HIV patient care by clinic nurses rather than hospital doctors clinically successful, cost effective

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Transferring care of HIV patients from doctors in hospitals to nurses in primary health clinics is both clinically successful and cost effective

Health outcomes for stable patients with HIV on antiretroviral (anti-HIV) therapy 12 months after their care was transferred to a primary health clinic (a community clinic) where they were managed by nurses were equivalent, or even better, than the outcomes of similar patients on antiretroviral therapy who remained at a hospital-based, doctor-managed outpatient clinic.

Furthermore, the results of this study led by Lawrence Long from the University of the Witwatersrand in Johannesburg, South Africa, and published in this week's PLoS Medicine also show that this primary health care transfer strategy was cost effective and able to improve or maintain patient responses to antiretroviral therapy for 11% lower cost than doctor-managed, hospital-based outpatient treatment.

These findings are important as they suggest that this [primary-health-care transfer strategy] would increase treatment capacity, shift care from doctors to nurses (there are fewer doctors than nurses in South Africa), and conserve resources without compromising patient outcomes.

The authors of this study analyzed data collected from a group of over 700 adult patients with HIV initially treated by doctors at the Themba

Lethu Clinic in Johannesburg and then transferred to a primary health clinic where nurses supervised their treatment. Each patient who transferred to the primary health care clinic was matched to three patients eligible for transfer but who remained in doctor-managed, hospital outpatient care and the clinical outcomes and costs in the patient groups were compared one year after the transfer. All the patients in the study were doing well on treatment at the start of the one-year study period.

The authors found that only 1.7% of the transferred patients had died or had been lost to follow up compared to 6.2% of the patients who continued to receive doctor-managed, hospital-based antiretroviral therapy. The average cost per patient-year for those in care and responding at 12 months was US$492 for patients transferred to nurse-managed, primary care but US$551 for patients remaining in doctor-managed, hospital care. Additionally, the primary health care site spent US$509 per responsive patient, taking into account the costs of patients who were not in care and responding at 12 months, whereas the hospital spent US$602.

The authors say: "In addition to the financial cost savings estimated in this study, transferring patients to nurse-managed, primary-level clinics has the additional advantage of freeing up the time and resources of more highly trained doctors and well-equipped facilities to focus on patients who are not responding to treatment or have other complications."

They continue: "Task-shifting allows more health care workers to provide [antiretroviral therapy] care, and this in turn increases the treatment coverage available to meet the large unmet need."

In an accompanying Perspective, Nathan Ford from the medical humanitarian organization, Médecins Sans Frontières, and Ed Mills from

the University of Ottowa in Canada (not involved in the research study) question how this study and other research can help to define future HIV programs, rather than validate what is already happening. They say: "We need to go much further. The ambition today is to provide [antiretroviral therapy] to many more people, and much earlier in their infection, over a long-term period. Realizing this ambition will depend on defining models of [antiretroviral therapy] delivery that are minimally intrusive to patient's lives."

Ford and Mills continue: "Several studies have demonstrated the feasibility of home-based and community-based [antiretroviral therapy] management, with positive results.

They conclude: "Future research on [antiretroviral therapy] delivery should build on these findings in order to help develop the elements that promote early HIV diagnosis, ensuring rapid enrolment into care, and support continuous adherence to an effective treatment regimen such that HIV care is largely a self-managed chronic disease, with the role of hospitals limited to providing care for a sick minority."

More information: Long L, Brennan A, Fox MP, Ndibongo B, Jaffray I, et al. (2011) Treatment Outcomes and Cost-Effectiveness of Shifting Management of Stable ART Patients to Nurses in South Africa: An Observational Cohort. PLoS Med 8(7): e1001055. doi:10.1371/journal.pmed.1001055

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