; yet most AIDS experts have recognized that the effectiveness of the ABC program depends on the economic status, cultural and religious values, or political environment of the population at risk.

It is difficult to introduce condoms or to declare abstinence and faithfulness as necessary practices because they might conflict with local social or religious norms. In many communities, sexuality and sexual practices are intricately laced into the cultural and religious fabrics (Preston-Whyte 1994). For example, the use of contraceptives is unpopular in a cultural context such as that of South Africa's Kwazulu/Natal area, where children are proof of masculinity and motherhood is a much-anticipated role for women with little education or work opportunities (Preston-Whyte 1994).

There is also the economic factor that drives women into commercial sex work. Even if abstinence and faithfulness are laudable virtues, women may find themselves exchanging sexual favors for money. As Campbell (2003) points out, sex workers cannot worry about AIDS, whose symptoms will not emerge until later, when they have the immediate task of feeding themselves and their children. Prevention programs aimed at getting sex workers to demand condom use are

hindered by the fact that clients often become enraged or threaten to take their business elsewhere. The fear of losing clients is enough to discourage impoverished sex workers from further talks of condom use.

The ABC approach, popular though it is, has caused heated debates among AIDS experts and policymakers over the issue of whether abstinence or condom use should be emphasized more. At the 2004 International AIDS Conference, Ugandan President Yoweri Museveni announced that the emphasis on abstinence education rather than condom promotion was responsible for his country's declining infection rate (Ekwowusi 2004). President Museveni, along with President Bush, claim that abstinence is the only method that is 100% effective against HIV infection.

Opponents say that abstinence education pushes a philosophical or religious view and ignores the fact that humans are sexual beings. Condom use, these opponents claim, is a more practical approach. They point to Thailand, a country that has successfully reduced infections by aggressively promoting condom use (Ekwowusi 2004).

The debate distracts from the reality that both abstinence and condoms are equally important in the fight to lower HIV infections. In some contexts abstinence is more appropriate than condoms and vice versa, so it is unnecessary to say which method is more effective in general. What clearly emerges from the debate is that the government plays a pivotal role in the prevention process. Opponents of President Museveni and President Bush recognize this and are afraid that the men will use their influence to steer prevention programs in the direction of their personal beliefs. AIDS activists desire a political environment favorable to their view because a

supportive government lends legitimacy to their method of prevention and will allocate more funding for the programs.

In addition to the ABC program, AIDS activists have sought other preventative measures. They advocate voluntary testing so that individuals will not unknowingly pass the disease onto their partners, or mothers to their children. There are programs to prevent and treat other STDs. Care is taken to prevent the spread of HIV in health care settings. Activists are also working at the community and national levels to dispel the stigma that usually surrounds HIV and AIDS.

Even though there are other prevention activities, the ABC program remains a top priority because of the continued belief that individuals can and must be sexually responsible. With such thinking, it is natural that the ABC program would be utilized in the mining community, where unsafe sexual activity is the main source of HIV infection. But in addition to the economic status, cultural and religious values, or the political environment that dictate the effectiveness of the ABC program, the mining industry has its own barriers to miners' safe sexual behavior. A restructuring of the system is necessary to enable healthy behaviors.

#### **IV. The Mining Industry's Response to HIV/AIDS**

The AIDS epidemic provokes a variety of responses. There exists prevention campaigns, efforts to mitigate the epidemic's impacts, and scientific investigations to find a cure or vaccine to halt the disease altogether. This chapter examines the priorities of the mining companies and the unions and offers suggestions as to where these priorities should be. Attention is specially paid to how much unions have pushed for changes in those three areas and how far mining companies have gone to restructure the industry.

##### *Union activities*

The National Union of Mineworkers (NUM) came into being on December 5, 1982 to improve the health, safety, and remuneration conditions of its members. Among its requests have been the abolition of the migrant labor system and the mine compounds for their inhumanity and undesirable social consequences (James 1992). The NUM has helped to increase safety standards but has encountered obstacles in its efforts to change the migrant labor system and housing accommodations.

