Catholic Relief Services Report 2006

Treatment Sites

This report is based on data supplied up to October 2006 from 28 reporting sites supported by the Catholic Relief Services and the Southern African Catholic Bishops Conference. Twenty four individual clinic site locations located throughout the north and east of South Africa are shown in Figure 1. Clinics are predominantly sited in poorly served rural or peri-urban areas of Gauteng, Free State, Kwa-Zulu Natal, North West, Eastern Cape, Mpumulanga and Limpopo provinces, away from the major metropolitan cities.

Figure 1

A total of 14,464 records of patients enrolled into the programme between January 2003 and June 2006 were made available for analysis. The size of each site varies considerably, with four clinics having more than a thousand clients each and together contributing over 40 percent of total programme numbers. In contrast there are four small clinics reporting less than 100 clients and 20 clinics with between 100 and 1000 clients. The number of patient records received from each of the individual reporting sites is shown in Table 1.

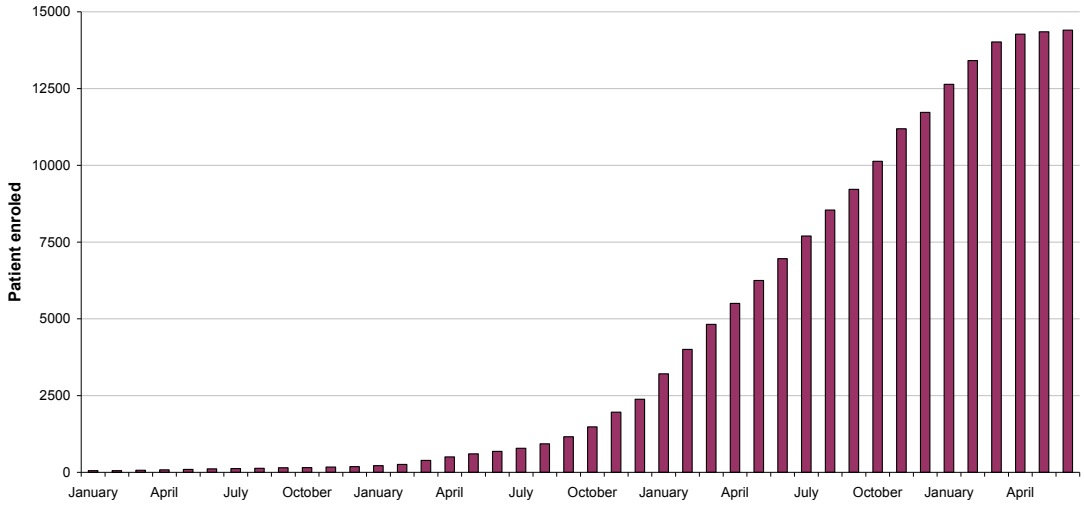
Table 1

Site name	Patients enrolled
Blessed Gerard	286
Centocow	446
Emmanual Haven	497
Good Shepherd Middelburg	184
Great Kei Komga 1	341
Great Kei Moiplaas	79
Hamburg	263
Hamburg Lists	307
Hamburg Nora	25
Hamburg Umta Wewlanga	20
Hamburg Wesley	17
Holy Cross	183
Kurisani- Holy Family	395
Kurisani- St Joseph's Clinic	296
Masibamisane	570
Mtubatuba	1410
Nazareth House	471
Newcastle	516
Orange Farm	193
Sinosizo	970
Sizanani	630
Sophumelela	1754
St Annes	196
St Francis	967
St Francis-Reigerpark	129
St Mary's	1477
Tapologo	1242
Winterveldt	600

Enrolment

Patient enrolment per calendar month is shown in figure 2. Patient enrolment commenced with relatively small numbers in January 2003 and remained at low levels through to January 2004 when 215 patients were on the programme. Numbers increased to 1478 by October 2004 and from November 2004 there was a steep linear growth in programme numbers to over 12,000 clients by January 2006. The subsequent slower growth in numbers during 2006 may represent delayed entry of data into the database. This trend will be made clear when 2006-7 data becomes available.

