

infected mothers, results of these assays are positive because of the presence of maternal antibodies derived transplacentally. Maternal antibodies may persist in the infant up to 18 months of age. Therefore, other diagnostic tests are used—most commonly the HIV polymerase chain reaction (PCR) for detection of proviral DNA. A controlled-center study tested recombinase polymerase amplification (RPA) as a novel technology that is ideal for early infant diagnosis of HIV-1, because it amplifies target DNA in less than 20 minutes at a constant temperature without the need for complex thermocycling equipment needed for the PCR assay (Boyde, Lehman, Lillis, et al, 2013). RPA may become a beneficial yet inexpensive test for early diagnosis of HIV-infected individuals worldwide. There is a need for further research to compare of RPA assay to the gold standard PCR-based assay in a real-world setting. With these techniques, almost all infected infants can be diagnosed between 1 and 6 months old (Siberry, 2014; Yogev and Chadwick, 2011).

HIV testing is entering a new era in the United States because of Food and Drug Administration approval of (1) combination tests that detect both HIV antigen and antibody, and (2) tests that accurately differentiate HIV-1 from HIV-2 antibodies (Centers for Disease Control and Prevention, 2014a). With the identification of HIV antigen, individuals may be diagnosed with HIV infection prior to development of symptoms.

The Centers for Disease Control and Prevention (1994) has developed a classification system to describe the spectrum of HIV disease in children (Table 24-2). The system indicates the severity of clinical signs and symptoms and the degree of immunosuppression. The non-symptomatic category includes either no signs and symptoms or one of the conditions listed in the mildly symptomatic category. Mildly symptomatic category includes signs and symptoms, such as lymphadenopathy, parotitis, hepatosplenomegaly, dermatitis, and recurrent or persistent sinusitis or otitis media. Moderately symptomatic category includes signs and symptoms such as lymphoid interstitial pneumonitis (LIP) and a variety of organ-specific dysfunctions or infections. Severely symptomatic category includes signs and symptoms, such as AIDS-defining illnesses with the exception of LIP. Children with LIP have a better prognosis than those with other AIDS-defining