

GLOBAL HEALTH INITIATIVE

Private Sector Intervention Case Example

Using a direct service model to
provide workplace prevention, care,
support and treatment

Case categories

Company: **AngloGold**

Industry: **Mining**

Location: **South Africa**

Programme: **HIV/AIDS**

Key questions

- How can AngloGold help ensure comprehensive treatment for employees after they elect to take ill-health retirement?
- How can AngloGold continue to contribute to local communities to ensure that improvements to medical infrastructure are sustainable?
- How can smaller employers provide a subset of this comprehensive programme at an affordable cost?

Overview

Company

AngloGold is a large international gold mining company.

- The company has 20 operations in Africa, North and South America and Australia. AngloGold produced 5.9 million ounces of gold in 2002.
- At the end of 2002, the company employed approximately 53,000 people worldwide. The majority of AngloGold's workforce is in South Africa where they have 44,800 workers, including 6,600 contractors.
- Anglo American has a 51.5% stake in AngloGold.
- AngloGold generated US\$ 1.8 billion in sales and US\$ 332 million in net income in 2002.

Business Case

Due to a combination of economic factors and an obligation to its workers, AngloGold established a comprehensive HIV/AIDS programme.

- Based on anonymous company **prevalence** surveys, national antenatal surveillance data and other regional data for comparable populations, AngloGold estimated the 2002 HIV prevalence to be **30% in its South African workforce**.
- AngloGold worked in conjunction with two actuarial companies that provided **different estimates as to when HIV/AIDS expenses would peak**. In 2009, HIV/AIDS expenses are estimated to range from **8% to 17% of payroll depending on the actuarial model used**. This variability in projections has led to the decision to develop a company-specific model to more accurately assess the impact of HIV/AIDS.
- AngloGold's 2003 budget for **workplace and community HIV/AIDS intervention programmes** is US\$ 2.6 million, which corresponds to **US\$ 58 per employee per year**.
- AngloGold budgeted **US\$ 244 per patient per month** to provide employees with **highly active anti-retroviral therapy (HAART)** during a trial running from November 2002 to March 2003 and rollout till December 2003 for a projected uptake of 820 patients. Falling drug and laboratory prices mean that this estimate can be revised to \$140 per patient per month at the time of writing.

Programme Description

AngloGold uses a direct service model to provide workplace prevention, Voluntary Counselling and Testing (VCT), care, support and treatment programmes.

- AngloGold revised its **HIV-specific policy** with its five labour organizations establishing a new partnership in July 2002.
- **Workplace prevention** programmes have been improving since 1985, focusing on awareness events, training, peer education, condom distribution and syndromic management of Sexually Transmitted Infections (STIs).
- AngloGold uses industry partnerships to reduce the risk of HIV/AIDS transmission in neighbouring **communities** by targeting **commercial sex workers** to receive STI treatment, condoms, and peer education.
- A **VCT programme** is available free of charge to all employees and partners. AngloGold is also working with local health departments to make these VCT facilities available to communities.
- **AngloGold** extended its comprehensive **wellness management** programme for HIV infected individuals to include **HAART** for employees in November 2002.
- AngloGold provides **home-based care** for approximately 45% of its ill-health retirees. This service is provided through industry, public, and NGO **partnerships** in high labour sending rural and peri mine communities.

Programme Evaluation

AngloGold's HIV/AIDS programme has a workplace programme review committee, a clinical HIV working group and a joint management-labour committee to implement, monitor and review the programme. This is complemented through research conducted by Aurum Health Research and both an internal and proposed external audit process.

In the next year, AngloGold will focus on improving programme performance in the following five quantifiable areas: (1) doubling VCT uptake; (2) increasing HAART enrolment by 150%; (3) renewed prevention education efforts to pre-empt treatment complacency; (4) explore means to assist local health services to provide enhanced treatment; (5) evaluating behaviour change communication methods to ensure they are appropriate and effective.

