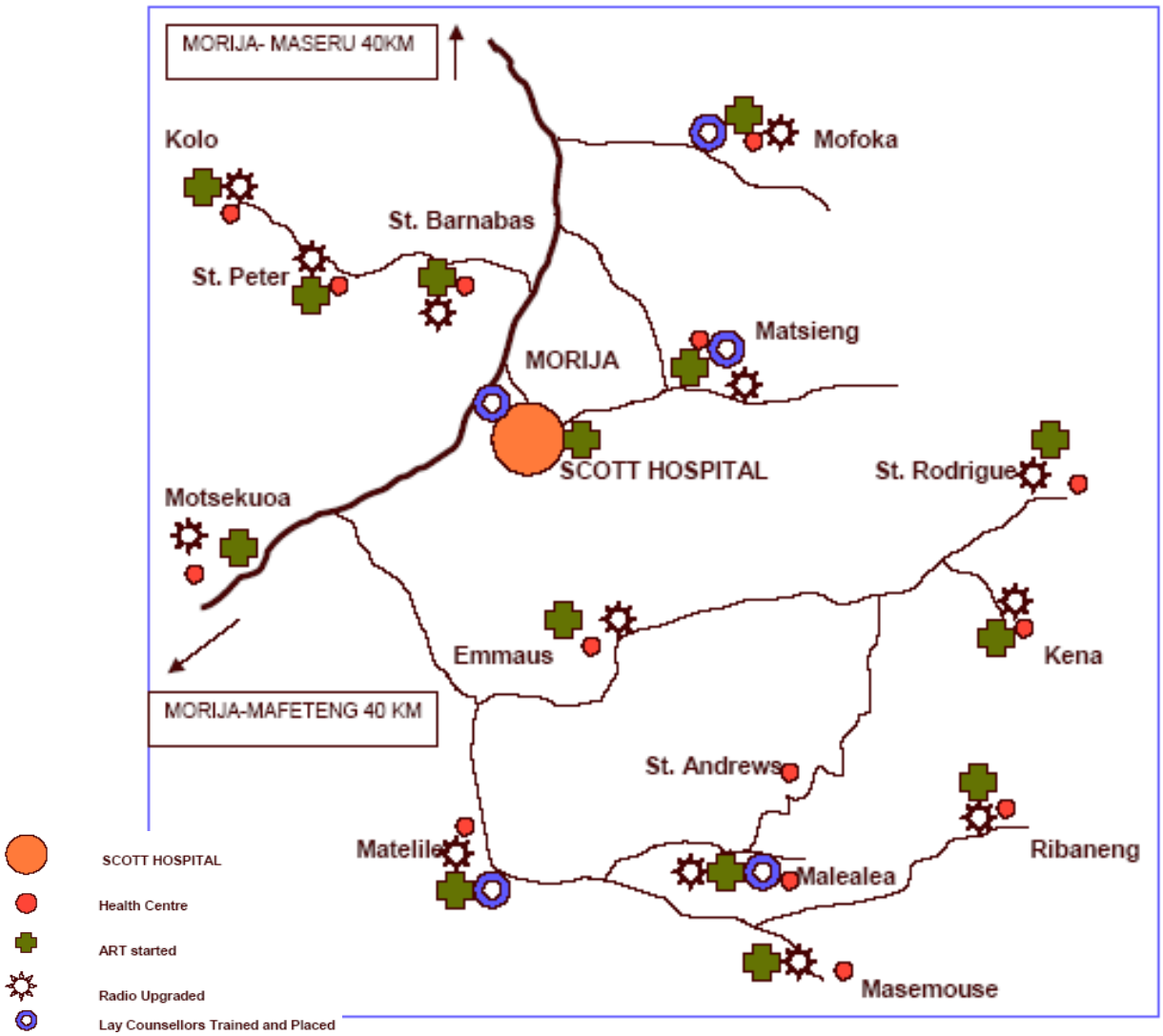
Decentralising free HIV/AIDS care & treatment in rural Lesotho:

A mid-year progress report

July 2006

Mapping of Scott H.S.A.