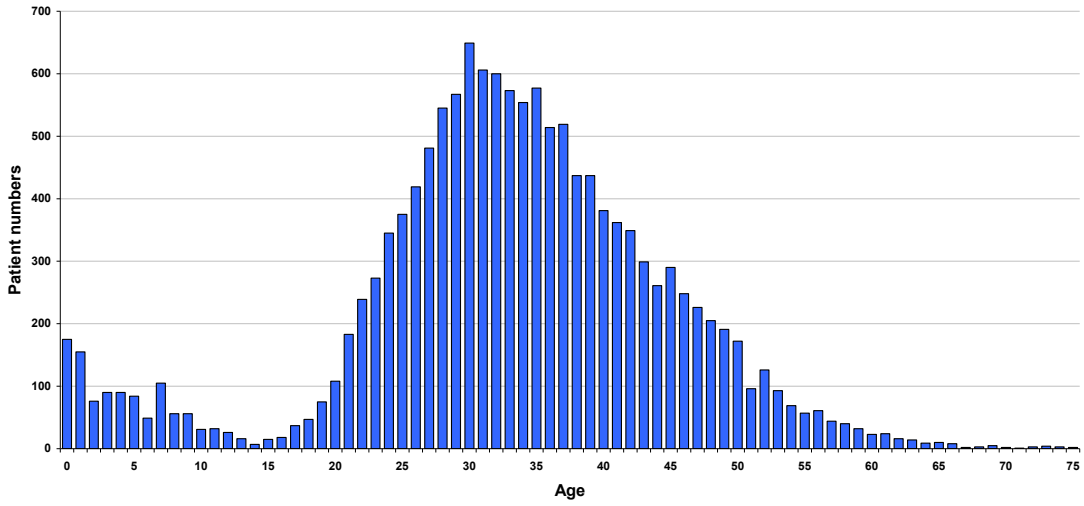
Figure 2



Age at entry to programme.

The distribution of ages of patients entering the programme is shown in figure 3, which shows a clear bimodal distribution compatible with two distinct modes of HIV acquisition. The 0-14 years probably represents survivors of maternal to child HIV transmission from 1992 onwards and the 14-80 years is compatible with sexually transmitted infection.

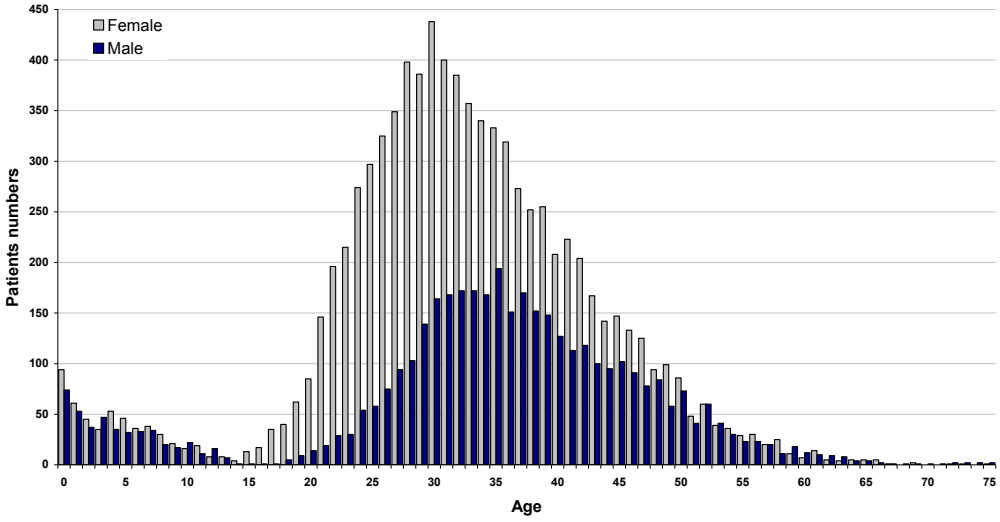
Figure 3



Gender at entry to programme.