Business Case

Vision

To prevent new infections in the workforce, care for those infected or affected by HIV/AIDS, provide outreach to the community and to base those interventions on researched best practice.

Case for Action

Based on the combination of economic factors and an obligation to its workers, AngloGold has organically grown its HIV/AIDS programme budget and activities to match the increasing need to prevent future infections, to extend the working life of HIV+ employees and to provide employees with the option for ill-health retirement with dignity.

- In 1999, Aurum Health Research (AHR) used an **anonymous unlinked survey to estimate an HIV prevalence of 24%** on employees in the lower pay scales in the Free State region. The employees in these pay scales represent 85% of the workforce in the region.
- In 2001, a follow-up **anonymous unlinked survey** of employees in the same lower pay scales **estimated an HIV prevalence of 29%**. The **second survey** was done in collaboration with the London School of Hygiene and Tropical Medicine (LSHTM). Between June 2000 and April 2001, the research team, using a **stratified random sampling method**, selected employees visiting the occupational health centre for their mandatory annual medical examination. They invited 6,100 employees from both the Free State region and the Vaal River region and had an **87% response rate**. Participants were **informed using a video available in two languages** followed by a **question and answer session** with a **nurse**. HIV testing was done by means of a **urine test**. The protocol was approved by two independent ethics committees of which one has local labour representation.
- Based on the surveys, antenatal data, and extrapolation from comparable reference groups, AngloGold estimated a **2002 HIV prevalence rate of 30% in its South African workforce**.
- The number of **deaths per 1,000 workers** has **decreased from 13 per 1,000 in 2001 to 4 per 1,000 in 2002**. Likewise, the number of **ill-health retirements** per 1,000 workers has **dropped from 19 per 1,000 to 6 per 1,000 in 2000 and 2002 respectively**. It is assumed that this apparent paradox can be explained by the increased uptake of voluntary separation packages offered routinely during downsizing and through AIDS-sick employees not returning to the workplace and being dismissed in absentia.
- From 2000 to 2002, AngloGold worked with two actuarial consultancies to develop estimates on the **economic impact of HIV/AIDS**. The two estimates were created by inputting the same data and assumptions into each consultancy's proprietary '**black box**'-**economic model**. The two estimates on the projected impact of HIV varied considerably.

Economic impact (percent of payroll)	2002	2009
	Percent	Percent
Consultancy 1	5.8%	17.3%
Consultancy 2	1.1%	8.0%

Note: Consultancy 1's 2009 estimate of US\$ 22 million in HIV/AIDS expenses is comprised of medical expenses (47%), lost gold revenues (38%), ill-health retirement (12%), and death benefits (3%). In the same year, Consultancy 2's estimate of US\$ 10 million in HIV/AIDS expenses is comprised of medical expenses (40%), wages from lost productivity (38%), paid sick leave (14%), incapacitation (7%), and funeral and training costs (1%).

Financing

AngloGold's 2003 HIV budget for both workplace and community intervention programmes is **US\$ 2.6 million, which corresponds to US\$ 58 per employee**.

- AngloGold's 2003 HIV/AIDS **employee prevention programme budget is US\$ 157,000**. This is allocated as follows: induction and refresher training (35%), management orientation and supervisor training (31%), awareness campaigns (14%), peer education (10%).
- AngloGold's 2003 HIV/AIDS **employee wellness programme budget is US\$ 1.4 million**. This is allocated as follows: HAART implementation (68%), VCT and wellness clinic (26%), TEBA home based care (6%).
- AngloGold's 2003 **HIV/AIDS administrative and research budget is US\$ 443,000**. This is allocated as follows: research (75%) and HIV programme management (25%).
- In 2003, AngloGold plans to **contribute US\$ 322,000 to community partnerships** where AngloGold is an active partner. These partnerships include Mothusimpilo, Carletonville Home & Community Based Care, Bambisanani Home Base Care, and Siyakhula.
- In 2003, the AngloGold Chairman's fund plans to contribute US\$ 200,000 to external HIV/AIDS initiatives.
- When planning the HAART implementation project, AngloGold estimated that a 14-month trial programme **adding HAART treatment** to approximately 820 patients will cost about **US\$ 244 per patient per month**. The expenses were comprised of drugs (54%), staff (23%), laboratory work (16%) and overhead (7%). **Additionally, to evaluate the pilot programme** there will be a **three-year contract for US\$ 360,000 per year** for Aurum Health Research to monitor and evaluate the programme, including an economic assessment in collaboration with health economists from the London School of Hygiene and Tropical Medicine. Falling drug and laboratory prices **lowered the estimate to US\$140 per patient per month** by October 2003.