Scott Hospital is responsible for a population of approximately 220,000 people living in a rural Health Service Area (H.S.A.) and supervises 14 health centres in Maseru and Mafeteng districts. The hospital is owned by the Lesotho Evangelical Church (LEC), which believes that the provision of high quality and holistic health care to all is the Christian response to "the Call into the World." The mission of Scott Hospital is to prevent illness, disease, disabilities and death whenever possible, through the use of education and preventative measures; to provide diagnosis, treatment and holistic care for those who suffer from injury and/or disease or where necessary; and to train and develop all levels of staff to carry out the said objectives and any other relevant ones to their utmost potential. Scott Hospital/LEC is a member of the Christian Health Association of Lesotho (CHAL), a voluntary association of six Christian churches that own and operate eight hospitals and 74 health centres and provide not-for-profit health care services to the people of Lesotho.

Doctors Without Borders/Médecins Sans Frontières (MSF) is an international independent medical humanitarian organisation founded in 1971 that delivers emergency aid to people affected by armed conflict, epidemics, natural or man-made disasters, and exclusion from health care in more than 70 countries. Each year, MSF volunteer doctors, nurses, and other medical and non-medical professionals depart on more than 3,800 aid missions. They work alongside more than 22,500 locally hired staff to provide urgent medical care and to speak out publicly about the plight of the populations they serve when the provision of care is simply not enough. MSF has been responding to the HIV/AIDS epidemic since the 1990s and began introducing antiretroviral therapy (ART) in its programmes in 2000. As of June 2006, MSF was providing ART as part of a comprehensive approach to HIV/AIDS care to approximately 75,000 people in 30 countries. The MSF programme in Lesotho is linked to MSF South Africa, where the organisation operates two of its best-known ART projects – in the township of Khayelitsha in Cape Town and in the rural area of Lusikisiki in Eastern Cape Province.
MSF was awarded the 1999 Nobel Peace Prize for its "pioneering" humanitarian work.

Cover photo: Lefa, an 11-year old boy who was the first patient started on ART in the Scott/MSF programme, with grandmother, health centre nurse, and MSF doctor at Kolo health centre.

I. BACKGROUND: HISTORY OF THE PROGRAMME

In late 2005, Médecins Sans Frontières (MSF), the Ministry of Health and Social Welfare (MOHSW), and Scott Hospital management agreed to initiate a collaboration to expand access to HIV/AIDS care and treatment in a rural Health Service Area (H.S.A.) responsible for approximately 220,000 with one hospital and 14 health centres, many in remote, mountainous areas. During an exploratory mission conducted in August 2005, MSF observed a number of significant challenges to scaling up HIV/AIDS treatment in the country (see panel 1), and the programme was designed specifically to help overcome some of these limitations.

Panel 1: Challenges to scaling up HIV/AIDS treatment in Lesotho as observed in August 2005

- Overwhelming and catastrophic human resource crisis (few doctors, high rates of nurse attrition)
- Rapid saturation of existing ART sites due to a highly centralised, hospital-based, doctor-centred strategy
- Under-utilisation of existing capacity for rapid roll-out of ART, particularly in health facilities managed by the Christian Health Association of Lesotho (CHAL)
- Costly "user fees" at all levels of care in health facilities managed by CHAL
- Lack of integration of prevention of mother-to-child transmission (PMTCT) and prophylaxis and treatment of opportunistic infections (OIs), including management of TB/HIV co-infection, in continuum of HIV care
- Lack of nurse-oriented trainings and guidelines
- High HIV-related stigma in the community and low treatment literacy among people living with HIV/AIDS
- Limited availability of OI and other essential HIV/AIDS drugs at the health centre level
- Fragile data collection, monitoring, and evaluation systems at the central and local level

In November 2005, MSF returned to Lesotho to carry out a joint planning exercise with the Medical Superintendent and Primary Health Care (PHC) Director of Scott Hospital. This exercise highlighted both the strength of the existing PHC capacity in Scott H.S.A. and the challenges and constraints that might be encountered in introducing comprehensive HIV care and treatment. To overcome some of the anticipated challenges, key operational principles for the programme were defined, including decentralisation of HIV/AIDS care and treatment to health centres from the start; guaranteed availability of *free* essential HIV care and treatment; and delegation of tasks to lower levels of health workers.

Major objectives were also agreed to:

a. Promote, strengthen, and decentralise HIV counselling and testing;
b. Strengthen and decentralise the existing PMTCT programme;
c. Improve and decentralise the management of OIs and co-infections, especially TB;
d. Introduce and manage ART at the hospital and health centres;
e. Expand treatment literacy, HIV awareness, and community mobilisation activities; and
f. Implement a robust monitoring and evaluation strategy.

