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How has that seminal paper affected the direction of research in HIV/AIDS since its publication two years ago?

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Is treatment of infected partners at higher CD4 counts to prevent transmission to non-infected partners now considered standard of care?

It is now the WHO recommendation (as well as IAS, DHHS, etc) that any country that have not yet moved to 500 cells, due to cost considerations and whether or not the health care infrastructure can accommodate the increased number of patients that would need care. (WHO- World Health Organization, IAS- International AIDS Society, DHHS- Department of Health and Human Services)

Infection rates in Malawi according to UNAIDS stands at 10%. Remarkably, they describe a 55% drop in the 10 years between 2001 and 2011. How often do you estimate infection rates? Do you attribute the marked drop in infection rates to more widespread availability of ART?

The Malawi Ministry of Health conducts HIV prevalence estimates nationwide. This is largely based on an epidemiology program called “SPECTRUM” that uses inputs from regularly collected data to estimate the prevalence. In rural South Africa, there was a study that clearly demonstrated that HIV incidence decreased according to population coverage of ART (Tanser, et al). Malawi has even higher coverage than seen in this article, so I suspect that many of the reductions are due in part to increased ART coverage. There may be increased condom use among known positives that could also contribute to the reduction (among other factors).

In what amount of time would you expect to see a drop in infection rates with new guidelines?

I suspect the trajectory of reduction in new infections will be somewhat slower than with the initial roll out, as the change is modest to go from 350 to 500 [CD4 Cell Counts], as compared to the initial situation where no one was on therapy to the current rates of approximately 60% coverage of those in need at the 350 threshold.

You also co-authored another study showing decrease in vertical transmission rates in infants whose HIV infected mothers were given anti-retroviral treatment for at least 12 weeks prior to delivery. Do pregnant women in Malawi frequently make it to delivery without pre-natal care? How can you target (especially HIV infected) pregnant women for pre-natal care prior to 28 weeks of pregnancy? Were the CD4 counts in the study participants also infected) pregnant women for pre-natal care prior to 28 weeks of pregnancy? Were the CD4 counts in the study participants also

In addition to this prestigious research, Dr. Hosseinipour has also co-authored a study showing reduction in transmission of HIV from infected mothers to their offspring when treated with ART while pregnant. So here we are, with a new paradigm of “treatment as prevention” and celebrating one million babies born HIV negative to an HIV positive mother through the initiatives of PEPFAR. It is truly a new era for prevention and treatment of HIV around the globe. Dare we say, “The Downfall of an Epidemic?”

Dr. Hosseinipour and your correspondent were medicine residences together at Baylor College of Medicine in Houston. Your correspondent is pleased and proud to share an interview with Hosseinipour regarding both her remarkable career and her role in changing the face of the HIV/AIDS epidemic.

Interview: Turning the Tide on an Epidemic

A Native Kentuckian Changes the Deadly Trajectory of HIV Infection | Dianne Smith Cook, M.D.

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Tell me about the impact on economic and social development that the HIV/AIDS epidemic has had in Malawi. UNAIDS discusses the increased impact on women as well as the devastation in fields that employ women such as teachers and healthcare workers (HCW).

Certainly, several areas have been affected by HIV/AIDS. Malawi, in all aspects of health care, health care workers, military, and police. With respect to HCW and teachers, the numbers required to provide services is well below requirements, up to 70 or 80% of positions in government facilities are unfilled according to the different health care cadres.

As an example, the population in the rural areas has been the most affected. In Malawi, the majority of the workforce is female, which means that HIV/AIDS has affected the productivity in the fields that employ women such as teachers and healthcare workers (HCW).

Is your institution able to target rural populations as well? What are the different barriers to care between rural and urban affected populations?

Yes, our programs target some rural communities, such as those that are most affected by HIV/AIDS. In Malawi, the rural areas are remote and accessing care is difficult. We have to work closely with the communities to provide care in their own environment.

What have some of the roadblocks to health care for people infected with HIV/AIDS in Malawi been? Are patients able to afford the medications they need? Who provides the medications for those that cannot afford the drugs?

The ART has been free since 2004, so that ART drug cost is not a barrier. However, the transport costs to get to clinics are difficult for the rural poor. The ART program, funded through the Global fund with a parallel procurement mechanism eliminated the out-of-pocket costs associated with transportation, which on average make up 50% of the cost of ART. For general health care in Malawi, all government health hospitals and clinics are free. However, for medications that are not provided through the ART program, the expenses are frequently out-of-pocket for patients, and patients will deprioritize without these medications. Also, if they are admitted to the hospital, there are common stock-outs of essential medications and supplies. In these scenarios, patients would go without. (The Global Fund to Fight AIDS, Tuberculosis, and Malaria)

You mentioned that you are able to provide ART through your clinic to patients, but once they are hospitalized they may not have access to any of the medications they need. Is ART as good as any other? Does the act of being hospitalized become a marker for increasing mortality? Stated in another way, when an elderly person falls and breaks a hip, no matter what their health care provider says prior to the break, their incidence of all-cause mortality rises significantly during the year after the break. Do you see a “this is the beginning of the end” scenario when your patients ultimately do need hospitalization?

ART would still be available to the patient, as they can either get an emergency supply through the hospital clinic, the ART clinic, or they can take their own drug. I don’t think the hope holds entirely with our HIV infected patients, as usually the problem is largely irreversible if they can get through the acute period. But, that gives me a research idea to evaluate the outcomes of patients with have had admissions and what follows thereafter.

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I think I would be a much better doctor if I had a better understanding of the social and structural determinants of health. As a general physician, I should be aware of these factors when I talk to my patients about their health. But, as a specialist in internal medicine, I need to be able to address these issues at a more general level. I think it is important to have a holistic approach to patient care, taking into account all aspects of their lives. I believe that this is the key to improving health outcomes for all patients.

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