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The epidemic of HIV and patient monitoring in Malawi: Lessons from the front

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Malawi has developed an excellent, nation-wide system for monitoring HIV patients and keeping track of key epidemic markers. The success of the Malawi system lies in two things: the focus on simplicity and the use of the data collection process not only to track the epidemic and identify problems to be dealt with but also to give regular feedback and support to every clinic in the country. This achievement is the more remarkable given that Malawi is one of the poorest countries in the world (1), but has one of the most severe epidemics of HIV in the world ranking 9th out of 168 countries by HIV prevalence (2). We in South Africa have much to learn from them.

The epidemic of HIV in Malawi started early (3, 4). In 1987 thirty thousand men working on Anglo-American's gold-mines were tested for HIV; the men in the study came from South Africa, Malawi, Lesotho, Mozambique, Swaziland and Botswana but not from Rhodesia, now Zimbabwe (5). The prevalence among mine-workers from Malawi was 4%, among those from all other countries, including South Africa, it was 0.03%. In response to this finding, the South African Chamber of Mines stopped recruiting novices from Malawi (6), and the number of Malawians employed on the South African gold-mines fell from 13,090 in 1988 to 2,212 in 1989 (7).

These data are important for two reasons. First, they show that Malawi experienced the effects of HIV before most other countries in southern Africa. Second, while the exclusion of Malawian nationals from working on the gold-mines affected the economy of Malawi in the short term, it almost certainly mitigated the spread of HIV in the long term. The spread of both HIV and TB in southern Africa is largely attributable to the system of oscillating migrant labour, introduced in the early 20th century to ensure a steady supply of cheap labour to the expanding gold mines while avoiding responsibility for the long-term health of their workers (8, 9).

Successful expansion of treatment

In a series of papers Harries and co-workers (10-20) discuss the development of the programme to control HIV and treat and support those infected with HIV in Malawi, drawing heavily on their experience in managing TB (14, 21). The lessons learned from the scale-up of ART and the system of patient monitoring treatment and support are summarised in a recent paper (20). The scale-up of ART in the public sector in Malawi began in earnest in 2004 when 13,000 people were started on ART; by the end of September 2016, 663,000 people, or 68% of the estimated 979,000 HIV positive adults, were on ART. Several factors contributed to this successful expansion of treatment in a low-income country with a substantial epidemic of HIV and may be summarised as follows (20):

1. From the beginning, the emphasis was on simplicity and standardisation.
2. The Malawi Ministry of Health, through the director and staff officers of the HIV Department, took clear leadership and assumed responsibility for national scale up.
3. Financial support for ART scale-up was from one source only: The Global Fund for AIDS, TB and malaria.
4. As clinics were brought on board, staff received an intensive course of training.
5. Every quarter, the HIV Department and its partners conducted supportive supervisory and monitoring visits to all ART sites in the country (referred to as 'The Quarterly Reports'). The data, results and lessons from these reports are published on a regular basis.
6. Maintaining uninterrupted drug supplies was a top priority.
7. Initially, a dedicated clerk was employed at each clinic to enter patient information retrospectively from patient treatment cards to a single desktop computer.
8. When they began to roll-out an electronic recording and reporting system, designed by the Baobab Health Trust, a local non-governmental organisation, computers were provided in every clinic room and connected to a central server that stored the data. Healthcare workers used simple, robust, touch-screen computers to enter patient information during clinical encounters at the point of care.
9. Key challenges that needed to be overcome included:
    a. Low computer literacy among users;
    b. The need for unique patient identifiers;
    c. Maintaining a clean and reliable electrical power;
    d. Managing the transition from paper to electronic-based records;
    e. Accurately back-entering large numbers of paper-based treatment cards and registers;
    f. Building analytical capacity in the country.

But perhaps the most important lesson from Malawi is that good patient monitoring made it possible to

provide support to clinical staff, leading in turn to high treatment coverage and high rates of compliance and a rapid decline in transmission. Good epidemic control starts from good patient monitoring, treatment and support and we in South Africa have much to learn in this regard.

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