Is HIV Screening in the Labor and Delivery Unit Feasible and Acceptable in Low-Income Settings?

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Despite the downward revision of the estimated national prevalence of HIV infection in India from 5.7 million to 2.5 million in UNAIDS’ December 2007 report, the burden faced in providing national HIV prevention and care remains massive [1]. The National AIDS Control Organization (NACO) of India estimated that some 60% of cases of HIV infection are found in rural areas, where about half of India’s citizens live [2]. In rural and urban areas, women of reproductive age are principally at risk for HIV acquisition through marriage—this risk reflects their husband’s premarital behavior and sexual concurrency during marriage [3,4]. Therefore, NACO has focused on the expansion of voluntary counseling and testing (VCT) services to increase early case-finding, in large part through antenatal care in conjunction with the prevention of mother-to-child transmission (PMTCT) of HIV during labor and delivery [2].

What is the impact of these national policies on HIV testing during pregnancy in India? Sinha and colleagues found that out of a random sample of 400 recently pregnant women in rural Maharashtra State, where sentinel surveillance suggested an antenatal HIV rate of at least 1%, only 3.3% of women reported receiving VCT during pregnancy [5]. This exceptionally low rate of antenatal testing for HIV was attributed to two identified barriers: (1) lack of discussion of HIV testing by antenatal care providers; and (2) women’s lack of awareness of HIV testing, including VCT. Interestingly, of the 13 participants reporting VCT during antenatal care, 12 received it through the private sector—thus, only one woman (in 400) reported receiving the Indian standard of care for HIV testing during pregnancy through a government clinic.

In this issue of PLoS Medicine, Nitika Pant Pai and colleagues evaluated the uptake of 24-hour rapid HIV testing of women in a labor and delivery center in a rural, tertiary teaching hospital in Sevagram, Maharashtra State, India [6]. The research team wanted to determine if offering round-the-clock rapid HIV testing would be feasible, lead to increased uptake of testing, and identify women in labor who could be provided optimal PMTCT.

The Main Findings

The study found that acceptance of HIV testing in the labor ward was almost universal—98% of women offered HIV testing accepted it, 82% of whom had no prior history of HIV testing or had incomplete reports of testing at the time of admission to the labor ward. Importantly, only 30 women (2%) refused the confidential HIV test, most of whom perceived that they were not at risk or knew their prior HIV test result (which of course could be imperfect). A total of 15 women were found to be HIV infected using the HIV testing algorithm, giving a prevalence of 1.23%, a rate close to the 1% anticipated from the recent antenatal sentinel surveillance. Of the women who agreed to testing, 54% gave no history of a prior HIV test. Of women with a prior history of being tested for HIV, most (65%) reported a private health facility as the testing site (although an additional 24% could not recall their HIV test site). Nevertheless, 82% of the women who were tested during labor had either not been previously tested or had not received their HIV test results, suggesting that the labor ward is an important venue for testing otherwise low-risk women. Importantly, 11 of the HIV-infected women were newly identified and were immediately provided PMTCT treatment.

What is as important as the study findings is the process by which this intervention was carried out. As the pace of events in a busy labor ward leaves little time for extraneous activities, the time between determination of study eligibility and
appear to offer an optimal safeguard
for HIV-infected women and allow
the timely provision of PMTCT care
during labor and delivery. Recently,
Dandona and colleagues showed that
combining PMTCT services with VCT
offers optimal efficiency in the Indian
setting [9].

So what will it take to convince an
already strapped public health care
system to include round-the-clock
counselors in all government labor
delivery centers? The cost–benefit
savings would appear to be the short
and the long answer. While human
personnel budgets are rapidly
increasing in cost as India modernizes,
the lifelong costs of medical care
for undetected HIV infection in pregnant
women and the transmission of HIV
to their offspring is a major financial
burden, even in the context of generic
HIV medications. However, it will take
an enlightened facility administrator
to consider the added short-term
personnel costs of instituting a
universal program of VCT in labor and
delivery with the long-term societal
costs of undetected infection, which of
course will not affect the bottom line of
the labor and delivery center. Given the
dismal record of government health
facilities in offering VCT to date, far
more concerted action will be required
by NACO for the situation to improve.

Conclusion
It is clear that the labor and delivery
setting offers the final opportunity
to detect and prevent MTCT of HIV.
The program outlined by Pai and
colleagues is efficient, acceptable,
and leads to reduced morbidity [6].
Scaling up this program is clearly the
next challenge, one that might require
additional operational research efforts
to convince policy makers of the utility
of this approach. Without such effective
programs, women are unlikely to be
tested [5]—an unacceptable situation
that is relatively easy to address at this
time.

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