The programme was launched in January 2006, and though it is still in its infancy, some significant progress has been made, which this report attempts to document.

The MOHSW has, of course, been a key partner in the programme, from helping to develop the conceptual approach to decentralisation to ensuring support from all levels of government to providing free antiretrovirals (ARVs) and other essential commodities without which the programme could not function.

The Scott/MSF programme would not be possible without the strong direction and support of the Medical Superintendent of Scott Hospital, the hard work and commitment of health centre and out-patient department (OPD) nurses, the expertise of the PHC team, and the openness and willingness of the OPD Coordinator, PMTCT Coordinator, and TB Coordinator as well as Scott doctors to take on the many new tasks this programme has brought.

The Scott/MSF programme has also benefited immensely from the pre-existing knowledge and capacity of people living openly with HIV/AIDS (PLOWHAs) in the H.S.A., many of whom were beneficiaries of existing ART programmes (particularly Senkatana Centre) and had already formed several support groups, bringing a wealth of personal experience and insight – and, importantly, a willingness to be open about their HIV status – to the introduction of ART in Scott H.S.A.

II. SUMMARY OF ACHIEVEMENTS

From January-June, MSF and the management and health staff in Scott H.S.A. have worked hand-in-hand to carry out a baseline assessment of HIV services at health centres, train nurses, strengthen drug supply and specimen collection systems, launch clinical activities, identify and train community health workers as lay counsellors, enrol patients in HIV care, and initiate ART (see section III for a more detailed description of core programme activities).

Since launching core programme activities:

- **More than 50 nurses and other health staff have been trained on clinical management of HIV, including ART;**
- **50 people living with HIV/AIDS (PLWHAs), village health workers (VHWs), and peer educators have been identified and trained on HIV counselling and testing and ART counselling;**
- **19 lay counsellors have been selected and placed at Scott Hospital and four health centres;**
- **Uptake of HIV testing has more than doubled from 2005 figures to at least 1,220 people;**
- **1,081 people have been enrolled in HIV care at 13 health centres[1] and Scott Hospital;**
- **279 people have initiated ART at 13 health centres and Scott Hospital;**
- **Uptake of testing among pregnant women at Scott Hospital ANC has increased from 48% in 2005 to 79% and uptake of PMTCT from 70% in 2005 to 100% of women testing positive;**
- **Radio communications systems have been upgraded at 13 health centres to facilitate communication between the clinics and the hospital.**

Chart 1: Cumulative number of patients enrolled in HIV care

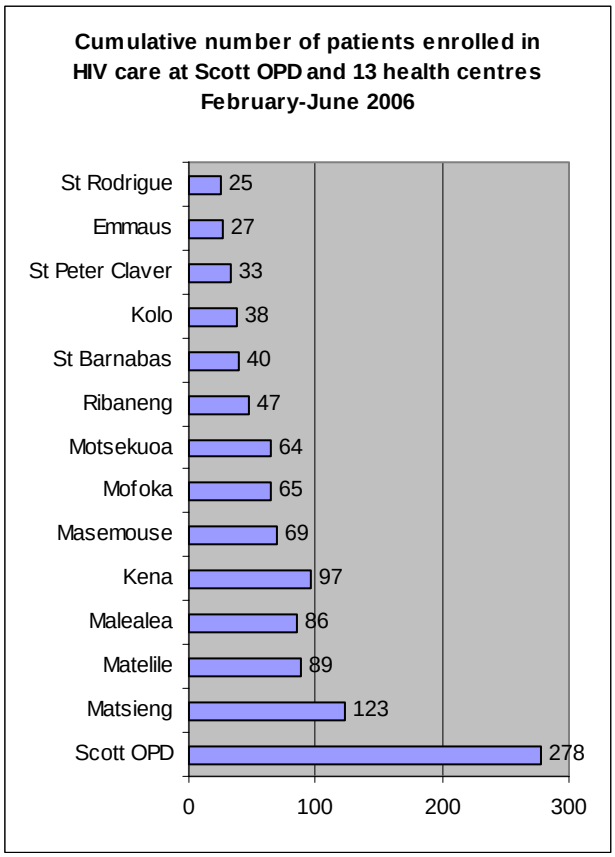
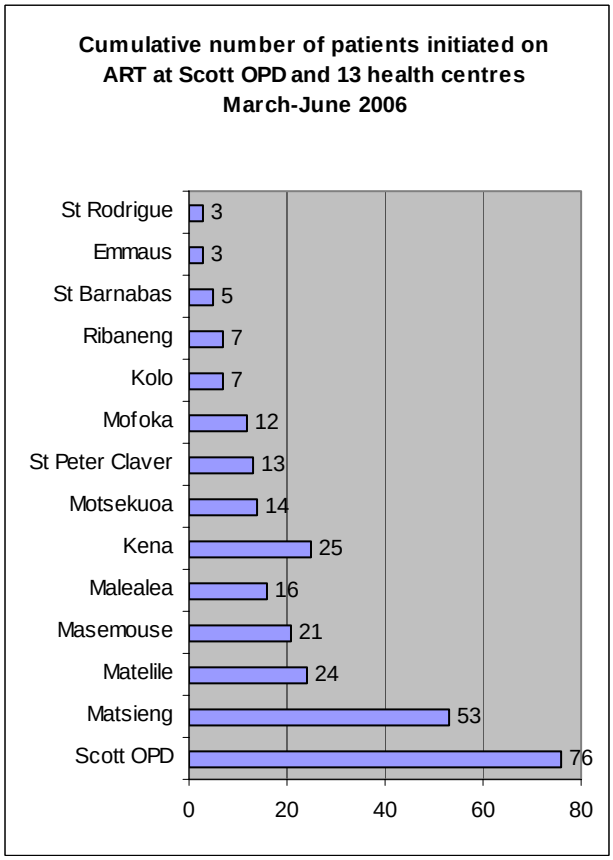


