



ADDENDUM

Evaluation and Management of the Infant Exposed to HIV-1 in the United States

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The following paragraph is an addendum to the clinical report “Evaluation and Management of the Infant Exposed to HIV-1 in the United States” (*Pediatrics* 2009;123[1]:175–187). It pertains to the section with the heading “HIV-1 Testing of the Infant if the Mother’s HIV-1 Infection Status Is Unknown”:

For newborn infants whose mother’s HIV-1 serostatus is unknown, the newborn infant’s health care provider should perform rapid HIV-1 antibody testing on the mother or the infant as soon as possible after birth with appropriate consent as required by state and local law. These test results should be available as early as possible and certainly within 12 hours after birth and can be used to guide initiation of infant antiretroviral prophylaxis. Rapid HIV-1 antibody testing, by using either blood or saliva, is licensed for the diagnosis of HIV infection in adults. Rapid HIV-1 antibody testing of women in labor and delivery units at 16 US hospitals identified a prevalence of undiagnosed HIV infection of 7 of 1000 women and demonstrated a sensitivity of 100% and specificity of 99.9% by using several rapid test kits.¹ Positive predictive value was 90% compared with 76% for enzyme immunoassay. However, the use of these tests in infants is neither well described nor licensed. Sherman et al² evaluated 7 HIV-1 rapid tests on stored samples from 116 HIV-exposed infants and compared the findings to standard HIV enzyme immunoassay testing. In the youngest cohort tested (median age, 1.5 months; range, 3–7 weeks), sensitivity of rapid testing was greater than 99%. In a subsequent study using whole blood, sensitivities ranged between 93.3% and 99.3% in infants younger than 3 months by using 5 rapid tests.³ In both of these studies, rapid HIV-1 rapid tests failed to identify some HIV-infected infants. Oral fluid testing has been demonstrated to have a negative predictive value of >99% in HIV-exposed children older than 12 months.⁴ However, when used for screening infants with a median age of 1.5 months (range, birth to 6 months), oral fluid testing had a sensitivity less than 90% and failed to detect 14 of 63 HIV-infected infants (22.2%).⁵ On the basis of these findings, only blood should be used to perform rapid HIV-1 antibody testing in newborn infants. Furthermore, rapid testing of the mother, by using either blood or saliva, is preferred over rapid testing in her infant (blood only) because of increased sensitivity in identifying HIV-1 infection.

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