Programme description

Policy

In 2002, AngloGold and its labour organizations collaborated to revise its HIV/AIDS policy.

- **Non discrimination:** (1) employees will not be dismissed on the grounds of their HIV status; (2) employees will undergo a medical exam before starting employment, but the exam does not include an HIV test and hiring decisions will not utilize an HIV assessment.
- **Confidentially and disclosure:** (1) employees are not required to disclose their status; (2) if employees choose to disclose their status to a colleague or supervisor, it cannot be disclosed to others without their consent.
- **Benefits:** (1) all employees have free access to mine health facilities and HIV/AIDS treatment; (2) dependants are not eligible for HIV/AIDS treatment unless the employee contributes on behalf of his/her dependants to the company medical scheme.
- **Ill-health retirement:** (1) the process can be initiated by referrals from the employee, fellow workers, medical practitioners, human resources, etc.; (2) the incapacitation review committee includes, in addition to the employee and his/her representative, it also has representatives from occupational health, occupational therapy, line management, and human resources; (3) the employee's medical diagnosis is not disclosed to this grouping, merely a report on his functional capacity limitations; (4) the committee will provide the employee with an alternate job if the employee is capable and a suitable job is available (27% of all cases in 2002); (5) upon leaving the company the employee receives either a lump sum or pension depending on whether he belonged to the company provident or pension fund; (6) if the employee is deemed terminally ill s/he will be kept on the company's books for an additional year even though s/he retires, so that his/her family can receive the death benefit which is usually only paid out to employees who die while being actively employed by the company; (7) in 2002, **1.96% of the workforce experienced deaths in service**, terminal illness, or were separated from the company due to medical incapacitation unrelated to an occupational injury or illness; of those separated for terminal illness, **67% were AIDS-ill**.
- **Contractors:** there is no explicit HIV/AIDS policy for contractors.

Prevention

AngloGold prevention programmes focus on awareness, education, peer education, condom distribution, STI management, and community interventions.

- Each business unit plans a campaign of **mass awareness events** it will pursue each year. Some of the events used in 2002 include: mass meetings to demonstrate VCT, drumming sessions with AIDS themes, industrial theatre acts, candle-lighting ceremonies, workshops, seminars, mass e-mails, newsletters, pamphlets, etc.
- All new employees and employees returning from annual leave undergo **induction training** which includes an HIV/AIDS component. The HIV/AIDS component is taught by qualified training officers and covers the following topics: (1) basic facts about HIV/AIDS as well as related illnesses such as TB and STIs; (2) national and company policies and programmes; (3) referral resources. **During 2002, the programme trained 68% of employees. Supervisors and management** also go through specialized training which covers the same topics as induction training, as well as: (1) a review of performance management processes; (2) the legal framework supporting confidentiality and grievance procedures if it is breached; (3) medical incapacitation processes.
- **391 peer educators (a ratio of 1 peer educator per 115 employees)** are currently active. 256 have been certified and trained internally through a three-day course. The remaining 135 peer educators were trained by various external providers and required an internal refresher course to obtain certification. **The training teaches the following topics and skills:** (1) intensive AIDS education (2) participative methods, such as picture coding and role playing in generating peer-driven behaviour change. **The peer educators focus on the following activities:** (1) providing informal peer education; (2) acting as a resource for other AIDS training and referrals; (3) replenishing condom dispensers. **The peer educators meet monthly** and AngloGold is evaluating methods to monitor their activities more effectively. In 2003, active peer educators received refresher training improving their presentation skills and knowledge of HAART. Additional peer educators will continue to be trained for business units which are under-represented.
- **Male condoms** are obtained for free from the state department of health and are distributed through workplace dispensers. In 2002, AngloGold distributed 628,800 condoms, which corresponds to **1.2 per employee per month**. Some operations distributed as many as 6 condoms per employees per month, while others averaged 0.04 per employee per month.

