Nurses safely and effectively prescribe antiretroviral drugs in pilot program

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Given sufficient training and support, nurses can safely and effectively prescribe antiretroviral therapy (ART) to patients with HIV, according to a Rwandan study published in this week's *PLoS Medicine*.

As in many other African countries, Rwanda has a shortage of doctors, which implies that many patients with HIV aren't receiving the treatment they need. To tackle this crisis, the World Health Organization recommends "task shifting"—whereby the task of prescribing ART is shifted from doctors to nurses so that more patients can be treated.

In September 2005, Rwanda launched a pilot program of task shifting. One nurse in each of three rural primary health centers was trained to examine patients with HIV and prescribe ART in simple cases (complex cases were referred to a doctor). Nurses had to complete at least 50 consultations with patients eligible for ART under the observation of a doctor before being allowed to treat patients independently. The new study, by Fabienne Shumbusho (Family Health International, Kigali, Rwanda) and colleagues, evaluates the success and safety of the program.

Shumbusho and colleagues reviewed the medical records of 1,076 patients enrolled in the program between September 2005 and March 2008. They examined whether the nurses had followed national guidelines on ART prescription and monitored the patients correctly. They also looked at patients' health outcomes, such as their death rate, changes in body weight and CD4 cell count (a marker of how healthy the

patient's immune system was), and whether patients maintained contact with caregivers.

The researchers found that by March 2008, 451 patients had been eligible for ART, of whom 435 received treatment. None of the patients were prescribed ART when they should not have been. Only one prescription did not follow national guidelines. At every visit, nurses were supposed to assess whether patients were taking their drugs (known as "adherence") and to monitor side effects. They did this most of the time (in 89% of clinic visits, nurses assessed adherence, and in 85% of visits they assessed side effects).

By March 2008, 390 (90%) patients were alive on ART, 29 (7%) had died, only one (under 1%) was lost to follow-up, and none had stopped treatment. Most patients gained weight in the first six months and their CD4 cell counts increased.

Outcomes, including death rate, were similar to those from the doctor-led Rwandan national ART program and other African national doctor-led programs.

The study, say the authors, "demonstrates the feasibility and suggests effectiveness of nurse-centered task shifting for decentralized ART services without compromising the quality of care." But there are also several limitations to the study, which the authors discuss in their paper. For example, the authors say that they did not directly compare outcomes from this nurse-centered model of care with those from traditional physician-centered models. This makes it difficult to ascertain if patients' outcomes were as a result of the nurses' role or due to doctors' intensive supervision.

More information: Shumbusho F, van Griensven J, Lowrance D, Turate I, Weaver MA, et al. (2009) Task Shifting for Scale-up of HIV Care:

Evaluation of Nurse-Centered Antiretroviral Treatment at Rural Health Centers in Rwanda. PLoS Med 6(10): e1000163. doi:10.1371/journal.pmed.1000163

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