The gender make up of the cohort is shown in figure 4. Females represent 68 percent and males 32 percent of the recruited cohort. The lower recruitment in males compared to females may represent in part, lower health seeking behaviour amongst males. The 0-14 age cohort has similar numbers of both males and females, a finding which is consistent with this population representing survivors of maternal to child transmission. In contrast the adult gender distribution is very asymmetric. The recruitment is not just lower in males than females but there is a markedly skewed age distribution, with a peak in female presentations at 30 years of age and with a much higher initial female preponderance in the 15-25 years. The age of presentation in males is older with a peak between 30 and 40 years of age. The higher recruitment among younger females may represent a true higher prevalence due to earlier sexual debut in females compared to males. Females constituted the majority of recruitments between the ages of 15 and 20 years and this is an indication that young female adolescents are an important target group for HIV prevention education programmes. Above the age of 45 years there is an equal representation of both genders.

Figure 4



CD4 cell count at entry

The median CD4 cell count of patients accessing the programme was 159 cells per ul. Although a median CD4 cell count of 159 appears low it is much higher than that of patients accessing treatment programmes elsewhere in Africa. A greater proportion of individuals presenting at higher CD4 cell counts is a probable measure of the quality of counselling and testing programme and may be improved with greater access to CD4 cell counts and an increased willingness to be aware of HIV status when benefits of early care are perceived to outweigh stigma.
The number and distribution of CD4 count strata of all patients who entered the programme is shown in figure 5. Patients accessing the programme predominantly had low CD4 cell counts with 56 percent of individuals presenting with a CD4 cell

count less than 200 cells/ul. Approximately 30 percent present with a CD4 cell count greater than 300 cells/ul and 16 percent with CD4 cell counts greater than 500 cells/ul. Well over half the population would therefore qualify for antiretroviral therapy on the basis of low CD4 cell count alone. Figure 6 shows the proportion of males and females contributing to each CD4 cell count strata. The numbers of individuals of both genders increases markedly in the lower CD4 cell strata.

Figure 5

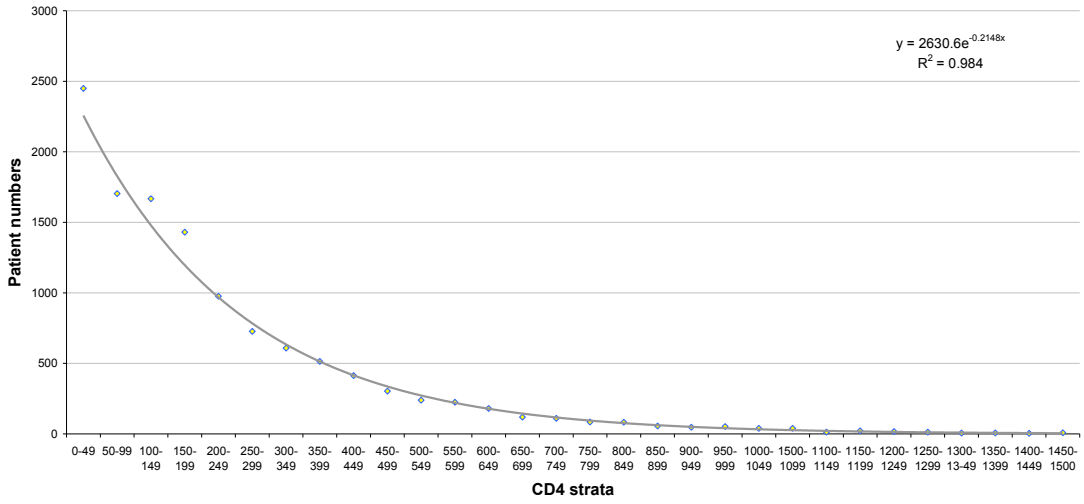
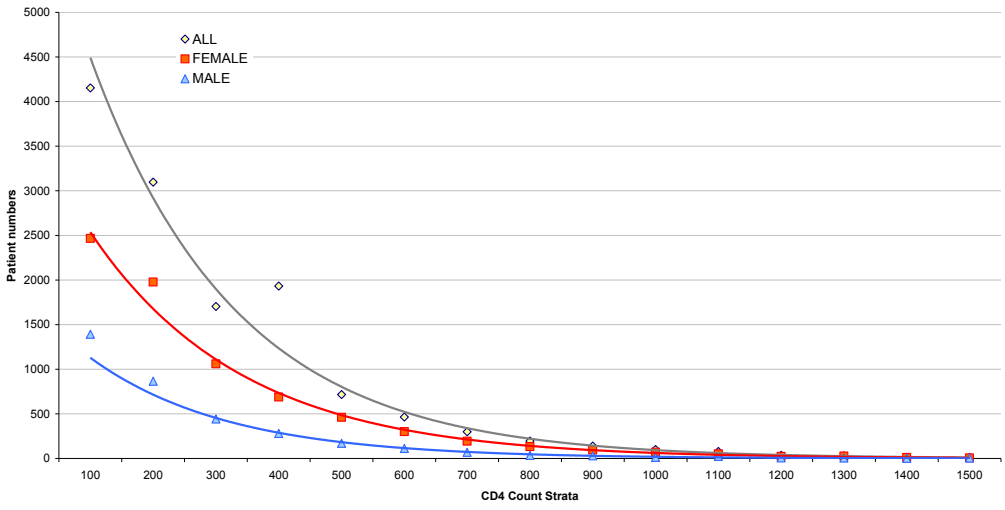