Programme description (continued...)

Prevention (...continued)

- **Treatment of STIs** is available to employees at company clinics. The programme focuses on the **syndromic management** of common STIs. In 2002, the programme **treated 4,908 employees** and contractors, an average incidence of 6.3 cases per 1000 workers. Partners are referred to local municipal clinics. The reported STI incidence in Orkney is more than double the rate in Carletonville. Factors that may influence this are: (1) user-friendliness of company STI services (2) re-infection due to the absence of an STI intervention targeting commercial sex workers in Orkney.
- **Community-based prevention interventions** target high risk populations in the two regions surrounding AngloGold mines. The **Mothusimpilo programme** is a **jointly-funded partnership with Gold Fields Limited, Harmony Mines and the provincial Department of Health**. The project provides: (1) male and female condoms; (2) peer education; (3) curative and preventative treatment for STIs to 4,000 commercial sex workers in Carletonville. In 2002, AngloGold initiated a **similar project in Orkney**, which is the other region where AngloGold operates. A situational analysis has confirmed an urgent need for such an intervention. Funding for implementation as well as evaluation has been committed by local AngloGold and African Rainbow Minerals mines.

Voluntary Counselling and Testing

AngloGold has provided free **Voluntary Counselling and Testing (VCT)** services to all employees since **March 2001** and partners since **June 2002**.

- The **primary aim** of the VCT programme is to **promote change** in sexual behaviour to reduce the risk of acquiring or transmitting HIV, thereby reducing the incidence of new infections. The **secondary aim** of the programme is to **identify those who are HIV positive and encourage them to access the benefits of specialized HIV care**, including tuberculosis (TB) preventative therapy through the **wellness clinic and HAART**.
- The programme adheres to World Health Organization (WHO) guidelines for informed consent, pre- and post-test counselling, and testing. The VCT programme relies on a screening and confirmatory rapid blood testing sequence. AngloGold's VCT processes and procedures are described in more detail under *Case-specific HIV/AIDS Resources*, at the end of this document.
- Services are available at **19 VCT centres** that are located at AHS hospitals, community clinics and medical stations. These locations are staffed by **14 full-time and three part-time counsellors** who have been trained by an AngloGold social worker. The accredited trainer uses **South African Department of Health Training manuals**.
- **From March of 2001 to December 2002, 3,045 employees**, which corresponds to **7% of AngloGold employees**, had accessed the service. The service handled an average of 147 patients per month in 2002, but 60% of the participants are from the West Wits region, which employs 40% of AngloGold South Africa.

Care, Support and Treatment

Started in 1999, a wellness management programme was designed to extend asymptomatic, productive life of HIV infected employees as far as possible.

- Employees who receive an HIV+ result and who elect to join the wellness programme receive further counselling and an **initial baseline health assessment** which covers the following areas: (1) medical history; (2) vital signs; (3) sputum smear and chest x-ray; (4) blood test including CD4 count. **After two weeks** there is a **follow-up** visit where the results of the blood and sputum tests are reviewed in order to decide whether to start preventive treatment against opportunistic infections and/or to start HAART (as of November 2002). Thereafter the patient is reviewed every six months or sooner if s/he is ill, or is suffering side-effects. Patients that take advantage of HAART will also be seen more frequently.
- **Management of opportunistic infections:** (1) prophylaxis against tuberculosis (TB) with INH and other diseases with cotrimoxazole; (2) early identification and treatment of opportunistic diseases during regular check-ups at the Wellness clinics, the annual surveillance medical at the Occupational Health Centre, and regular chest X-ray screenings at the medical stations. **Employees** have access to **unlimited hospitalization benefits** for AIDS-related illnesses.
- AngloGold also provides HIV+ employees with **nutritional and lifestyle counselling** as well as **psychosocial support**.
- By the end of 2002, 2,080 employees had enrolled in the wellness management programme which, based on prevalence estimates of 30%, corresponds to approximately 17% of AngloGold's HIV+ employees in South Africa.

