Letter from South Africa

Sojourn in South Africa

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He was 4 months old, weighed less than 2 kg, and spent the better part of his life in an incubator. His mother died at birth from symptoms associated with HIV infection, and the extended family that came to collect her body did not return for him. He was a semipermanent fixture in the neonatal ward—an AIDS orphan, unwanted, abandoned.

Making a difference and learning in the process: *Dr Wade Mitchell embraces staff members at the Mosvold Hospital in Ingwavuma, Kwa-Zulu Natal South Africa.*

He died shortly after our visit to Mosvold Hospital in Ingwavuma, Kwa-Zulu Natal South Africa, another statistic of the AIDS epidemic currently ravaging many parts of Africa. Recent anonymous HIV testing of maternity patients in this area of South Africa has shown a one in three incidence of undiagnosed HIV.[1] Current estimates of the rate of mother-to-child HIV transmission range between 16% and 28%, or roughly 1 in 4.[2] Of the 1640 births annually at Mosvold Hospital, approximately 130 babies will have been vertically infected with HIV. The effects of these numbers of HIV-infected mothers and infants are both financial and emotional as well as both individual and communal, and they compromise the social fabric upon which the community once dwelled and prospered.

During the second year of my rural family medicine residency program at the University of British Columbia in Vancouver, I had the opportunity to travel to Ingwavuma to conduct a feasibility study for Mosvold Hospital, addressing the plausibility of implementing an antenatal HIV screening program. In return for my work, I was to gain more maternity training and experience in surgical obstetrics. Fortunately, the most recent World AIDS Conference had just taken place in Durban, South Africa, and a plethora of information regarding vertical transmission and antenatal screening programs lay at my fingertips. The hospital itself had been managing AIDS and HIV–related disease for years but had yet to implement an HIV screening program.

Political denial of the role of HIV in AIDS has been the primary obstacle to developing and implementing an integrated antenatal HIV screening-treatment program in South Africa. Failure to acknowledge this fundamental association has prevented sufficient allocation of resources to purchase effective testing and treatment modalities. Current testing methods involve transporting blood samples to the local tertiary laboratory facility capable of doing enzyme-linked immunosorbent assays—an obstacle that often results in lost samples; delayed reporting, which affects patient follow up; and inefficient screening. Treatment is limited to managing peripartum sexually transmitted diseases (STDs) and candidiasis infections where patient follow up actually occurs. Counselors have been trained and are available for those identified as likely HIV-positive, but few patients take advantage of this support because the benefits are perceived as questionable in light of the stigmatization of being identified as HIV-positive.

Barriers to implementing screening programs

Various other hospitals in the vicinity have attempted to implement antenatal screening programs and have met with variable success. Manguzi Hospital in eastern South Africa had achieved a 100% screening rate for mothers. Their program included both group and individual counseling and provided some reasonable prenatal follow up and basic treatments (antibiotics and antifungals for STDs or candidiasis infections) before delivery to help reduce vertical transmission. Unfortunately, only 10% of those screened would follow up on the results, so the screening process had little effect on preventing vertical transmission in this area.

Another hospital located south of Ingwavuma had also attempted a screening program but was able to persuade only 20% to 30% of maternity patients to undergo testing and even fewer to follow up on results. Similar problems of lack of resources, inefficient testing and reporting

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procedures, and limited treatment capacity, in addition to the prevalent negative attitude toward HIV-positive people, all figured prominently in the failure of these programs.

A comprehensive literature search and a brief pilot survey regarding cultural beliefs and attitudes toward HIV helped to shed light on possible solutions for an effective antenatal screening program. The literature review revealed the cost-effectiveness of both universal and targeted antenatal HIV screening programs (universal treatment being more economical in areas of high prevalence),[3] the most effective treatment and testing strategies, and the psychosocial components essential to its implementation. Numerous examples of successful programs implemented in the developing world showed that such programs were not only necessary but also entirely feasible even in low-resource countries.[4] Fortunately, numerous affordable and simple treatment strategies, which do not require use of antiretroviral drugs to help reduce vertical transmission, are readily available in many of these communities. Studies suggesting that most vertical transmissions actually occur via cervico-vaginal secretions around delivery[5] support use of modalities, such as elective cesarean sections (providing the mother's health can bear the stress of such a procedure),[6] chlorhexidine douches, and treatment of STDs or candidiasis infections that occur peripartum.[7]