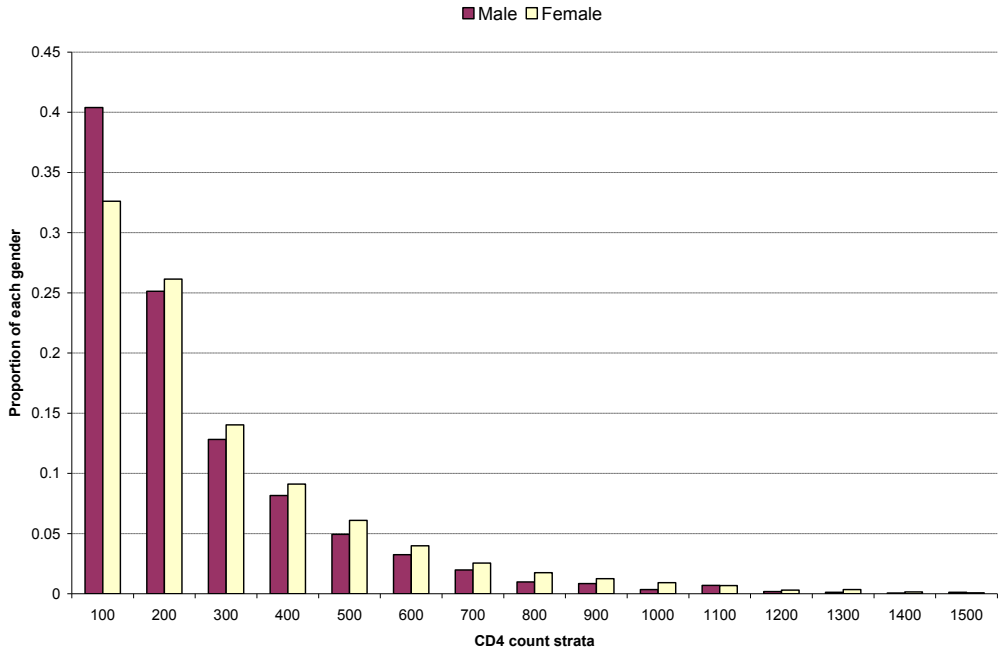
Figure 6



The proportion of each gender presented in each of the CD4 strata is shown in Figure 7. Forty percent of males had CD4 cell counts less than 100 cells/ul at their initial visit and a further 25 percent were between 100 and 200 cells/ul. The corresponding values for females were 33 percent and 26 percent respectively. It appears that

females are accessing the care programme at an earlier stage in their HIV illness than males.

