



## Treatment for HIV/AIDS at South Africa's largest employers: myth and reality

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**Objectives.** To determine what proportion of employees at the largest private-sector companies in South Africa have access to HIV/AIDS care and treatment, including antiretroviral therapy (ART); how many employees are enrolled in disease management programmes; how many are receiving ART; and which approach to the financing and delivery of care is proving most successful at reaching eligible employees.

**Design.** All 64 private-sector and parastatal companies with more than 6 000 employees in South Africa were identified and contacted. Those that agreed to participate were interviewed by telephone using a structured questionnaire.

**Results.** Fifty-two companies agreed to participate. Among these companies, 63% of employees had access to employer-sponsored care and treatment for HIV/AIDS. However, access

varied widely by sector. Approximately 27% of suspected HIV-positive employees were enrolled in disease management programmes, or 4.4% of the workforce overall. Fewer than 4 000 employees in the entire sample were receiving ART. In-house (employer) disease management programmes and independent disease management programmes achieved higher uptake of services than did medical aid schemes.

**Conclusions.** Publicity by large employers about their treatment programmes should be interpreted cautiously. While there is a high level of access to treatment, uptake of services is low and only a small fraction of employees medically eligible for ART are receiving it.

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Over the past 3 years many of South Africa's largest and most prominent private-sector companies have announced and launched HIV/AIDS workplace treatment programmes. These announcements have frequently been accompanied by much fanfare on the part of the companies and high praise in the media. However, evidence on the success these companies have had in enrolling employees in their care and treatment programmes and putting them onto antiretroviral therapy (ART) has been fragmented and anecdotal. Considering the varied motivations for providing care and treatment – in some cases purely financial, in others at least partly humanitarian – it is important to understand the extent and success of these programmes, which have the potential to lessen the burden on the public sector of HIV/AIDS care and to reserve more 'slots' in the national AIDS treatment programme for those who cannot afford private care.

The manner in which South African companies make HIV/AIDS care and treatment available to employees can be categorised into four models.<sup>1</sup>

**Model 1: Employer provider.** The employer internally finances and delivers treatment and care for HIV-positive employees. The company may use a 'closed' medical scheme (usually only available to employees of the company and their

dependants), company clinic facilities, or a combination of the two.

**Model 2: Medical aid scheme.** Employers subsidise medical aid scheme premiums for employees who choose to make the co-payment (medical aid schemes are similar to health insurance providers in the USA). Most medical schemes contract with a disease management programme (DMP) to handle the treatment and care of HIV-positive members. Medical aid scheme members must typically enrol separately in the DMP (i.e. enrolment is not automatic).

**Model 3: Independent disease management programme (DMP).** A specialised HIV/AIDS disease management company is contracted by an employer to manage the costs and treatment of HIV-positive employees, independent of whatever medical aid scheme may be available.

**Model 4: Clinic provider.** An external treatment and care provider (clinic) is contracted by the employer to provide HIV-related services either at the workplace or at an outside clinic.

Each of these models of care and treatment involves some level of financial cost to the employer. How effective the different models of care and treatment have been in enrolling HIV-positive members and providing high-quality care and treatment has rarely been communicated by providers or purchasers of the services. The most revealing information has come from Anglo American, which has developed an extensive programme following the 'employer provider' approach. After more than 2½ years of operation, about 22% of those believed to be HIV-positive have enrolled in the programme and just under 3 000 have started on ART. Results in some divisions



of the company have been extremely encouraging – nearly 100% uptake of both DMP and ART in one mine, for example – but patient attrition has also been high. Nearly 30% of those started on ART are no longer being treated. However, despite low overall enrolment in the DMP and high attrition from ART, it is likely that Anglo American has one of the most successful private-sector programmes in the country.<sup>2,3</sup>

In the second half of 2004 we conducted a brief telephone survey of the largest private-sector employers in South Africa to determine what proportion of employees have access to HIV/AIDS care and treatment, including ART; how many employees are enrolled in DMPs; how many are receiving ART; and which approach to the financing and delivery of care is proving most successful at reaching eligible employees. We asked interviewees about the results of any estimates done for or by the company with regard to HIV prevalence among employees.