Breastfeeding, especially mixed feeding (formula and breastfeeding), also contributes strongly to vertical transmission.[8] Either exclusive breastfeeding for at least 4 to 6 months or simply providing formula for HIV-infected mothers during the first 6 to 12 months and foregoing breastfeeding actually improves morbidity and mortality. Mothers with HIV benefit because their bodies can forego the stresses of milk production. Formula feeding, however, is fraught with difficulty in developing countries because of poor hygienic conditions. If antiretrovirals, specifically nevirapine, were to be made available, a simple two-dose program, one to the mother during labour and one to the infant upon delivery, could be cost-effective and efficacious for reducing vertical transmission[9] during vaginal delivery. Rapid testing kits with near-perfect sensitivity and specificity currently exist and would improve screening and follow up.[10]

Finally, improved community education and counseling support with stringent confidentiality protocols are essential to creating a successful program.[11] The pilot survey of cultural attitudes and beliefs illustrated a fairly well informed populace regarding the cause, symptoms, and mechanisms of HIV transmission as well as, and more importantly, a definitive fear of being labeled HIV-positive. If no treatment were available for mothers or infants, what is the point of testing?

Government acknowledgment crucial to success

Successful implementation of antenatal HIV screening-treatment programs for communities such as Ingwavuma will depend first and foremost

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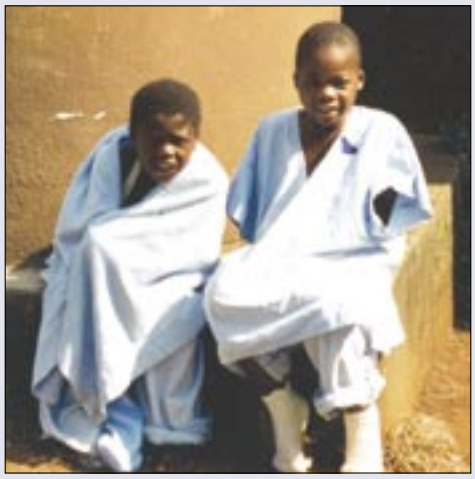
on government acknowledgment of the role of HIV in AIDS. Ceding this essential relationship will mandate allocation of national and international resources to provide the essential components for implementing an integrated antenatal HIV screening-treatment program. Although a targeted treatment program using rapid testing would permit improved surveillance, support, integrated breastfeeding counseling, and less likelihood of adverse reactions or side effects from universal treatment protocols with single-dose nevirapine, the cost-effectiveness and efficacy of the universal treatment would help avoid problems with testing and the associated stigmatization of those found to be HIV positive. Without access to antiretroviral therapies, implementing antenatal screening-treatment programs will depend on targeted protocols so that other simple, available treatments, counseling, and follow up can occur.

To be successful, it will be essential to procure rapid-testing kits and conduct group and individual pretest counseling and immediate posttest counseling to permit adequate follow up and implementation of individual support and treatment protocols, which might include selenium supplementation, peripartum STD and candidiasis infection treatment, possible elective cesarean section, and counseling about exclusive breastfeeding or, if possible, hygienic use of exclusive infant formula.

Aside from the research and maternity work, I also helped out with various antenatal, emergency, and general health clinics both at the hospital and in nearby communities that required an often hair-raising, fixed-wing flight into and out of the clinics.



My newlywed wife taught basic sciences to grades 6 to 9 students at the local elementary school. When she asked them about any recent weddings in their community, she was struck by their answer that fewer weddings than funerals took place because of the HIV and AIDS epidemic. It seemed that every second weekend a funeral was being held in the local church, with beautiful but sombre hymns emanating throughout the hospital compound.

On the lighter side . . .

We managed to explore a fair bit of northeastern South Africa with some field trips to local game parks and weekend excursions. We also paid brief visits to Swaziland and Mozambique. It was amazing how a mere 2 months could fly by so quickly, but alas we made our way back to British Columbia to finish my residency and pursue other avenues. As with our previous experiences working in low-resources communities, we were again touched by the human aspect of the experience. Our desire to devote at least some part of our future toward similar work and to expose our children to the breadth of understanding that comes with these adventures has once again been renewed. I am currently undertaking a third year of training in obstetrics and surgery for further rural or remote as well as international work, as it is with these skills that I feel I can really make a difference and learn a great deal in the process. ✱

Competing interests

Dr Mitchell was funded through an international health fellowship from the Society of Obstetricians and Gynaecologists of Canada.

Dr Mitchell *is a family physician currently completing an extra year of training in obstetrics and general surgery in Surrey, BC.*

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