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Tuberculosis and children

The issue

In the past, tuberculosis (TB) in children has been neglected because most paediatric cases have limited infectiousness and therefore do not contribute significantly to transmission of TB in the community. The new WHO Stop TB Strategy, launched in 2006, aims to ensure equitable access to care of international standard for all patients, regardless of age, gender, infectiousness or clinical condition.

The main problems related to TB in children are described below.

- **Difficulty of diagnosis:** effective procedures for TB diagnosis in adults, such as sputum smear microscopy and x-ray, are often not conclusive and need to be supported by additional tools.
- **Difficulty of treatment:** treatment regimens are different from those for adult cases, and their safety and effectiveness are not always fully documented; not all anti-TB drugs are produced in paediatric formulations; severe forms of TB such as tuberculous meningitis (TB meningitis) and miliary TB (also known as disseminated TB) are common in children; the clinical management of children with HIV infection or/and drug-resistant TB is more complicated than in adult cases.
- **Lack of data:** in many countries, children with TB are seen by paediatricians outside the national TB programme; national TB programmes consolidate and analyse their TB cases by age groups that are too broad to take proper account of children; the management of children with TB is not part of the routine activities of a national TB programme.
- **Neglect of prevention:** vaccination of neonates with bacilli Calmette-Guerin (BCG) and screening and management of household paediatric contacts are either poorly implemented or not properly targeted.

The facts

- Of the more than 400 000 new TB cases reported by the 53 countries of the WHO European Region in 2005, more than 15 000 (4%) were in children under 15 years of age. However, it is considered that TB in children is underreported.
- The proportion of TB cases in children ranges from 0% to 14% of the total number of cases notified in the different countries.
- Of the 1244 cases with TB meningitis or disseminated TB registered in 2005 and reported to the Euro TB project by 27 countries (European Union member states, western European countries and the Balkan countries), 151 (12%) were in children. Romania reported 72 (48%) of the total 151 cases in children.

- Among the estimated 2.4 million people living with HIV in Europe, almost 11 000 are children.
- While the BCG vaccination is widely recognized as protecting against severe forms of TB in infants and children, there is less evidence that this protection can be extended in adults. Countries in Europe have large variations in their BCG policies, not clearly linked to national TB prevalence. Policies range from no use of BCG at all to vaccination of all children at birth, in infancy, at school entry and in later school years.

The policy considerations

According to the Stop TB Strategy, all patients, including children, should have access to diagnosis and treatment of TB according to international standards. Every national TB programme should consistently include the management of children with TB as part of its routine activities.

Every national TB programme should revise its policies and guidelines to properly address TB in children. Specifically, it should be ensured that: the basic tools for TB diagnosis in children are available (including x-ray and tuberculin testing); effective screening and management are adopted for household TB contacts; anti-TB drugs are available in paediatric formulations; children have full access to care for HIV and drug-resistant TB; national surveillance includes both the 0–4 and the 5–14 years age groups of TB patients; BCG vaccination policy is revised and consistent with the pattern of TB epidemiology in the country and the evidence-based international recommendations.

A European research agenda on childhood TB needs to be defined and funded. Research should address the urgent need for a better understanding of the incidence and burden of TB in children, evaluate current diagnostic and treatment procedures, identify best practices in delivering services, and develop and evaluate new diagnostics, drugs and vaccines.

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