Two recent developments in South Africa are important in understanding the results that follow. First, in 2004 South Africa began providing ART through public hospitals and clinics. As of early 2005, some 30 000 patients were receiving care at public 'ARV rollout' sites. Although universal access to ART is the long-term goal of the national programme, scaling up services will take many years, and currently only about 6% of medically eligible patients are receiving ART.<sup>4</sup> Although many employers will rely on the public sector to take care of HIV-positive workers, it is not safe to assume that employees will have ready access to treatment at public clinics for many years to come. The second relevant development occurred in 2005 when ART was added to the 'prescribed minimum benefits' that medical aid schemes are required to provide. Employees who belong to medical aid schemes can therefore be assumed to have access to ART.

## Methods

All private and parastatal companies with 6 000 or more permanent employees were included in our population. Employment figures were provided by Matrix Marketing, a private-sector database consulting company. Structured interviews were conducted by telephone between September and November 2004. At each company we interviewed the HIV/AIDS programme manager, human resources manager, or another individual with knowledge of the current status of the programme.

Interviews included questions about the size of the company's labour force in South Africa, estimated prevalence of HIV in the workforce, commencement date of the HIV/AIDS disease management or treatment programme, number of employees enrolled in the programme, and number of employees currently receiving ART. Interviewees were also asked about the manner in which HIV disease management services and ART were being delivered and financed.

## Results

### Access to AIDS care and treatment

Of the 64 companies in our study population, 52 participated in the study. Ten companies were unresponsive to repeated telephone and e-mail requests for information and 2 companies refused to participate. Characteristics of the participating companies are presented in Table I. Because of the workforce size requirement for the study population (at least 6 000 employees), some of the South African firms whose HIV/AIDS programmes have received the most publicity, such as Daimler-Chrysler South Africa, are not included in the sample.<sup>5</sup>

**Table I. Characteristics of surveyed companies**

Industry	No. (%) of surveyed companies	Total No. of employees	Average No. of employees
Retail	14 (27)	157 100	11 221
Mining	12 (23)	313 915	26 160
Manufacturing	7 (13)	64 200	9 171
Financial services	6 (12)	133 434	22 239
Community, social and personal services (CSPS)	4 (8)	78 400	19 600
Transport, storage and communication (TSC)	4 (8)	145 000	36 250
Construction	3 (6)	31 500	10 500
Agriculture	2 (4)	18 200	9 100
Total	52 (100)	941 749	18 111

All of the surveyed companies offered to subsidise medical aid membership for some or all of their employees, typically paying 50% of the premium for employees and dependants. For medical aid scheme members, ART is a standard benefit. However, only a minority of all employees actually belong to a medical aid. Membership is optional and typically concentrated among managers and supervisors, who also are least likely to be HIV-positive. Few unskilled workers opt to join, presumably because the 50% co-payment is very high for a low-wage worker. Since all of the companies have at least some employees on medical aid, none of them can be said to provide no access to ART. However, since medical aid membership is typically very low among the majority of the workforce in the skilled and unskilled job bands, we considered a company to have an AIDS treatment programme only if all of its employees had access to ART, regardless of which model or models were used.

Roughly half of the companies surveyed ( $N = 25$ ) made ART available to all permanent employees. Coverage of HIV/AIDS treatment access varied by industry, as shown in Table II. All financial services companies and three-quarters of mining companies made ART available to all employees, but only 21%



of retail firms and none of the construction or community, social and personal services (CSPS) companies did so.

On average, 63% of permanent employees of surveyed firms had access to HIV/AIDS care and treatment financed by their employer. This figure is driven largely by widespread access in the mining and financial industries.