Chart 2: Cumulative number of patients initiated on ART



[1]There has been no nurse trained on management of HIV-related conditions or ART at St Andrew's health centre. In May, one nurse was trained, and St Andrew's will be added to the roster of clinics the MSF mobile medical teams visits in July.

III. CORE PROGRAMME ACTIVITIES

a. Reinforcing and decentralising HIV counselling and testing

Initial constraints: HIV tests became readily available in Scott H.S.A. in 2004 through a donation from CHAL. According to the PHC team at Scott Hospital, approximately 1,000 clients were counselled and tested for HIV in 2005. By the end of 2005, there were a total of 35 nurses trained as HIV/AIDS Counsellors. Prior to 2006, nurse/counsellors were carrying out rapid tests (Determine®), primarily at the hospital but also at some health centres, but specimens were sent to the laboratory of Scott Hospital for confirmatory tests (DoubleCheckGold®). There were no lay counsellors trained on HIV counselling and testing. During preliminary clinic assessment visits in January, several nurses reported that there had been regular shortages of test kits, and very limited uptake of testing due to lack of availability of test kits as well as stigma, denial, and, importantly, the absence of HIV care and treatment services for those that test positive. Nurses also expressed anxiety about being able to continue carrying out testing and counselling when they knew they were going to be expected to take on far greater clinical responsibilities.

Key activities:

- Conducted HIV counselling and testing for at least 1,220 people from January-June 2006 (including at least 504 in the month of June alone[2]), a two-fold increase over 2005 figures (overall positivity rate was 41%);
- Supplied buffer stock of test kits for the hospital and each health centre (2,100 Determine® and 980 confirmatory tests from January-June), thereby addressing supply gaps and ensuring total decentralisation of HIV counselling and testing;
- Identified and trained a total of 50 PLWHAs, VHWs, and peer educators on HIV counselling and testing, building on existing networks and capacities, 19 of whom (primarily PLWHAs) were selected as lay counsellors and placed at Scott Hospital and four priority clinics;
- Developed clear description of duties, guidelines, and allowance payment system, including reimbursement for transport, for lay counsellors (financed by MSF and administered by Scott);
- Developed register to be introduced in July/August to improve record-keeping, facilitate monthly reporting to MOHSW, assess role of community activities in increasing uptake of testing, evaluate quality of counselling, track uptake and HIV prevalence among specific populations (pregnant women, TB patients, specific age groups, etc.), and track consumption of test kits;
- Started to implement more aggressive approach to HIV testing, including: routine offering of counselling and testing for TB patients and ANC clients; diagnostic testing of acutely ill in-patients; group "pre-test counselling" (with the possibility of individual testing for clients that need it), etc.