Care, Support and Treatment (...continued)

AngloGold recently launched a three phase HAART Implementation Project. Starting in April 2003, HAART was made available to all medically eligible employees.

- **ART** is provided for Prevention of Mother-to-Child Transmission (PMTCT), rape victims and for post exposure prophylaxis (PEP).
- In mid-2002, AngloGold pledged to **expand its HAART treatment programme** to all employees. The drugs become medically indicated when a patient's CD4 count falls below 250 or if s/he has suffered an AIDS-defining illness. It is estimated that 25% of AngloGold HIV-infected employees meet these medical eligibility criteria.
- **The first phase started in August 2002 and ran until October 2002. This preparation phase** focused on three areas (1) developing protocols, guidelines, and data systems; (2) conducting recruitment and training; (3) negotiating contracts with suppliers and service providers.
- **The second pilot phase started in November 2002, and ran until March 2003, to test-run the new treatment programme.** In this phase 100 patients were randomly selected from each of AngloGold's two Wellness Clinics as well as any patient with full-blown AIDS who needed HAART as a life-saving measure. The pilot phase recruited 121 patients on HAART. 17 additional patients had refused treatment for a variety of reasons described below.
- **The third rollout phase started in April 2003, and made the services available to any employee who is both medically eligible and who has undergone VCT to establish his or her HIV status.** By the end of June 2003, over 300 patients had been offered or been considered for HAART. 25 were assessed by their physicians as not being ready for treatment, and **31 refused treatment for the following main reasons** (1) fear of side effects; (2) fear of frequent blood testing; (3) concern about frequent follow-up visits required; (4) unconvinced about the benefits of ART. Of the 249 that had started treatment to date, 233 were still on treatment by the end of June. **Patients stopped treatment for the following main reasons:** (1) side effects (2) failure to collect repeat scripts (3) forgetting to take treatment (4) death. 5 of the 6 deaths have been due to pre-existing advanced AIDS illness, and 1 can probably be ascribed to drug toxicity. Self-reported drug adherence has been observed at 90%. This is validated through 89% of patients, on whom follow up data is available, demonstrating a biological response to treatment (reduction in viral load)
- **Aurum Health Research** will monitor and evaluate the ART programme during its first three years. This evaluation includes a detailed economic impact study.

AngloGold provides home-based care through community partnerships.

- **Home-based care** is provided through a service level agreement with The Employment Bureau of Africa (TEBA) that covers approximately 45% of AngloGold's labour force. The service provides: (1) **palliative care** for the dying with links to **primary care**; (2) assistance for families in bereavement to **access welfare support for both the incapacitated terminally ill person and the orphans that are left behind**. From April 2002 to June 2003, inclusive, **294 ex-AngloGold employees** took advantage of the service.
- **Carletonville Home & Community Based Care** is a multi-stakeholder programme involving public, private, civic, NGO and faith-based sector participation in partnership with the local community. AngloGold has provided more than just financial support by seconding a programme manager, a part-time accountant, providing IT support and supporting income generating activities. Similarly, AngloGold has seconded a nurse to the Bambisanani Home Based Care Project in the Eastern Cape.

Programme evaluation

Key Success Factors

As AngloGold's HIV/AIDS programmes have evolved since 1985, they have compiled various learnings.