## HIV prevalence

In order to analyse the enrolment rates of HIV-positive employees in HIV DMPs and on ART, we asked if the respondent's company had estimated the prevalence of HIV among its employees. Thirty-four of the surveyed companies had made such estimates, and 27 were willing to disclose the results to our interviewers. The average prevalence of HIV infection at the 27 reporting companies was 15.2%. In the mining sector, 9 of the 12 participating companies provided prevalence estimates, and the average prevalence was 18.3%. For retail/wholesale and manufacturing, 5 companies in each sector provided estimates, and the average infection levels were 11.7% and 10.7%, respectively. Estimates of prevalence were provided by only a few companies in the financial, telecommunications, agriculture and CSPS sectors.

## Utilisation of ART benefits

Table III provides results on treatment programme monitoring, enrolment, and ART uptake. Monitoring by companies of utilisation of their AIDS treatment benefit varied.

Approximately half the companies in our survey ( $N = 25$ ), with a combined workforce of roughly 600 000, could tell us the number of employees enrolled in the HIV DMP and/or the number receiving ART. At these companies, 26 010 employees, or 4.4% of the total, were enrolled in HIV/AIDS DMPs at the time of the survey. Approximately 3 908 employees, or 0.7% of the total, were currently receiving ART.

## Treatment programme models

We distributed the surveyed companies among the three models of treatment provision based on the characteristics of their treatment programmes. Looking only at those companies that made treatment available to all employees, 10 had adopted the independent DMP model (model 3), 9 the employer provider model (model 1), and 6 the medical scheme model (model 2). No companies surveyed purchased services from a clinic provider (model 4). As previously mentioned, all the remaining companies ( $N = 27$ ) had at least some employees

**Table II. Number and proportion of employees with access to ART, by industry**

Industry	No. of companies surveyed	No. making ART available to all employees	% making ART available to all employees	No. of employees with access*	% of employees with access
Retail	14	3	21	83 939	37
Mining	12	8	75	273 919	90
Manufacturing	7	5	71	55 600	80
Financial services	6	6	100	133 434	100
CSPS	4	0	0	8 760	13
TSC	4	2	50	130 660	74
Construction	3	0	0	8 080	51
Agriculture <sup>†</sup>	2	1	50	2 875	59
Total	52	25	48	697 267	63

\*From all companies, including those for which only some employees have access.

<sup>†</sup>Information from one of the agriculture companies was only available for one unit.

CSPS = community, social and personal services; TSC = transport, storage and communication.

**Table III. Utilisation of treatment and care, end 2004**

Industry	No. of companies reporting uptake	No. of employees	No. of employees in HIV DMP	% of employees in HIV DMP	No. of employees on ART	% of all employees on ART
Retail	3	44 900	70	0.2	52	0.1
Mining	9	275 300	24 066	8.7	2 954	1.1
Manufacturing	4	36 700	Insufficient data*	NA	518	1.4
Financial services	4	112 500	910 <sup>†</sup>	0.8	330 <sup>†</sup>	0.3
CSPS	0	NA	NA	NA	NA	NA
TSC	3	119 000	824	0.7	6	0.0
Construction	0	NA	NA	NA	NA	NA
Agriculture	2	8 475	140	1.7	48	0.6
Total	25	596 875	26 010	4.4	3 908	0.7

\*Two of the manufacturing firms did not provide information on DMPs. One did not have an HIV DMP and the other did not know how many employees were enrolled.

<sup>†</sup>Utilisation figures for the four financial companies include dependants.

CSPS = community, social and personal services; TSC = transport, storage and communication; DMP = disease management programme.



with access to treatment through their medical aid scheme, but the proportion of employees covered in these firms was low, averaging 32%.

The breakdown of model choice by sector is shown in Table IV. Most of the companies with an internal programme (model 1) were in the mining sector, while most of those in which all employees were covered by medical aid (model 2) were in the financial services sector.