##### *Safety*

Like any other businesses, mining companies want to maximize production and profits, sometimes to the detriment of the workers' health and safety. Furthermore, the apartheid political structure laid the foundation for exploitation of the predominately black labor force. The NUM has been instrumental in making management more responsible for its workforce in health and safety matters, often framing their arguments as human rights issues.

Because danger is an intrinsic characteristic of mining, it is impossible for the NUM to completely dispel the miners' fears. Nonetheless, the NUM is the watchdog making sure that mines are equipped with the best available safety measures. A major victory came with the passage of the Mine Health and Safety Act of 1996. Under the Act, workers have the right to refuse work when conditions are dangerous. They also are entitled to elect their own safety representatives to independently monitor safety standards. In addition, the Act established the national Mine Health and Safety Inspectorate. The 2003-2004 report from the Inspectorate showed that there were 264 fatalities in all the mining industry, down from 293 in the previous year (Van Gass 2004).

The NUM has also approached the safety issue by seeking compensation for those injured. In 1986 the NUM won a measure that allows injured and disabled workers to collect compensation if they were demoted (James 1992). Companies also are required to find alternative employment for disabled workers rather than immediately dismissing them.

### *Migrancy*

Since 1988, the NUM has argued that migrancy and housing accommodations contribute to the AIDS epidemic (Campbell and B. Williams 1999). Cross-border migration has declined as the industry has sought to employ more South African miners. In 1999, 46% of the workforce came from South Africa, compared to only 22% in 1971 (Wilson 2001). The decline in foreign migrants, though, resulted from

the changing political climate in the contributing countries rather than any influence from the NUM.

Two major, unrelated events occurred in the 1970s that convinced the mining industry to hire more domestic workers than foreigners. In 1974, the mining industry lost a third of its labor force when President Banda of Malawi withdrew 130,000 workers (James 1992). The action came following a plane crash that killed 74 Malawian workers being transported to work on a South African mine. Speculation for this abrupt decision was that President Banda had long been pressured by his state officials and local entrepreneurs to stop sending workers to South Africa (James 1992).

In the same month that Malawians were withdrawn from South Africa, Mozambique made progress in its fight for independence from Portugal. The freedom fighters of the independence war threatened that once in power, they would stop supporting apartheid by withdrawing Mozambican laborers from South Africa's mines (Wilson 2001). At the time, Mozambique provided 25% of the mines' workers (Wilson 2001). Recognizing how vulnerable the industry was to political instability in the migrant-sending countries, the industry decided to reduce foreign recruitment and to rely more on domestic labor (James 1992).

Though southern African countries like Malawi and Mozambique may have opposed migrant labor, the reality was that they depended greatly on the system (James 1992). The governments cannot escape the fact that most of the miners' wages went back to help their impoverished rural families. Furthermore, the

governments earned money from administrative fees charged during the recruitment process (James 1992). They also earned revenue by forcing miners to participate in a system of deferred payment in which 60% of their wages were withheld until the end of their contracts (James 1992). The interest generated from that money benefited the various governments but not the miners in what was essentially an interest-free credit system (James 1992). When the mining industry decided to use less foreign labor, the governments not only lost the revenue from the deferred pay system, but they also had to find jobs for the thousands of repatriated workers (James 1992).

Like the other southern African countries, the mining companies and South African government recognize the negative consequences of the migrant labor system (Chamber of Mines 2004; SA Depts. of Minerals, Energy, Health, Labor 2003). However, it is unlikely that they will stop using migrants when mining requires a large labor force and when the system is of such economic benefit to the other southern African countries (James 1992). The use of domestic labor may facilitate visits because the workers are closer to home, but the fact remains that domestic miners are still spatially separated from their families for the majority of the time (Gebrekristos and Lurie 2003). The NUM calls for the migrant labor system to be eliminated in phases to minimize the shock (1995). In the meantime, the union is working to improve the status of migrants and to ensure that miners are given satisfactory housing.

