OUTCOMES OF INTEGRATING HIV SERVICES INTO CLINIC CARE

An overview of HIV/AIDS services is given in Table I, together with some of the main outcome indicators.

The aim from the outset was to demonstrate the feasibility of initiation and rapidly scaling up ARV treatment at the clinic level. A cohort analysis of outcomes for people who have been on treatment for more than 12 months shows satisfactory immunological recovery and viral suppression (Table II).

The greater proximity and acceptability of services at the clinic level has led to a much faster enrolment of people on treatment and much better patient retention. Only 2% of people are lost to follow-up in the clinics, compared with 19% at the hospital. This higher drop-out rate at the hospital could be due to sicker people starting treatment (higher early mortality), people having to travel further, less preparation of ARV users, and less effective follow-up of defaulters. Mortality in the hospital (13%) appears to be lower than in the clinics (16%). Mortality and loss to follow-up combined is much higher (32%). While mortality among those lost to follow-up cannot be known, it is expected to be high.
Overall coverage (treatment as a proportion of need) is impressive: according to established modelling, the programme had achieved 95% coverage for 2005. (This calculation is derived from the ASSA Model [www.assa.org.za/aidsmodel.asp]. It calculates all people entering Stage IV and requiring treatment in 2005; it does not cover the backlog of people needing treatment that would have accumulated in previous years.) At this level of coverage people arriving at the clinics with HIV/AIDS are far less sick than was previously the case. In the inception phases of the programme many people were so sick that they had to be carried to clinics; every day there would be several new arrivals ‘by wheelbarrow’. This is rarely seen today. This ‘catch up of the backlog’ is reflected in the statistics: in early 2004, 50% of service users at the hospital and 40% at clinics arrived with a CD4 count < 50 cells/µl; by the end of 2005 this had dropped to 16% at both hospital and clinics. Because people are arriving with better immune status, clinical management is easier, freeing up the time spent on each person so that more people can be seen.

**TABLE I. OVERVIEW OF HIV SERVICES IN LUSIKISIKI**

<table>
<thead>
<tr>
<th>Services</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCT</td>
<td>46 039 tests done in the last 3 years representing two-thirds of adult population. VCT uptake increased 4-fold from 4 874 tests in 2002 to 18 809 tests in 2005</td>
</tr>
<tr>
<td>Condom distribution</td>
<td>110 000 condoms distributed monthly through 450 points in the community</td>
</tr>
<tr>
<td>PMTCT services</td>
<td>Uptake of testing increased from 28% in 2003 to 89% of women attending antenatal clinics in 2006</td>
</tr>
<tr>
<td>HIV/TB integration</td>
<td>Number of tests done each month (N = 1 100) found to be positive has increased from 15 - 20% to 25 - 30%</td>
</tr>
<tr>
<td></td>
<td>22% increase in proportion of TB patients with a known HIV status between the last two supervision visits — now standing at 70% tested</td>
</tr>
<tr>
<td>HIV/TB integration</td>
<td>See Table II and Fig. 1</td>
</tr>
</tbody>
</table>

**TABLE II. TWELVE-MONTH OUTCOMES AT CLINICS AND THE HOSPITAL, LUSIKISIKI**

<table>
<thead>
<tr>
<th>Services</th>
<th>Clinics</th>
<th>Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of patients starting ARVs*</td>
<td>595</td>
<td>430</td>
</tr>
<tr>
<td>Remaining on treatment</td>
<td>482 (81%)</td>
<td>289 (67%)</td>
</tr>
<tr>
<td>Deaths</td>
<td>100 (17%)</td>
<td>58 (13%)</td>
</tr>
<tr>
<td>Lost to follow-up</td>
<td>13 (2%)</td>
<td>83 (19%)</td>
</tr>
<tr>
<td>CD4 &gt; 200/µl</td>
<td>87%</td>
<td>75%</td>
</tr>
<tr>
<td>Viral load undetectable</td>
<td>90%</td>
<td>78%</td>
</tr>
</tbody>
</table>

*All had started ARVs between January 2004 and June 2005 and completed at least 12 months of treatment by July 2006.