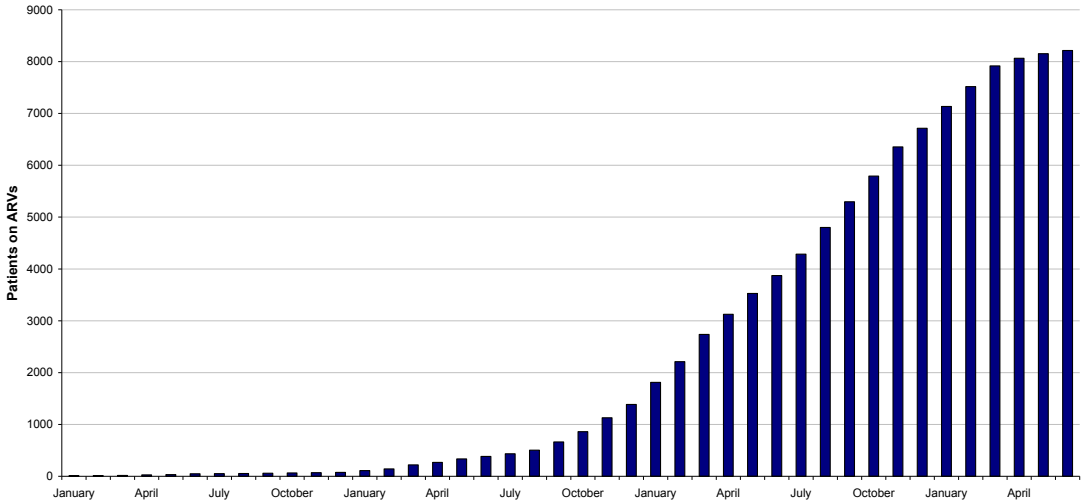
Figure 7



On treatment numbers

There were very few patients receiving antiretroviral therapy prior to January 2004 with an increase in numbers to over 1000 on ART by November 2004 and a subsequent rapid recruitment to a total of 8214 patients. The cumulative numbers on ART are shown in figure 8.

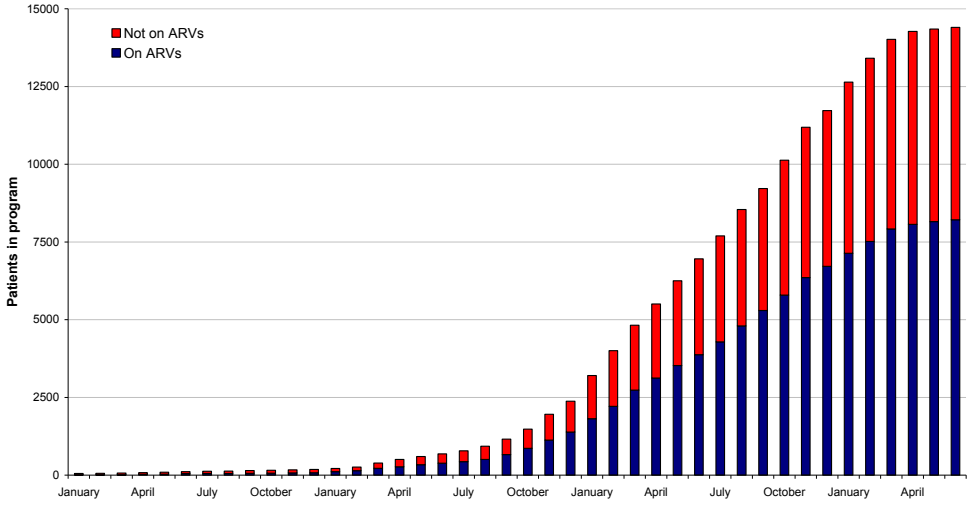
Figure 8



On treatment numbers as proportion of enrolled

The proportion of patients entering the programme that start on antiretroviral therapy has increased from 23 percent in January 2003, to 52 percent in January 2004 and has since January 2005 remained at an approximate 57 percent.

