

5. DISCUSSION

The aim of this study was to quantify the disease burden due to the HIV/AIDS epidemic in Leratong Hospital, a level 2 public sector hospital in the West Rand. This study was undertaken just as Antiretroviral Therapy (ART) programme was being introduced in the hospital.

5.1 Demographic profile

Counter to expectations, the total number of patients admitted into the hospital decreased by about 6.6% between the two years studied. However, the average bed occupancy for the medical wards increased marginally more in the male wards than in female wards. The average length of hospital stay (ALOS) for all patients increased significantly from 3.7 days in 2001 to 4.4 days in 2004. The ALOS for each of the top ten discharge-diagnoses, especially HIV-associated diseases, increased significantly in the two periods.

These findings suggest that by 2001, Leratong Hospital medical wards had already reached maximum level of admission, and by 2004, staff were dealing with a growing burden and severity of HIV-associated illness by decreasing the number of admissions into the wards.

About 60% of the patients were aged 40 years or less, with more than 50% in the 21 to 40 years age group. This shows that the preponderance of patients

admitted into the hospital were young adults. Similar findings were reported in Tanzania by Kwesigabo et al²⁵ and Mkony et al.²⁹

5.2 Clinical profile

HIV-associated diseases accounted for four of the top five commonest cause of admission. These diseases accounted for about 50% of all admissions in both years studied. Though the total number of admissions decreased between the two years studied, the proportion of HIV-associated admissions increased from about 52% in 2001 to 58% in 2004. The study showed some changes in the clinical profile of the patients towards a preponderance of HIV-associated diseases over other chronic diseases. This indicates the growing impact of the HIV/AIDS epidemic, the effect of which is not so obvious in the number of admissions. Similar report was made by Colvin et al who noted that AIDS patients were limiting the availability of beds for non-AIDS patients.⁸

In 2004 pneumonia was a commoner cause of admission than tuberculosis. This might be because as the HIV epidemic matures, and the prevalence of HIV increases, more patients were presenting with HIV associated smear-negative tuberculosis. These patients were usually discharged as pneumonia (because their sputa were negative for Acid-fast Bacilli), and asked to return to the medical outpatient clinics for review. Similar views were held by Hargreaves and colleagues¹⁹ who noted that in high HIV seroprevalence areas tuberculosis was usually confirmed in HIV patients with smear-negative sputa. Pallangyo³⁵ concluded that because of the atypical clinical features of

tuberculosis in HIV patients, they were easily misdiagnosed and mismanaged, and were likely to die from the disease. Also because of the high bed occupancy rates, many patients were discharged before they could be fully evaluated.

5.3 HIV prevalence

The proportion of patients who were tested for HIV decreased from 16.9% in 2001 to 11.3% in 2004. This decrease might be due to the attitude of the healthcare providers towards the VCT programme and staff burnout in spite of the ART rollout. Ole-Nguyaine et al³¹ and Palmer et al³² advised that a policy of routine or mandatory testing would increase the detection rate of HIV patients, clarify prognosis, ensure improved and prompt management of associated diseases, and prevention of transmission.

In spite of the decrease in the proportion of patients who accessed HIV tests between 2001 and 2004, the proportion of tested patients who were HIV positive increased significantly from 89% to 92.4%. This is more profound in the four common HIV/AIDS-associated diseases (pneumonia, tuberculosis, gastroenteritis and meningitis), in which HIV prevalence rates increased from 92% in 2001 to 95.7% in 2004. Also the proportion of patients with diseases associated with HIV/AIDS increased significantly from 52% in 2001 to 58% in 2004. This also indicates that the epidemic has not stabilized and that the impact of the disease is still growing.

5.4 Mortality profile

The study has shown that the mortality rate is significantly higher in patients with documented HIV tests and those patients that were admitted with HIV-associated diseases. Similar findings were reported by Tembo et al⁴⁰ and Fabiani et al¹¹ in Uganda, Colvin et al⁸ in South Africa, and Mkony et al²⁹ in Tanzania.

The mortality rates for both sexes increased significantly from 2001 to 2004. This indicates that the impact of the epidemic in health institutions is still growing. It is interesting to note that among HIV positive patients, though the mortality rate remained high, it did not increase significantly from 2001 to 2004. This shows that, in spite of the increasing epidemic, the death rate might have reached its peak, and, with the introduction of the ARV programme, would hopefully decrease over the next few years.

Among the HIV sero-negative patients the mortality rate decreased significantly over the period. This might be due to the employment of a specialist physician between the two periods and the increased standard of care of especially chronic diseases not associated with HIV/AIDS. This is especially so for chronic diseases in particular diabetes mellitus, in which the mortality rates decreased significantly. Mortality rates did not increase for cardiovascular accident (CVA), hypertension, epilepsy, and cardiac failure, which suggests that crowding out effects are not yet severe in the group.

Among those patients who were not tested for HIV, either because they had no access to VCT or because they refused to be tested, the mortality rate increased significantly between 2001 and 2004. This indicates the need to ensure increased access to VCT services for patients, so that specific diagnosis would be made and proper management procedures including ART and prophylaxis could be initiated.

5.5 Conclusions and recommendations

The HIV/AIDS pandemic poses great challenges to global health systems, especially in sub-Saharan Africa. It has aggravated the relatively poor healthcare delivery systems and tended to cancel the little gains achieved in the last century in these under-resourced regions in life expectancy, maternal and child health and social development. In South Africa the effects of the epidemic are being felt in all facets of life, especially in the different healthcare delivery facilities all over the country.

With the recent introduction and scale up of anti-retroviral therapy (ART) programmes in most health districts in the country, there is need to quantify the existing disease burden and monitor trends in impacts of the disease in health services. This study provides a contribution by providing the burden of diseases, including those related to HIV/AIDS, and the trends in its prevalence, utilization of services and mortality rates between 2001 and 2004.

This cross-sectional study of all patients admitted into Leratong Hospital during these periods has shown that in spite of the decrease in the total number of admission in 2004, the bed occupancy and average length of stay increased. The clinical profile of the in-patients is gradually changing to a preponderance of HIV-associated diseases and crowding out of chronic diseases like hypertension and diabetes. In spite of a decrease in-patients' access to HIV tests, the prevalence of HIV infection increased significantly over the two years of study.

Although the mortality rates were higher in documented HIV-positive patients, they showed no significant increase between 2001 and 2004, and as access to ART increases it is hoped that the mortality will decrease. Among HIV sero-negative patients the mortality even decreased significantly between the same period. In-hospital mortality and length of stay in the wards were associated with the patient's agegroup, HIV status, and discharge diagnosis.

It is therefore recommended that:

1. Measures should be put in place to ensure that certain diseases, especially chronic diseases, not associated with HIV/AIDS are not crowded out.
2. Early discharge of sick patients, especially those suspected of having tuberculosis, before they are fully investigated and evaluated to confirm their diagnoses, should be discouraged.

3. All patients, especially those admitted with diseases associated with HIV/AIDS, should be offered prompt access to VCT. They should have the prerogative of making an informed choice concerning HIV tests. The opt out policy in which patients are given the opportunity to refuse the test should be started.
4. More emphasis should be placed on the proper management of those diseases with both high admission and mortality rates. Standard protocols including ART, should be developed to ensure this.
5. The primary health services should be strengthened to better manage early presentation of diseases. This will ensure that patients have better access to and use of primary healthcare facilities, and are managed at the appropriate level of care.
6. Clear criteria and routes for referral, including referral to palliative care and home-based care facilities, should be identified and strengthened to ensure continuum of care for these patients.