Ongoing challenges:

- Serious problems with supply and stock management of test kits due mainly to a dysfunctional reporting system preventing re-supply;
- Lack of time for trained nurses to perform counselling in addition to their clinical duties;
- Reluctance of some health staff at hospital to test in-patients and at clinics routinely to offer HIV counselling and testing to all TB patients and ANC clients;
- Lack of space for well-equipped, dedicated counselling and testing stations at hospital and clinics;
- Lack of lay counsellors for 10 remaining clinics;
- Reluctance to test due to previous absence of treatment, hence intense HIV-related stigma and discrimination;
- Onerous reporting requirements from CHAL on consumption of test kits and from MOHSW on monthly statistics (reporting form requires breakdown into nine age groups).

b. Strengthen the existing PMTCT programme

Initial constraints: PMTCT services became available at Scott Hospital in 2003. As in other parts of Lesotho, where PMTCT coverage is estimated at 5%,[3] there have been numerous constraints. First, uptake

[2] Monthly reporting on HIV counselling and testing in Scott H.S.A. is not always reliable. Statistics for April, for example, are only from Scott Hospital OPD (no health centres), and even the June statistics do not include four health centres. The actual figures for HIV counselling and testing in 2006 are probably significantly higher than reported.

[3] According to the Lesotho Demographic and Health Survey.

of both testing and single-dose nevirapine (NVP) has been very low, particularly at health centres where NVP syrup was not available. At Scott Hospital, ANC clients have been offered group counselling in the waiting area and, if they agree, individual counselling and testing. In 2005, there were 2,500 ANC consultations. Of these, 615 pregnant women were individually counselled but only 288 (less than half) accepted an HIV test. Of those who accepted a test, 77 (27%) were positive, but only 54 (70%) received NVP. Second, in the absence of ARVs, PMTCT has been viewed as a vertical intervention, rather than as part of a comprehensive continuum of care for HIV-positive pregnant women, their babies, and families.

Key activities:

Clinical

- From January-June 2006, increased uptake of testing at Scott Hospital ANC: 256 pregnant women were individually counselled, 201 of whom (79%) accepted a test;
- Increased uptake of PMTCT at ANC: of those who accepted an HIV test, 62 (31%) were positive and all received a PMTCT intervention (100%);
- Initiated ART for seven pregnant women according to national criteria (three at Scott OPD, four at clinics);
- Introduced HIV DNA PCR testing for early diagnosis of HIV in infants in April: a total of 15 HIV DNA PCR tests on HIV-exposed infants have been done, and six results were received: 1 HIV-positive, 5 HIV-negative (the remaining PCR results are pending).[4]

Other

- Developed flowchart for management of HIV-positive pregnant women, including ART for those with a CD4 count of < 200 or Stage IV and an updated PMTCT strategy in line with current international recommendations;
- Ensured availability of NVP syrup at all health centres;
- Provided formula for mothers who opt to exclusively formula-feed beginning in June (provided by MSF for free for HIV-exposed infants until 12 months of age);
- Assigned two trained lay counsellors to Scott ANC to improve uptake of testing and started specific outreach to pregnant women at health centres on ANC clinic days beginning in June;
- Developed new ANC register, labour ward register, and infant register to track all clients (mothers and babies) enrolled in the PMTCT programme (to be introduced in July/August).

Ongoing challenges:

- Limited interest in testing among pregnant women, especially at health centres, due to lack of awareness about the availability of comprehensive care and treatment for pregnant women and their families and therefore slow enrolment of pregnant women into HIV care;
- Lack of updated national PMTCT guidelines;
- Weighing risks and benefits of feeding options, particularly where access to clean, safe water is not guaranteed;
- Price of formula.

c. Improve and decentralise the management of OIs and co-infections, especially TB, and introduce and manage ART at the hospital and primary health care level

Initial constraints: Although national guidelines on the management of OIs and ART existed prior to 2006, HIV care and treatment was extremely limited in Scott H.S.A., primarily due to the absence of practical training, tools, and systems to support implementation (including lack of key OI drugs, ARVs,[5] equipment and capacity to carry out CD4 and other essential lab tests, nurse-oriented guidelines, etc.). Some Scott staff attended trainings on HIV clinical care, however these did not focus on local management of HIV infection, but on identification of cases and referral to existing ART sites. Therefore, despite the large burden of HIV infection, the health services were not yet prepared to manage HIV care or ART.