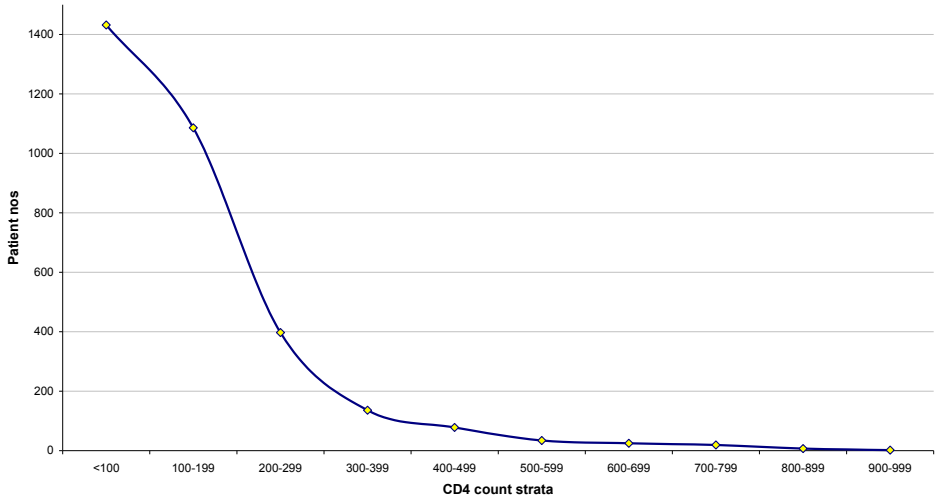
Figure 9



CD4 distribution at ART initiation

CD4 count at ART initiation is largely dependent on the application of existing ART treatment guidelines. The median CD4 cell count at ART commencement was 117 cells/ul with 78 percent of patients initiating ART at an initial CD4 count of less than 200 cells/uL. The distribution of patients in each CD4 cell strata at ART commencement is shown in figure 10.

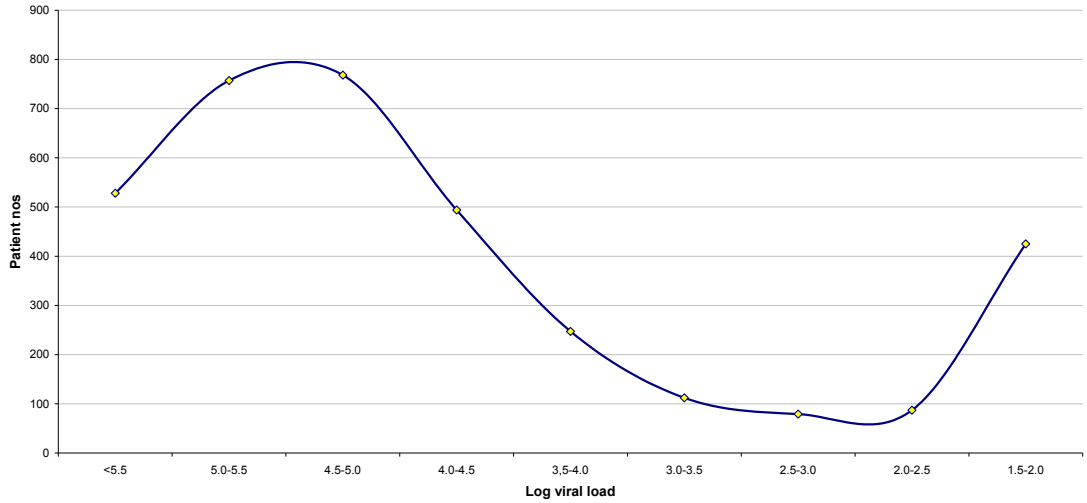
Figure 10



Viral load distribution

Baseline viral load estimations were available for 3497 individuals and the distribution of values is shown in figure 11. Of these the most frequent value (mode) of the $\log_{10}$ viral load at time of ART commencement was 5.0 $\log_{10}$ which is equivalent to 100,000 copies/ml. However 12 percent of patients (n=425) started ART with a viral load less than 50 copies /ml. These individuals are shown as the "rising tail" at the right hand end of the graph in figure 11. This is a very unusual distribution of viral load which does not appear to be part of the majority distribution. This could be a real phenomenon or could result from either a failure of the laboratory assay, or misclassification of patients as drug-naïve at a time when they had already commenced ARV treatment.