### *Housing*

Along with better wage demands, accommodation issues have been a top priority for the National Union of Mineworkers and its predecessor, the Black Mineworkers Union (NUM 2004). Demands range from improving existing conditions to giving miners the option of moving away from the hostels. Under apartheid, it was almost politically impossible for miners to demand family housing units. After all, there was a law specifically prohibiting mining companies from providing family housing for more than 3% of its black workforce (James 1992). Mining companies often used that law to justify their housing policies, although James (1992) notes that mining companies rarely provided even 2% of their workforce with family housing. By 1987, the South African government had relaxed some of its influx laws, and the militaristic management structure that had mirrored the apartheid government relaxed as well (Weinberg, Hunter, and Murphy 1996).

Even after the breakdown of apartheid, the NUM still accuses the mining companies of racial discrimination. First is the denial of alternative accommodations for foreign migrants, who happen to be mostly black. The NUM also points out the fact that new, white employees can easily obtain appropriate living space while blacks who have been employed for longer encounter problems (NUM 2004).

The NUM advocates that there be a variety of housing options for its South African and foreign members (NUM 2004). Miners preferring to maintain the freedom of their bachelor-like lifestyle are entitled to renovated hostels. At the same time, those desiring the company of their families should be provided with family-

oriented housing. For workers who want to build a home in the rural areas but do not fancy life in the hostels, the NUM suggests that they be given a living allowance (NUM 2004).

### *AIDS*

The AIDS epidemic brought new issues to the NUM's already full agenda. The union has adopted three major platforms in response to the intrusion of AIDS into the mining community: raising awareness levels and prevention activities, ensuring wellness programs for those already infected, and encouraging research (NUM 2003).

The NUM supports the message of the ABC campaign but continues to emphasize how hostel living prevents miners from adopting the message. Recognizing that 70% of miners still reside in hostels today, the NUM demands that family housing be made available to half the workforce within the next five years (NUM 2003). In addition to changing the housing situation, the NUM recognizes the importance of peer educators in the prevention and awareness processes.

For the thousands of miners already infected, the NUM hopes that mining companies will provide wellness programs; the incentive for the companies is that the miners could remain economically active for as long as possible (NUM 2003). Another request is that the companies pay attention to the nutritional content of the food, so that miners can sustain a healthy immune system. Anti-retroviral drugs, which can help make AIDS a chronic disease rather than a death sentence, are also

requested. Though supplements are important, the NUM condemns companies that try to substitute vitamins for anti-retroviral drugs.

Lastly, the NUM encourages mining companies to support and contribute to the endeavors of universities and other institutions in their quest for a cure. There is also a call for research to find more preventive measures and to analyze the specific impact of the disease on the industry.

### *Employers' responses*

The success of mines rests on people, capital, and the ore reserve (Weinberg, Hunter, and Murphy 1996). For the mining industry, containing the spread of AIDS is “neither a human rights issue nor a health issue.... AIDS is a business issue” (Campbell and B. Williams 1999, 1628). It is estimated that HIV/AIDS adds 4-5% to a company's labor costs, which is damaging for an industry that is several decades past its prime (“Working with HIV/AIDS” 2002; Itano 2004).

Recognizing the losses associated with passivity, the mining companies have spearheaded prevention efforts since the early days of the epidemic, even before the government had a chance to react (Campbell and B. Williams 1999). While proactive in dealing with the immediate issues of AIDS, companies have been more hesitant to change the core structures of the industry, such as the migrant labor and hostel systems that, as shown in the previous chapter, can hinder prevention efforts.

### *AIDS*

The Chamber of Mines, which speaks on behalf of mining companies, identifies four major areas of concern for employers: prevention, voluntary

counseling, support and treatment, and research (Chamber of Mines 2003c). The companies are devoted to preventing and caring for their workers because research shows that doing nothing would add \$10-12 to every ounce of gold produced, whereas prevention and care cost as little as \$2 per ounce (“Working with HIV/AIDS” 2002).