**APPROACHES TO SUPPORT CLINIC-BASED CARE**

The approach taken in Lusikisi is in keeping with the World Health Organization’s public health approach to HIV/AIDS services. WHO is promoting a radical departure from traditional models that depend on specialists; instead, task shifting is encouraged to enable nurses to prescribe and dispense ARV therapy and community workers to deliver a wide range of HIV services. The WHO has made it clear that it supports a public health model of service delivery that uses standardised, simplified and decentralised systems to maximise the role of primary health care and community-led care.5

The delivery of HIV services in Lusikisi has depended on three approaches: decentralisation to primary health care to spread the workload across facilities, task shifting within services, and the creation of new human capacity to support the system.

**DECENTRALISATION: CLINIC-BASED ARV THERAPY**

The National Plan states that ‘where access to a district hospital is limited, ARV initiation may occur at lower level facilities and mobile clinics where the requisite expertise is available’6 Experience from other countries has shown that decentralisation of services is a highly effective way of increasing patient enrolment rates without compromising quality of care.7

The main rate-limiting step to increasing treatment coverage in Lusikisi, as elsewhere, is the initiation of therapy. The current practice in many places of ‘down referral’ — starting people at the hospital, and then passing them on to the clinic — creates a bottleneck in treatment and an unnecessary
shutting of service users, prescriptions and laboratory results between institutions. It was with this perspective that the Lusikisiki programme from the outset provided ARVs at the clinic level.

For the first year of the programme enrolment increased at a similar pace at the clinics and hospital, but from then on enrolment at the hospital reached a plateau and then began to decline, suggesting a saturation of services. In contrast, enrolment in the clinics continues to increase (Fig. 1). Enrolment is increasing faster in the clinics because of multiple service points, and services are integrated into general consultations and not dependent on specific staff. The much lower number of people who are lost to follow-up and the faster enrolments at the clinics are a clear indication of service user preference to follow treatment at sites close to where they live. These indicators also point to the more ‘user friendly’ services that are provided by clinics. While the community initially had more confidence in a doctor, this preference was soon outweighed by the advantages of clinic-based care that is proximal, part of the community and supported strongly by community groups.

### New Human Capacity

While the critical role played by adherence counsellors is recognised by clinic staff and service users, their function is not as yet accommodated by Department of Health staffing structures. In Lusikisiki a community-based organisation

Fig. 1. Enrolment at clinics compared with hospital.
(NB: this graph shows the number of patients newly enrolled into treatment for each quarter. Numbers are not cumulative.)

**Task Shifting: Necessary and Desirable**

The provision of treatment at the clinic level inevitably meant a significant increase in service users within a system that was understaffed and poorly equipped. This was dealt with through a radical task shifting within health staff, the creation of new lower cadre posts, and a strong community engagement to support the health system.

Task shifting recognises the competences of actors across the health service and in this respect it is a worthwhile goal in itself. However, it is also a practical, necessary response to the severe shortage of nurses. Last year, 37% of nursing posts in the Eastern Cape were vacant. In the meantime utilisation of services has increased. In Lusikisiki, while overall utilisation of clinic services almost doubled, from 16 465 in April 2004 to 31 786 in April 2006, the number of professional nurses has not changed (30). This represents a near-doubling of workload that would have been impossible to manage without task shifting. The nurse-patient ratio (number of patients seen per nurse per clinical work day) has increased from 29 in 2003 to 47 in 2006; this compares with a national average of 29.4.

Through training, mentoring and supervision, the running of the ARV programme was delegated to primary health care nurses and community health workers. Table III outlines the roles of the various team members in the Lusikisiki programme compared with traditional functions. Task shifting was a departure from a model that relies heavily on the most sparse human resources in the system by shifting as much responsibility as possible to lower cadres while providing professional oversight for quality control.

All clinics receive regular doctor support via a mobile visit to support the overall service. Nurses receive extensive preparation in HIV management, including staging and initiation of ARV therapy in uncomplicated cases and routine follow-up. In the two larger clinics they are supported by pharmacists’ assistants for drug management.