[4] In April, Scott became a pilot site for collection of dried blood spots (DBS) and transport of samples to the Central Lab (and then Johannesburg). A training for key hospital staff and health centre nurses was conducted by the Central Lab and the Clinton Foundation HIV/AIDS Initiative prior to launching HIV DNA PCR testing in the programme.

[5] Except NVP for PMTCT and PEP kits for cases of occupational exposure.

Key activities:

Clinical

- Enrolled a total of **1,081** people in HIV care at the hospital and health centres in Scott H.S.A. since 6 February, including 273 males (> 14 years), 699 non-pregnant females (> 14), 44 pregnant females, 30 boys (< 14), and 35 girls (< 14);
- Initiated ART for a total of **279** people since 1 March at the hospital and health centres, including 74 males, 180 non-pregnant females, 7 pregnant females, 8 boys, and 10 girls;
- Accepted a total of **16 transfers in** of patients on ART from other facilities.

Training and guidelines

- Theoretical training and on-site coaching for more than 50 health centre nurses and other key health staff on management of HIV-related conditions and ART at primary care level;
- Developed and distributed MSF *Guide for Nurses: Management of HIV-related Conditions and Antiretroviral Therapy in Adults and Children at Primary Health Care Level* (a field-tested practical guide designed for nurses to manage HIV care) to all training participants.

Infrastructure, supplies, and equipment

- Procured essential HIV/AIDS medicines and supplies (primarily OI drugs) for Scott Hospital pharmacy from National Drug Service Organisation (NDSO) and Tripharm and ensured supply of ARVs from the HIV/AIDS Health Products Coordinating Office (HAHPCO);
- Purchased and ensured installation of and training on a new CD4 machine (Partec SL3) for the Scott Hospital laboratory;
- Prepared 'starter kits' of OI drugs and essential supplies and provided basic clinic equipment (e.g. T-scales, filing cabinets, file folders, appointment books) for each health centre;
- Upgraded radio communications systems at 13 health centres to facilitate communication.

Systems

- Formed two MSF mobile medical teams to provide direct clinical care, on-site supervision, and in-service training and developed roster for weekly clinic visits;
- Developed and instituted policy on provision of free essential HIV care and treatment in Scott H.S.A. for HIV-positive individuals;
- Developed all necessary forms, policies, and protocols/flowcharts to simplify standard operating procedures for clinical, laboratory, and pharmacy activities;
- Developed specimen collection system with health centres and Scott Hospital lab to ensure reliable collection and reporting of results and minimise the need for patients to travel to Scott;
- Introduced MOHSW pre-ART and ART registers as well as an 'active file' folder system.

Clinic-based treatment literacy and community support

- Established weekly support sessions run by lay counsellors at Scott OPD, Mofoka, and Matsieng to provide education and psycho-social support for PLWHAs and complement existing support groups;
- Established a series of at least five clinic-based treatment literacy workshops at Kolo, St Barnabas, Motsekuoa, and Matelile where no support groups or lay counsellors exist.[6]

Ongoing challenges:

- Shortage of health workers, particularly nurse clinicians, and motivation of some health staff;
- Integration of TB/HIV services for co-infected patients;
- Standard of care in wards of Scott Hospital due to nurse shortages and lack of communication;
- Continuous problems with sample flow and quality control in Scott Hospital lab as well as with specific lab equipment, requiring MSF to bring in a short-term lab technician;
- Distance from some villages to existing clinics, particularly for acutely ill patients who live in remote areas, and cost of transport for patients;
- Testing, diagnosis, and treatment of pregnant women and children at primary care level;
- Need for improved organisational systems and structural improvements at hospital and some health centres;
- Need for additional training for VCT counsellors to graduate to ART counsellors at all clinics;
- Need for improved record-keeping (filling pre-ART and ART registers, etc.).

[6] Matelile has since had two lay counsellors placed and initiated a support group.

IV. MAJOR CONSTRAINTS & PRIORITIES FOR THE FUTURE

In addition to the specific challenges described above, there are several overarching constraints and priorities that require urgent attention in the coming months.

a. Coping with the human resource crisis

Since January 2006, 18 nurses left Scott H.S.A. for "greener pastures." Seven went to the United Kingdom, four left for government institutions, reportedly because the benefits package (pension fund) is considered superior to that offered by CHAL institutions, four are on study leave, one left for South Africa, one left for a private hospital, and one left for an international NGO. As of June, there were 19 vacancies for nurses in Scott H.S.A. out of a total of 77 nursing posts (25% vacancy rate). This situation is, of course, not unique to Scott H.S.A., but it is dire.