The companies have used many tactics to raise awareness and to publicize prevention techniques (Chamber of Mines 2003b). For example, they have sponsored theater productions, music festivals, sports days, and rallies that address AIDS issues. AIDS education has also been incorporated into the training programs that all new employees must undergo. They have given out free male condoms in the workplace. There are efforts to give advice and treat other sexually transmitted diseases.

In addition, the companies have utilized peer educators to discuss the ABC message with miners, as well as to promote voluntary testing and counseling. The voluntary testing programs allow miners to know the status of their health and to receive advice no matter what the result. Critics fear the potential discriminatory uses with disclosure of the status of miners’ health, but the companies stand by their anti-discrimination policies (Chamber of Mines 2003c).

The goal of providing care and treatment will be most challenging for the mining companies (Campbell and B. Williams 1999). Traditionally, the companies have provided free health care to miners, but the many opportunistic infections that accompany AIDS may overburden the system (Campbell and B. Williams 1999). Companies recently began providing anti-retroviral drugs; however, due to the high

volume needed, the drugs have been delegated mostly to pregnant women to prevent mother to child transmission or to rape victims (Chamber of Mines 2003b). Some companies, although not all, do provide the drugs for all employees with AIDS.

### *Mining structure*

The NUM condemns the migrant labor system as a relic of apartheid, but because stopping it would disrupt relations with the countries involved, the labor union has not pushed strongly for its abolition. Its only alternative is to mitigate the consequences of the system by making available family housing units for miners who desire them.

Companies have approached the challenge of finding alternatives to hostels differently. One option is to transform existing single-sex hostels to family units, although that would require building more facilities. Another option is to provide miners with an “all-inclusive wage” to be used at the miners’ discretion (James 1992). The lump sum includes the miner’s basic earnings, plus the costs of housing, food, travel, or other items usually provided by the company (James 1992).

Other approaches to the accommodation dilemma are home-ownership programs, rent subsidies, and a “living out” allowance (James 1992). To encourage home-ownership, some companies would provide loans or underwrite mortgages for the miners, but usually only senior black employees have the financial means to adopt this policy (James, 1992). As for the allowance approach, many companies are discovering that miners prefer to construct squatter dwellings around the mining area with the extra money rather than renting homes in the townships (James 1992).

With 70% of miners still living in hostels, the NUM complains that housing reforms are not comprehensive enough (NUM 2003). Housing reforms are quick only where the NUM's presence is strong (James 1992). There is not much incentive to change the status quo, for hostels remain the cheapest means of housing migrants (SA Depts. of Minerals, Energy, Health and Labor 2003). Financial difficulties are often the excuse that companies give (Itano 2004). Evidence to their claim is the statistic that the cost of gold production is 25% higher in South Africa than in the US, Canada, and Australia (Campbell and B. Williams 1999). One cause for the steeper costs is the increasing depth at which the remaining gold reserve is found. Another culprit is the fluctuating gold prices and the value of the rand (Itano 2004). Paying for AIDS-related medical costs has also been a drain on the companies.

## **V. Conclusions and Recommendations**

Officials of the gold mining industry are optimistic that the AIDS epidemic will not destroy their industry (Campbell and B. Williams 1999). The increase in worker turnover can be absorbed by the pool of unemployed people (Campbell and B. Williams 1999). However, unskilled workers may be easily replaced, but training skilled workers will be a drain on already thin resources. In addition, the companies are paying more for healthcare and death benefits (Campbell and B. Williams 1999). While the epidemic may not destroy the industry completely, companies have figured that remaining idle while the disease destroys one of the three pillars of the industry would be an unwise business decision (Campbell and B. Williams 1999).

The disease is not just an issue that affects production and profits of South Africa's backbone industry. As migrants from all over South Africa and the surrounding region, the miners are conduits for spreading the disease far and wide (Barnett and Whitestand 2002). The increasing prevalence of AIDS will exacerbate problems for individuals, families, and societies.