**Adherence Counsellors as Patient Advocates**

At the centre of the Lusikisiki model are the adherence counsellors — lay workers who receive training through workshops and on-site mentoring and are employed full-time in the Lusikisiki programme. Within a few months they are able to support all the key processes for running a clinic-based HIV service. This includes service user support, treatment preparedness, facilitating support groups, arranging follow-up visits, teaching people on ARVs to package pillboxes, addressing problems in adherence, and collecting and collating statistics. Adherence counsellors work closely with other community actors: volunteer workers (community caregivers), various support groups, adherence and clinic committees and treatment activists (TAC).

Debates on scaling up voluntary counselling and testing (VCT) have focused on whether testing should be voluntary or routinely performed. Often missing from the debate is the basic need to increase capacity (people and space) to do VCT. According to National Department of Health policy, nurses must do testing, but this limits the number of tests that can be done and fragments the VCT process. In Lusikisiki, the rapid uptake of VCT services was only possible because of the increased capacity provided by counsellor-based testing, an approach that has also proven its effectiveness elsewhere.

In contrast to the model of community-based health workers, adherence counsellors are facility-based and support a range of activities related to HIV/AIDS in the clinics, while at the same time advocating rights of service users and participating in decision-making about health services. The low rate (2%) of loss to follow-up in clinics can be attributed largely to the work of the adherence counsellors.
called HAACO (HIV/AIDS Adherence Counsellors Organisation) has recently been formed to ensure that their role is sustained in the long term.

**Community support**

Engaging the community in HIV/AIDS care is a proven way to enhance programme quality, in terms of clinical outcomes, adherence rates, and retention. In Lusikisiki, the community interacts with the HIV services in a number of different ways. General support groups provide peer support for disclosure and testing and do home visits where problems are identified. ARV support groups prepare people for treatment, provide support for adherence and managing side-effects, and seek out and support defaulters. A clinic committee represents service users who feel they have been badly treated, advocates for better infrastructure and drug supply, and monitors HIV programme and condom distribution in the community. An adherence committee made up of community members follows up non-adherers and will take decisions if a clinic team cannot decide on readiness of a person for ARVs. Finally, individual service users make a significant contribution through learning about HIV and sharing their experiences, thereby providing important support to other members of the community.

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**TABLE III. COMPARISON OF THE TRADITIONAL ROLES OF HEALTH STAFF IN HIV/AIDS CARE COMPARED WITH THE LUSIKISIKI PROGRAMME**

<table>
<thead>
<tr>
<th>Category</th>
<th>Traditional roles</th>
<th>Roles in Lusikisiki</th>
</tr>
</thead>
</table>
| Doctors                         | Patient consultations: OIs, staging, ARV initiation  
Visiting doctor remains apart from clinic staff | Mobile visit: sees only problem cases  
Clinic supervision and mentoring  
Part of multidisciplinary team |
| Pharmacists                     | Manage drug supply  
Responsible for overseeing prescriptions | Hospital pharmacist provides coaching  
to pharmacists' assistants |
| Nurses                          | Support doctor  
Do VCT  
Prepare for ARVs  
Monitor ARV users  
Data collection  
Manage drug supply  
Supervise community care-givers | Manage OIs  
Clinical staging  
Initiate and monitor ARVs  
Prescribe ARVs  
Supervision of clinic staff |
| Adherence counsellors           | Not utilised | Preparation for ARVs  
Empower ARV users  
ARV support group  
Data collection (ARV registers)  
Mentor community caregivers  
Tracing of non-adherers |
| Pharmacists' assistants         | Not utilised or limited role (dispensing medicines only under strict pharmacist supervision at the hospital) | Manage drug supply  
Dispense medicines  
Adherence checks |
| Community caregivers            | Health promotion  
DOT (recall of defaulters) | VCT  
HIV support group  
Data collection (VCT registers) |
| Support groups, community       | Not utilised | Preparation for ARVs  
Health promotion in community  
Recalling of non-adherers  
Reaction to bottlenecks  
Advocating for better service delivery  
committees, activists, people with HIV/AIDS |
|                                 |                                                     |

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**THE BROADER PERSPECTIVE**

The challenges and solutions described for the Lusikisiki programme are far from unique. Across South Africa health care providers in rural areas are struggling to meet the needs of people with HIV/AIDS in an environment of chronic human resource shortages.