There are significant differences in monitoring, access to, and utilisation of HIV/AIDS treatment and care benefits between companies using different models, as shown in Table V. All companies offering HIV/AIDS treatment and care internally (employer provider) or through an independent DMP had made estimates of HIV prevalence among employees and knew enrolment rates into DMPs and onto ART. Of the 33 companies relying on medical schemes for HIV/AIDS treatment and

**Table IV. HIV/AIDS treatment model utilised by surveyed companies**

Industry	No. of companies surveyed	Model 1: Employer provider	Model 2: Medical scheme (all employees covered)	Model 3: Independent DMP	No programme: Partial coverage through medical scheme
Retail	14	1	1	1	11
Mining	12	7	0	1	4
Manufacturing	7	1	0	4	2
Financial services	6	0	4	2	0
CSPS	4	0	0	0	4
TSC	4	0	1	1	2
Construction	3	0	0	0	3
Agriculture	2	0	0	1	1
Total	52	9	6	10	27

CSPS = community, social and personal services; TSC = transport, storage and communication; DMP = disease management programme.

**Table V. Coverage of HIV/AIDS treatment and care benefits by model, end 2004**

Variable	Model 1: Employer provider	Model 2:* Medical scheme DMP (all employees covered)	Model 3: Independent DMP	No programme: Partial coverage through medical scheme	Total
No. and proportion (%) of companies reporting HIV prevalence, DMP enrolment, and ART rates	9 (100)	5 (50)	6 (60)	3 (13)	23 (44)
No. of employees at companies reporting HIV prevalence, DMP enrolment, and ART rates	273 424	249 545	97 474	30 800	651 243
Estimated HIV prevalence (%)	19.4	4.9	9.8	14.3	15.2 (weighted)
Inferred number of HIV-positive employees	53 044	12 228	9 552	4 404	98 989
No. of HIV-positive employees enrolled in DMP	23 332	1 690	1 136	376	26 534
Proportion (%) of estimated HIV-positive employees enrolled in DMP	44.0	13.8	11.9	8.5	26.8
No. of HIV-positive employees receiving ART	2 719	330	650	73	3 772
Proportion (%) of estimated HIV-positive employees receiving ART	5.1	2.7	6.8	1.7	3.8

\*Utilisation figures for four of the model 2 companies include dependants.  
DMP = disease management programme.



care, 12 knew utilisation rates. However, 4 of these companies refused to reveal the information to the study team.

To estimate uptake ratios for DMPs and ART, we required an estimate of HIV prevalence, the number of employees enrolled in the DMP, and the number currently on ART. We obtained all three variables from 23 companies. Overall, 27% of suspected HIV-positive employees were enrolled in DMPs and 3.8% were receiving ART. Companies making treatment services available internally (model 1) reported that 44% of HIV-positive employees were enrolled in DMPs, more than three times higher than the independent DMP or medical scheme models. This may reflect the greater success of model 1 companies in promoting HIV testing among employees. Many companies with internal programmes also have longstanding 'HIV wellness programmes' that predate the introduction of ART by several years. In contrast, companies using independent DMPs reported the highest rate of ART uptake – 6.8% versus 4.2% and 2.4% for companies using the employer provider and the medical scheme model, respectively.

## Discussion

To date most of the information available on HIV/AIDS treatment and care programmes at very large companies in South Africa has come from a small number of high-profile companies communicating the success of their efforts. Few details have been released on the extent of access to and utilisation of HIV/AIDS benefits. The findings reported here serve as an indication to government and funding agencies of the contribution of large private-sector employers to national treatment goals, and as a signal to individual companies about the relative achievements of their programmes.

We found a high average level of access to HIV/AIDS care and treatment, including ART, for the entire employee population of the surveyed firms. However, this result was largely driven by the extensive access to benefits at the large mining houses and financial services firms. Many companies in other sectors continue to rely solely on medical aid schemes for which the majority of employees cannot (or choose not to) afford the premiums. Although all employees at these companies do have access to medical aid coverage, wages are not high enough to make it a viable option. We therefore regarded employees not covered by medical aid at these companies as not having access to AIDS treatment.