The serious increase in HIV-associated workload has become a major concern for some nurses in Scott H.S.A., and several strategies have been employed to help them cope, including providing practical guidelines and tools; weekly supervision and in-service training from MSF mobile teams; and training of lower levels of health workers to assist with specific tasks, particularly trained nursing assistants (TNAs), historically a more stable and less "poachable" workforce, and community health workers, who have become VCT and ART counsellors. This "task-shifting" will continue to be a key strategy, and we suspect that lay counsellors will quickly become the backbone of the programme. It will be essential to ensure they become a formal part of the health delivery system and are compensated appropriately.

But ultimately, aggressive strategies will need to be developed to retain skilled nurses in Scott H.S.A. It is the single most significant limiting factor in scaling up access to treatment in the programme. Ensuring that the government of Lesotho addresses "macro" issues such as increased allocations of health workers (not only nurses but also doctors, pharmacists, lab technicians, etc.) and increases in salaries is an urgent priority. In addition, MSF and Scott are interested in exploring practical steps that could be taken in the short- to medium-term to recruit, train, and retain nurses and doctors, including:

- Developing and integrating an HIV/AIDS module into the curriculum of the School of Nursing (which trains approximately 20 TNAs each year);
- Investigating the possibility of establishing a structured course (accredited by a university) that would enable nurses and doctors to get a specialised post-graduate diploma in HIV clinical care;
- Creating non-financial incentives to motivate and reward the most committed nurses and doctors.

b. Offering free 'essential' chronic HIV care in a fee-for-service environment

Because of the experience MSF and other organisations have had globally with provision of HIV/AIDS care and treatment, which demonstrates clearly that the cost of chronic HIV care can be most important factor affecting adherence to ART, a pre-condition for launching the programme was agreement from CHAL and the management of Scott Hospital to ensure access to free "essential" HIV/AIDS care throughout the H.S.A. (including the hospital) and a commitment from the MOHSW that, once MSF phases out its involvement, it will commit to taking over the cost of care.

HIV test kits, cotrimoxazole prophylaxis for TB patients, and ARVs for ART, PMTCT, and PEP are already provided by government (or external donations). This has been critically important. While it has been difficult to establish limits for what can be considered 'essential' HIV/AIDS care, and to introduce a system of free treatment only for HIV-positive patients, practical decisions had to be made to begin implementing free care and treatment. Hence, the following additional services and medical commodities are now provided for free (costs are covered by MSF):

- All necessary lab tests and investigations (including CD4, haematology, chemistry, and parasitology exams as well as chest x-rays);
- All drugs needed to prevent and treat HIV-related conditions;
- Drugs needed to manage ARV side effects;
- Cost of admission and hospitalisation for HIV-positive individuals who need in-patient care;
- Formula milk for HIV-positive pregnant women who opt to exclusively formula-feed.

Plans to eliminate user-fees at the health centre level is a critically important step, which can pave the way for eventual provision of free, chronic HIV care for all PLWHAs. In the meantime, MSF and Scott are committed to documenting the cost of HIV care in the programme and to assisting with defining an essential package of HIV/AIDS care and treatment to facilitate the achievement of this objective, which the MOHSW shares.

c. Ensuring access to best available medical tools and strategies

Since HIV is a fast-moving science, it is important to keep up with the best available evidence and data. To ensure the highest possible quality of care for HIV-positive patients, it is essential that up-to-date tools and strategies be made accessible to as many people as possible. It is also critical that a technical forum be convened to ensure that national guidelines are revised to reflect internationally recognised standards. Based on the past six months of experience in the Scott/MSF programme, the most pressing clinical issues that we have encountered, and which we feel require immediate technical consensus in Lesotho in order to implement widely include:

Updating PMTCT strategy: There is a growing body of evidence demonstrating that NNRTI-containing ART is less effective in women who have received a single dose of NVP for PMTCT within six months of starting ART. The World Health Organization (WHO)[7] recommends ART for pregnant women with a CD4 count of <200 or WHO Stage IV (as with non-pregnant women) and a short-course of AZT in addition to single-dose NVP for pregnant women with a CD4 count of >200 or WHO Stage I, II or III and their babies *where possible*. It is considered "best practice" to ensure "tail protection" of AZT/3TC after exposure to single-dose NVP. Developing an appropriate, updated PMTCT strategy will require weighing the advantages and disadvantages of various approaches, and making difficult practical decisions, but piloting such approaches is essential to determine what will be feasible at the national level.

