

of gastric contents with a NG tube may be performed to capture sputum swallowed overnight and should ideally occur daily for 3 days before the child eats. In some cases, an induced sputum specimen may be obtained by administering aerosolized normal saline for 10 to 15 minutes followed by chest percussion and postural drainage and suctioning of the nasopharynx.

The Xpert MTB/RIF is a diagnostic test that can be used on gastric lavage and nasopharyngeal secretions to identify *M. tuberculosis* and to detect resistance to rifampin. Results are available in 1 hour and 40 minutes, and this diagnostic test was endorsed by the World Health Organization.

Therapeutic Management

Medical management of TB disease in children consists of adequate nutrition, pharmacotherapy, general supportive measures, prevention of unnecessary exposure to other infections that further compromise the body's defenses, prevention of reinfection, and sometimes surgical procedures. Family members and other contacts should also be assessed for symptoms by public health and treated accordingly.

Ethambutol, isoniazid, pyrazinamide (PZA), and rifampin are common medications used to treat TB in children. They are prescribed daily or twice weekly with **direct observation of therapy (DOT)** if daily treatment is not possible. DOT means that a health care worker or other responsible, mutually agreed-on individual is present when medications are administered to the patient. The duration of treatment depends on the medication, presence of disease versus LTBI, if multidrug-resistant TB is present or not, and the patient's immune status.

For the child with clinically active TB, the goal is to achieve sterilization of the tuberculous lesion. Recommended drug therapy for treating TB disease includes combinations of isonicotinic acid hydrazide (INH), rifampin, and PZA. The American Academy of Pediatrics recommends a 6-month regimen consisting of INH, rifampin, and PZA given daily for the first 2 months followed by INH and rifampin given two or three times a week by DOT for the remaining 4 months ([American Academy of Pediatrics Committee on Infectious Diseases and Pickering, 2012](#)). DOT decreases the rates of relapse, treatment failures, and drug resistance and is