Prevention efforts have focused on the immediate task of changing individual behavior (Campbell 2003). The ABC campaign encourages people to delay sexual activities, reduce the number of partners, and use condoms consistently. Many researchers have asked that in addition to persuading individuals to adopt those behaviors, there must also be efforts to improve the social environment so as to enable behavioral changes (Campbell 2003; Link and Phelan 1995; D. Williams 1990).

Three aspects of the mining industry hinder prevention efforts: the dangerous conditions of the job, the migrant labor system, and the single-sex hostels. These three aspects subject miners to stress and loneliness that encourage them to seek pleasure among the nearby sex workers, often without using protection (Campbell 2003). In order to more effectively promote behavioral changes among miners, the living and working conditions on the mines must change. A simplistic yet logical conclusion to that assessment is that those three factors must be removed from the mining industry to facilitate prevention efforts. Unfortunately, the situation is more complex as to prohibit the complete removal of those three factors.

To begin with, it is still technologically unfeasible to make the mines completely safe. The task of mining gold requires men to descend into the depths of the earth to remove large chunks of rocks using heavy machinery. In the least, rock falls would always be a threat with such a scenario. The NUM can work to ensure that the mining companies are taking the necessary precautions to prevent accidents, but there are limits to the safety mechanisms.

Given the intrinsic danger of mining, there must be programs to counter its ill effects, especially the stress and fatalism that drive miners to reckless sexual behavior. Mining companies should provide psychological counseling to relieve the post-traumatic symptoms that have been observed in miners (Campbell 2003). Many miners have witnessed horrible accidents and need to be assured (or deceived) that there is little chance of the same event happening to them. The point is to make miners feel more comfortable in their working environment so that they do not

always associate work with injuries and death. Such fears can be crippling, and some miners have said that their focus on physical pleasure comes from those fears (Campbell 2003).

Given the inhospitable locations of most mines, the migrant labor system is another factor that is hard to dispel (Moodie 1994). Even domestic labor must migrate to work there. It has been suggested that having family nearby would help miners overcome the temptation of women, alcohol, and drugs (Gebrekristos and Lurie 2003). Efforts are underway to provide alternative housing options, albeit at a slow and uneven pace (NUM 2003). Though it denounces the migrant labor system as a relic of apartheid, the Chamber of Mines has refrained from acknowledging the link between migrancy and AIDS in its position paper on the epidemic. The NUM should put pressure on the companies to recognize that connection, as it would add a sense of urgency that could hasten the process of depopulating the mine hostels.

There are other additional issues that must be addressed. One is the prevalence of sex workers near mining premises. Though the police know of their existence, few bother to raid the operations (Campbell 2003). Reducing commercial sex work is a long-term goal that involves educating and improving the status of women. For the short-term, some non-governmental organizations have directed the ABC campaign at the sex workers, particularly the condom use aspect (Campbell 2003). The South African government should consider following Senegal's example of licensing commercial sex work (Barnett and Whitestand 2002). Doing so would

allow the government to control the sex workers' health while at the same time giving the women legal protection (Barnett and Whitestand 2002).

Another issue is the widespread use of alcohol (Campbell 2003; Moodie 1994). Drinking is a way for miners to express solidarity and also a form of entertainment (Campbell 1997; Moodie 1994). The companies tried to prohibit alcohol in the mining compounds, but the rule was repealed in 1962 (Moodie 1994). Miners have said drinking is one of few entertainment options available to them (Campbell 1998). The companies should ask miners what sort of entertainment they desire and work to realize as many of them as possible.

The rhetoric of both the National Union of Mineworkers and the Chamber of Mines shows a deep commitment to the health and safety of miners, although each side has different reasons for being concerned. For the Chamber of Mines, it is a matter of maintaining a productive workforce. Meanwhile, the NUM views health and safety as basic rights of miners—rights that may be compromised as the employers seek to maximize profits. Both the labor and management sides have excellent ideas to prevent and cope with HIV/AIDS outlined on paper, but the difficulties lie in implementing them. The recommendations provided will require additional resources, but the sacrifices are necessary to prevent HIV from destroying the human capital of the industry and more broadly, of the African continent.

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