A meeting organised by MSF and the Nelson Mandela Foundation in Maropeng at the end of September 2006 brought together actors from 20 different sites across six provinces to discuss challenges to providing HIV care in rural areas (Eastern Cape, KwaZulu-Natal, Mpumalanga, Limpopo, North West and Free State). All sites expressed a problem of staff shortages, high staff attrition rates, poor infrastructure and, in many cases, an overwhelming patient load that further encouraged high staff attrition rates. According to one hospital programme manager in the Eastern Cape ‘nurses are running away from the programme because of workload and burnout’.

Participants outlined several clear policy barriers preventing scale-up, including an unrealistic interpretation of accreditation requirements, lack of support for nurse
initiation, and a rigid insistence that nurses do VCT. Those programmes that had been able to reach larger numbers (each providing ARVs for more than 1 000 patients) listed among their strengths decentralised initiation of ARVs, community partnerships, task shifting, and good integration with primary health care.

CONCLUSIONS

The primary health care approach to providing HIV services in Lusikisiki has achieved very high coverage without compromising on quality of care. Integration helped spread the load among all staff, while decentralisation helped to spread the load among different clinics. This was essential given a near-doubling in service users with no increase in nursing staff. Task shifting allowed lay counsellors to test, nurses to initiate ARVs, pharmacists’ assistants to manage drug supply, adherence counsellors to support the system and proactively support service users, and community groups to actively engage in service provision. Uptake of testing and treatment is much quicker if these services are offered at clinic level, making more service points that are more readily accessible. Because clinics are part of the local community they are more user-friendly, and so people seek treatment earlier and stay on treatment longer.

The shortage of nurses in rural areas is a priority concern. A number of action points have emerged from the Lusikisiki programme as ways to improve nurse recruitment and retention. These include ensuring an adequate budget for a full complement of clinic staff, recruitment of adequate administrative staff (drivers, clerks, pharmacists’ assistants) to ensure that nurses spend their time being nurses rather than being consumed by non-nursing tasks, accreditation and increased remuneration of nurses trained and experienced in HIV, acknowledging the great disparity between non-urban settings by paying maximum rural allowances to staff working in the most challenging rural areas like Lusikisiki, and building and renovating nursing accommodation to meet acceptable standards.

Our experience in Lusikisiki shows that far from being to the detriment of health care services as some have suggested, the provision of ART is having a positive effect on the general quality of primary health care. Improvements in drug supply, diagnostic services, monitoring, staff training, and infrastructural improvements all contribute to improving general primary health care. The strong community ownership of and participation in health care delivery has also had a major benefit in supporting the general quality of health services.

External NGOs with the freedom of flexible budgets and human resources can be very effective in helping establish new models of care. The importance of MSF’s role in Lusikisiki was not the provision of human and financial resources, which is a time-limited and unsustainable contribution, but rather the mobilisation of expertise and fostering of partnerships to develop innovative approaches to delivering HIV services. Following a gradual handover over a period of 18 months, MSF left Lusikisiki in October 2006.

Ensuring sustainability in the face of increasing need will require increased resource inputs from the public sector and full acceptance of the creative approaches to implementation, including task shifting and community involvement. Some of these approaches – such as nurse initiation of treatment – are hampered by a lack of clear policy guidance, while others – such as lay counsellor testing – are inconsistent with current policy, although in practice they are broadly recognised as the only possible way to respond to the needs. Uncertainty in these and other areas is slowing down the accreditation of sites, with the result that accreditation is preventing rather than enabling treatment rollout. Clear direction at the national level is needed on these critical issues.

While the Lusikisiki programme has performed well up to now, concerted efforts must be made to ensure that rate of enrolment continues to increase in order to prevent the treatment gap from widening. The innovative approaches taken in Lusikisiki and elsewhere have been a response to an overwhelming need for services in the face of poorly staffed and equipped facilities, but it should be recognised that this is the reality in most treatment sites across the country, many of which are reaching saturation point. This model is not just a substitution for suboptimal staff levels in rural areas, but needs to be promoted as a model for best practice everywhere.

Acknowledgements

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REFERENCES