

source cases and evaluation of household contacts exposed to TB disease are important measures to identify individuals at high risk of infection, diagnose LTBI and TB disease promptly, and prevent more transmission.¹³⁻¹⁵ All confirmed and suspected cases of TB disease should be reported to state and local health departments.¹⁵

In the United States, disease caused by *Mycobacterium bovis* (*M. bovis*) is thought to be far less common than disease caused by *M. tuberculosis*, but pediatric *M. bovis* cases have been reported, and children might have an increased relative prevalence of *M. bovis* disease.^{16,17} Of the 165 cases of TB known to be caused by *M. bovis* in the United States between 1995 and 2005, 12 (7.3%) were in children aged 0 to 4 years, and 19 (11.5%) were in children aged 5 to 14 years.¹⁶ Several reports suggest that *M. bovis* is primarily transmitted via ingestion of unpasteurized dairy products^{16,18}; however, human-to-human airborne transmission has been reported.¹⁹⁻²¹ *M. bovis* is considered intrinsically resistant to pyrazinamide, a characteristic that could influence treatment decisions.^{22,23}

The emergence and effective transmission of drug-resistant TB is a major obstacle to global TB control.²⁴⁻²⁶ In the United States, comprehensive public health measures have successfully reduced the rates of drug-resistant TB; among reported cases of TB, the proportion of primary multidrug-resistant (MDR)-TB cases, defined as cases resistant to at least isoniazid and rifampin, declined from 2.5% in 1993 to less than 1% since 1996.² Between 2008 and 2010, resistance to isoniazid was found for 7.8% of culture-confirmed TB cases occurring in children and adolescents (aged <18 years) and MDR-TB was found in 4% of non-U.S.-born and 1% of U.S.-born children in the United States who had culture-confirmed TB and drug-susceptibility testing (DST) results reported to the CDC.³

Extensively drug-resistant TB (XDR-TB) was traditionally defined as resistance to isoniazid and rifampin (i.e., MDR-TB), with additional resistance to any fluoroquinolone and at least one of three second-line injectable drugs (capreomycin, kanamycin, and amikacin). In 2021, the World Health Organization (WHO) updated the XDR-TB definition; according to WHO, XDR is TB caused by MDR or rifampin-resistant (RR) *M. tuberculosis* strains that are also resistant to any fluoroquinolone and at least one additional Group A drug (i.e., bedaquiline or linezolid); CDC has also updated the United States definition of XDR-TB.^{27,28} CDC defines XDR as TB caused by *M. tuberculosis* strains that are resistant to isoniazid, rifampin, a fluoroquinolone and a second-line injectable agent (e.g., amikacin, capreomycin, and kanamycin).²⁸ CDC also considers *M. tuberculosis* strains resistant to isoniazid, rifampin, a fluoroquinolone, bedaquiline, and linezolid to be XDR.²⁸ XDR-TB has emerged globally as an important new threat.^{24,26,29} Of the 49 cases of XDR-TB reported in the United States from 1993 to 2006, one (2%) was in a child aged <15 years.³⁰

Clinical Manifestations

After acquiring *M. tuberculosis* complex, children aged <5 years old and children with immune-compromising conditions, such as HIV, are highly susceptible to developing symptomatic TB disease; the first 12 months after primary infection represents the period of greatest risk for progression to TB disease.^{6,12,31} Children <5 years old and children with HIV can also develop TB disease after a primary infection of *M. tuberculosis* complex. Generally, the clinical features of TB disease in children with and without HIV are similar, with non-localizing signs such as failure to thrive, cough, and intermittent fever present. Disease progression, however, may be more rapid, and the development of complicated or disseminated disease is more likely in children with HIV.^{12,32-34} Regardless of HIV status, children may present with characteristic pulmonary involvement such as hilar and/or mediastinal adenopathy, which may cause airway compression. In addition, children who are immunocompromised, including those with HIV, might have atypical findings such as