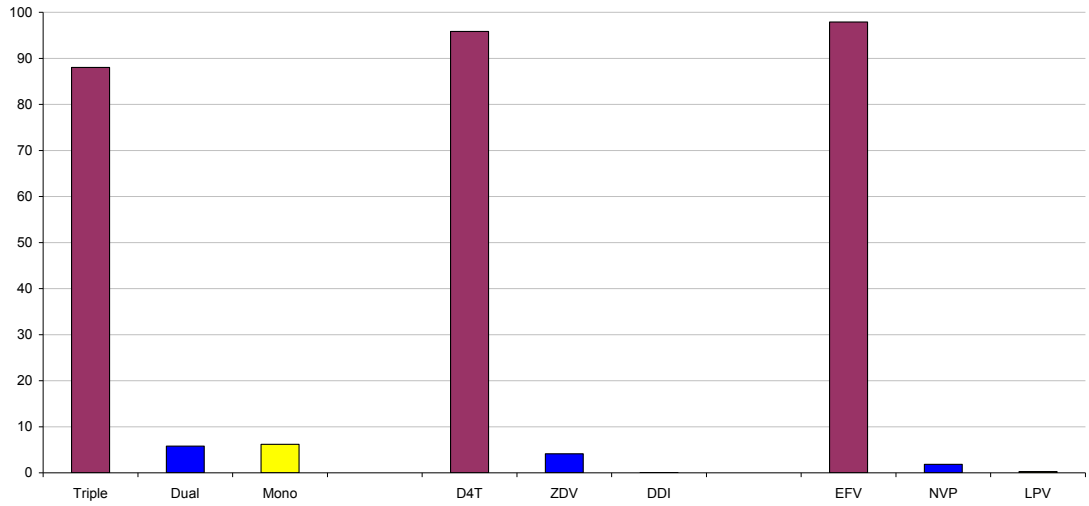
Figure 11



Regimens

The initial ART regimens utilised within the program are shown in figure 12. The majority (88%) of individuals were commenced on triple ART regimens. The mono and dual regimens recorded may represent the use of non-triple regimens for maternal to child prevention. Stavudine was used as the initial thymidine nucleoside reverse-transcriptase inhibitor (NRTI) in 96 percent of patients with the more expensive thymidine NRTI AZT (zidovudine) used in only 4 percent of cases. The most frequently prescribed non-nucleoside reverse-transcriptase inhibitor (NNRTI) was efavirenz which was initiated in 88 percent of individuals. Nevirapine a much cheaper NNRTI was prescribed in only 2 percent of regimens.