Based on estimates of HIV prevalence and service utilisation supplied by the individual companies, we found the overall enrolment levels of HIV-positive employees into companies' treatment programmes to be low. We estimate that fewer than one-third of those with HIV are aware of their own status and enrolled in an HIV DMP, while approximately 4% of HIV-positive employees – 0.6% overall – are currently on ART. Assuming that an average of 15% of employees are HIV-positive, as indicated in Table V, and at least 10% of HIV-

positive South Africans are medically eligible for ART, far fewer employees are accessing treatment than currently need the therapy.<sup>6</sup> If we extrapolate the reported uptake rates to all 52 large companies, the result is an estimated 8 000 patients on ART. While this clearly underestimates the total number of private-sector employees on employer-sponsored ART, as it excludes the very large employers who refused to participate and the many large and medium-sized companies in which some employees are on ART, the true number is certainly far smaller than the estimated 30 000 patients being treated with antiretrovirals in the public sector at the time of the survey.<sup>7</sup>

Programme monitoring, access to care and treatment, and uptake of benefits seem to be related to the model of service delivery and financing in use. Few companies relying on medical aid schemes to deliver treatment and care (model 2), for example, were able to report uptake figures. The reason given by many companies was that the medical scheme administrators do not or will not report utilisation rates, even though the companies typically subsidise 50% of the medical aid scheme premiums. Companies using model 1 (employer DMP) or model 3 (independent DMP) were more likely to make ART available to all their employees and reported higher uptake of services than companies relying exclusively on medical schemes.

We did not explore the reasons for the observed low uptake of benefits and differences in uptake rates among companies. The greater uptake reported by companies with employer or independent DMPs probably reflects better uptake of voluntary counselling and testing (VCT), which in turn results from active VCT campaigns by the employers and their DMPs. We assume that overall low uptake of treatment services is caused by stigma surrounding HIV/AIDS, lack of trust among employees that their employer will not learn their status, and the newness of many programmes. The commitment of companies and managers implementing the programmes, approaches to recruiting employees into them, and the quality of the programmes themselves may also be important.

Each of the models for employer-sponsored HIV/AIDS disease management has limitations. In-house programmes (employer DMPs) may not be feasible if health care is not already provided to all employees. Very few companies have the resources or expertise necessary to run an in-house programme. There are only a handful of independent DMPs operating in South Africa, and quality seems to vary widely. Since most companies already offer medical aid coverage, making it affordable and compulsory for all employees may be the simplest way to extend access to ART. As noted above, however, medical aid schemes have been the least successful in promoting uptake of services.

One innovative approach to extending access to ART through a public-private partnership was reported by an agricultural company and a company in the CSPS sector. These companies



provide some of the support services necessary for ART, such as screening and counselling, but rely on government facilities for physicians, laboratory tests, and antiretroviral medications. While this model is dependent on having a nearby public treatment facility, it may prove more feasible and affordable for some employers than the existing models.

The study had several limitations. First, 12 of the 64 companies in our study population refused to participate. The companies that did not participate are distributed across most industrial sectors (retail, manufacturing, construction, agriculture, energy, and CSPS). From information reported by the media, at least five of the non-participating companies have active treatment and care programmes in place. A second limitation is the source of the data – uptake figures were reported by company representatives and could not be verified. Finally, in the case of five companies, information was provided for only one operating unit.

We conclude that publicity by large employers about their treatment programmes should be interpreted cautiously. The notion that business will play a significant role in meeting national and international treatment goals is uncertain. The extent of the current private-sector contribution to national treatment goals is less than the limited media coverage might lead us to believe. At this point it appears that even some of South Africa's largest employers will wait for the national public treatment programme to assume responsibility for employees sick with AIDS. However, the study team noted a good deal of confusion regarding government provision of ART, options for making ART available to employees, and other policy questions. Clarifying these issues for employers

may encourage more, and more effective, employer-sponsored programmes.

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