Integrating TB/HIV services: The prevalence of HIV in adult TB patients is estimated to be 76%,[8] which means that these twin epidemics must be treated simultaneously and that services for TB/HIV must be integrated. Important steps to integrating TB/HIV care include: routine offering of HIV testing to all TB suspects; acute awareness of diagnosis of TB in all HIV-positive patients; scheduling TB and HIV appointments for co-infected patients on the same day; clear algorithms for diagnosis of smear negative TB and clear guidelines allowing for nurse-initiated presumptive treatment for smear negative patients; specialised training for nurses and community health workers; and patient-friendly materials on TB and HIV drug interactions, immune reconstitution syndrome, and specific challenges to adherence for TB/HIV co-infected patients. It is important to address the lack of flexibility in the present protocol to expedite TB treatment for very ill suspects and patients, as TB is the number one killer of PLWHAs in Lesotho.

Ensuring access to newer generations and formulations of ARVs: There are several important ARVs that have been developed or formulated in the past few months and years, which are particularly useful in resource-limited settings because of their superior side-effect profile or user-friendly formulation. Unfortunately, these are not widely available in Lesotho and other developing countries. It will be important to ensure access to these newer ARVs, which include tenofovir disoproxil fumarate (TDF) for first-line therapy to address the growing evidence base concerning d4T-related toxicities; heat-stable lopinavir/ritonavir (Kaletra®), which has several advantages over the older formulation, including lower pill burden (four pills per day instead of six), no dietary restrictions, and storage without refrigeration (as well as heat-stable ritonavir alone); and fixed-dose combinations of AZT/3TC/NVP, especially for pregnant women, which have recently been prequalified by WHO or approved by the US Food and Drug Administration.

[7] WHO guidelines on ART and PMTCT are being revised according to expert consultations and will be released at the International AIDS Conference in Toronto in August 2006.
[8] According to WHO TB country profile, available at:
http://www.who.int/GlobalAtlas/predefinedReports/TB/PDF_Files/LS_2004_Brief.pdf

V. LESSONS LEARNED

Lesotho has embarked on an ambitious effort to expand and decentralise HIV care and ART in 2006. There are now several projects underway to bring care and treatment to the primary care level and different approaches are being used. The Scott/MSF programme is still young, and many significant challenges remain. Still, the first phase of the programme has resulted in important short-term achievements. We have learned important lessons and developed practical strategies to overcome the constraints inherent in decentralising dedicated HIV services in a resource-limited rural setting. For example:

- HIV testing can increase dramatically if appropriate pull factors are in place (decentralised access to testing, management of OIs, ART, etc.) and "permanent" lay counsellors (especially PLWHAs) linked to HIV services are trained, utilised, and compensated;
- Treatment does not start with ART: all cadres of nurses as well as community health workers need to be familiar with management of major OIs, including TB, before introducing ART;
- PMTCT can and should be integrated into comprehensive HIV care and treatment services;
- All cadres of nurses, including TNAs, have the capacity and confidence to manage ART if properly empowered through provision of trainings and simplified, user-friendly guidelines and tools, as demonstrated by all clinics starting ART despite most having no nurse clinician on staff;
- Mobile medical teams are a requirement to provide direct clinical care for HIV-positive individuals, offer on-the-spot supervision and in-service training for nurses on a regular basis, and ensure ongoing links with the district hospital (referral of complicated cases, drug supply, lab support, radio communication, overall supervision, etc.);
- Simultaneous development and strengthening of logistical systems (including specimen collection/transport systems) and infrastructure are mandatory to facilitate decentralised implementation of HIV care and ART and assure a reliable supply of test kits, OI drugs, ARVs, and other essential supplies;
- Treatment literacy and other community-driven activities linked to HIV care and treatment empower PLWHAs and increase uptake of services;
- Provision of *free* essential HIV care and treatment is fundamental to ensure access to treatment for the vast majority of the rural population.

Despite these achievements there is a great risk that the future of the programme will be jeopardised if immediate solutions to the human resource crisis, particularly retention of skilled nurses, are not found.