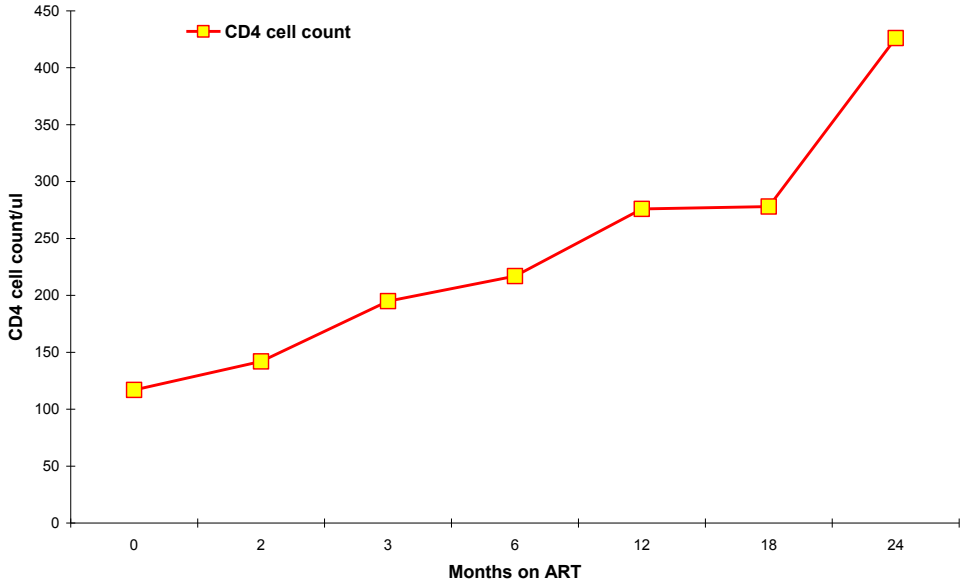
Figure 12



CD4 cell response

Of the 3239 patients starting ART, CD4 cell count results were available for 407, 765, 1383, 833, 208 and 66 patients at 2, 3, 6, 12, 18 and 24 month time points respectively. The change in median CD4 cell count of the evaluated patients at each time point is shown in figure 13. The median CD4 cell count at baseline was 117 cells/ul, which increased linearly at a rate of approximately 10 cells per month up to 278 cells/ul at 18 months. The median CD4 cell count at 24 months is based on only 66 laboratory estimations and will be more accurately evaluated in the 2007 result analysis.

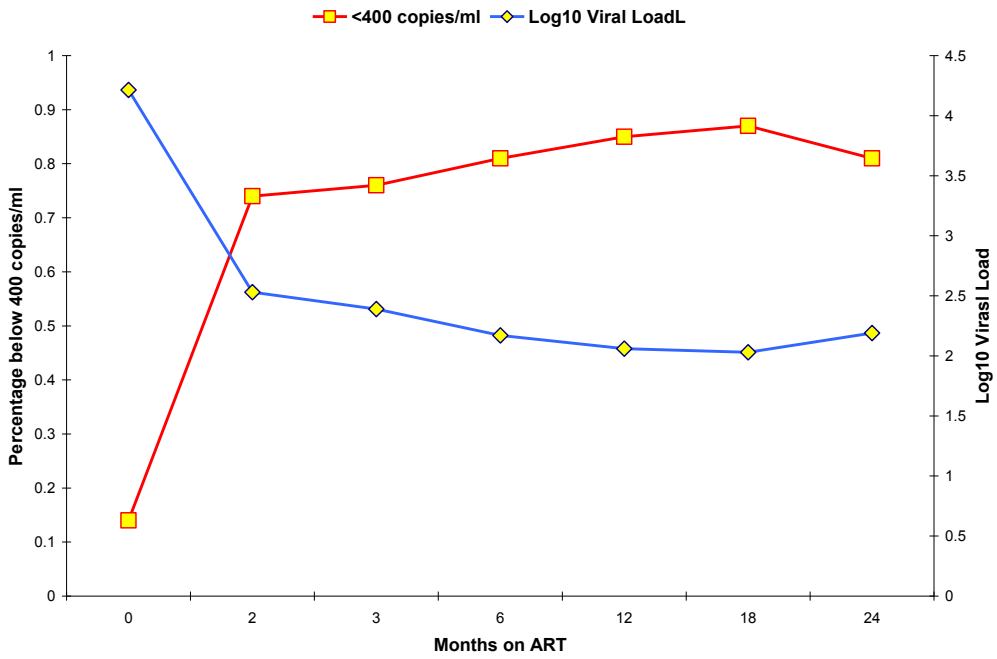
Figure 13



Virological response

The HI viral load at commencement of ART was 4.22 $\log_{10}$ copies/ml which reduced rapidly to 2,53 $\log_{10}$ copies after 2 months of treatment, followed by a slower but continued decline to less than 2.1 $\log_{10}$ copies after 12 months. The decline in log10 viral load together with the proportion of patients < 400 copies/ml at each time point are shown in figure 14. More than 80 percent of patients evaluated at each time point were virally suppressed to levels less than 400 copies per ml. This proportion of suppressed patients would fulfil the ART programme effectiveness target as outlined in the 2007-2011 HIV and AIDS Strategic Plan for South Africa.

Figure 14



Summary

The programme is one of the largest in the world and has achieved a massive increase in number of patients in both HIV care and commencement of ART. The measurable parameters show that immunological and viral responses to therapy meet international norms. However, the continued collection of very large amounts of programme evaluation data from geographically disparate clinics remains a challenge.