- **Collaborating with labour** can appear to hamper the process of programme development, but is essential in order to develop the trust required to obtain **high levels of behaviour change** and **programme uptake**.
- Spend **less time and money on the risk assessment** analysis which is costly and can produce unreliable estimates, and **more resources on acting**.
- There are large **economies of scale** available to AngloGold's programme because of the vast size of the workforce and the existence of the AngloGold Health Service infrastructure.
- Focus on intervention programmes that **generate behaviour change**.
- Avoid the misconception that anti-retrovirals alone will turn the tide of the epidemic.
- Beware of complacency when ART is made available. An ART programme is an opportune time to renew or re-launch prevention and behaviour change efforts.

Self-evaluation Process

AngloGold's HIV/AIDS programme has a workplace programme review committee, a clinical working group and a joint management-labour committee to internally manage the programme. This is complemented through external research conducted by Aurum Health Research and both an internal and proposed external audit process.

- **Quarterly meetings** with the **workplace prevention programme co-ordinators**. This is a forum to discuss HIV/AIDS prevention programme **progress at each business unit** and to communicate **strategic programme changes**.
- **Monthly meetings** with the **HIV Working Group** which includes peer education trainers, wellness nursing managers, wellness doctors, counselling trainers, research doctors, wellness data manager, a home-based care manager and programme management staff. This is a forum to implement **programme modifications**, address **operational issues** and to **compare experiences between the two regional wellness programmes**.
- **Joint management and union AIDS committee** meets quarterly and involves representatives from each of the five labour organizations, HR representatives from operations, industrial relations officers and HIV/AIDS programme managers. They meet to discuss implementation and debate areas of contention such as prevalence studies, the use of full-time peer educators, and the addition of immune boosting therapy.
- **Aurum Health Research** develops, adapts and assesses health care interventions within the context of the mining environment. For example, having developed the HAART programme, Aurum will be responsible for both its medical and economic evaluation.
- **AngloGold Group Internal Audit** department has been devising and implementing audit processes for both workplace and wellness programmes.
- **An external auditing capability has been appointed to verify a company Sustainable Development report scheduled for release in 2004 which will include a section on HIV/AIDS interventions.**

Future Goals

AngloGold will continue to focus on improving its internal programme effectiveness by meeting these goals.

- In 2003, AngloGold will conduct HIV sero-prevalence testing linked to a behavioural study in a partnership with the Union.
- AngloGold hopes to train enough **peer educators** to achieve a 1:100 ratio at each operation. AngloGold hopes to maintain this ratio while monitoring effectiveness and continuing peer educator training and support to ensure competency.
- AngloGold hopes to distribute an average of **two condoms** per employee per month at each operation.
- AngloGold hopes to conduct 4,000 **VCT** sessions in 2003, which corresponds to 9% of the workforce.
- AngloGold hopes to enrol 820 eligible employees in **HAART** by the end of 2003.

Case-specific HIV/AIDS Resources

Documents

[AngloGold and Labour HIV Agreement](#)

[AngloGold Voluntary Counselling and Testing Protocols and Rapid Testing Manual](#)

[AngloGold Wellness Protocols](#)

[AngloGold HIV PowerPoint presentation \(December 2002\)](#)

[AngloGold HAART Protocol \(June 2003\)](#)

[AngloGold HIV/AIDS Interventions Update \(September 2003\)](#)

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This case study uses the following exchange rate: 10 South African Rands to 1 United States Dollar.

The World Economic Forum Global Health Initiative Private Sector Case example was written by Peter DeYoung and developed in collaboration with the featured company, however, GHI member companies and partners, the World Economic Forum and the contributing company do not necessarily subscribe to every view expressed herein. The case is based on a self-reporting model. Although the GHI makes reasonable efforts to ensure the accuracy of the statements, this report should not be viewed as an external audit of the programme described.

This case study is a part of the GHI's Case Study and Supporting Document Library, which is available at www.weforum.org/globalhealth/cases. Please contact Peter DeYoung at the World Economic Forum for any questions, feedback or submissions related to this case study. This case was published October 2002 and updated October 2003.

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