

Introduction to
Public Health
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SUPPORTING
PAPERS

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INTRODUCTION TO TUBERCULOSIS

Tuberculosis is a bacterial infection which is in most cases is very serious. It is often spread through tiny droplets from an infected individual.

Tuberculosis is a curable infection that mainly affects the lungs by causing a persistent cough which last up to 3 weeks or even longer which could also leave you feeling breathless which gradually gets worse. The infection could also affect areas such as your glands, bones, and nervous system. The usual treatment for tuberculosis is taking antibiotics for a period of 2 months.

Strategies used in the UK to measure the incidence of the TB

1. Improve access to services and ensure early diagnosis
2. Provide universal access to high quality diagnostics
3. Improve treatment and care services
4. Ensure comprehensive contact tracing
5. Improve BCG vaccination uptake
6. Reduce drug-resistant TB
7. Tackle TB in under-served populations
8. Systematically implement new entrant latent TB screening
9. Strengthen surveillance and monitoring
10. Ensure an appropriate workforce to deliver TB control

In all health care settings, particularly those in which people are at high risk for exposure to TB, policies and procedures for TB control should be developed, reviewed periodically, and evaluated for effectiveness to determine the actions necessary to minimize the risk for transmission of TB.

Strategies used in the UK to monitor the incidence of the disease

Monitoring and evaluating the performance of TB control programmes involves assessing activities, monitoring costs and expenditure, determining the extent of programme coverage and evaluating treatment outcomes, as well as the epidemiological impact of the programme. Important factors include:

- ensuring that training, supervision, logistics and communication activities are being carried out effectively at each level from the national level to the peripheral clinic.
- deciding whether health units are collecting the data needed to assess case notification rates and treatment outcomes.
- identifying technical and operational problems, specifying the reasons for the problems, and taking the necessary corrective actions.
- assisting staff to improve standards of practice.
- improving patient care and support, and the quality of information.

Indicators

The use of indicators provides a convenient way of measuring programme performance, including the coverage targets (monitoring), reaching strategic and outcome objectives (evaluation) and impact objectives (epidemiological surveillance).

Cohort analysis

Cohort analysis is the key management tool used to evaluate the effectiveness of TB control activities in any given area. It may be used to identify the quarterly and annual treatment success rates (percentage of patients who are cured plus those who complete treatment) and provide middle- or higher-level managers with timely, concrete indicators of achievement.

Measurement of impact

The evaluation of the impact of TB control requires the measurement of TB prevalence, incidence, and mortality.

Recording and reporting

The recording and reporting system allows for targeted, individualized follow-up to help patients who may not be making satisfactory progress, and for a rapid managerial assessment of the overall performance of each institution, district, region, or country. This strong system of accountability and crosschecks avoids false reporting of data.

Strategies used in the UK to control the incidence of TB

- Plan, oversee, support, and monitor all aspects of local TB control, including clinical and public health services and workforce planning
- Work closely with local clinical and TB networks and engage with another key stakeholders such as local government and the third sector
- Include representation from PH (Public Health), NHS, CCGs, local authority directors of public health and social care, the NHS (primary and secondary care, adult and paediatric TB specialists and front-line nursing representation), patient advocates and the third sector
- Develop a local TB control plan based on the national strategy, local services, local need, and evidence-based models
- Agree and ensure the appropriate commissioning of TB services, and through collaborative working and the use of existing accountability arrangements, hold providers and commissioners of clinical care and public services to account to ensure TB cohort review is undertaken regularly (every 3–4 months) and fed back to the TB control board, commissioners, TB service provider management and the local directors of public health; and that appropriate action is taken because of cohort review
- Ensure full and consistent use of current national guidelines those of the National Institute for Health and Care Excellence
- Ensure an appropriate workforce strategy is developed and implemented
- Ensure the needs of under-served populations are addressed and health inequalities are reduced
- Involve under-served populations in designing and shaping services so that they are responsive to the specific needs of these groups
- Ensure the delivery of a quality-assured local programme of new entrant latent
- TB screening focused on areas of high TB incidence

- Consider commissioning a team to undertake extended community contact
- Tracing of incidents and outbreaks
- Ensure appropriate TB awareness-raising in collaboration with the third sector, local authorities and other organisations who provide this.

A clear message from the three-month TB Strategy consultation was that respondents favoured universal coverage of UK with enhanced TB support through TB control boards, rather than TB control boards solely covering areas of high incidence. In keeping with this nine TB control boards will be created to coincide with Public Health Centre boundaries and provide overarching support to large geographic areas. The TB control boards will concentrate their efforts on high incidence areas but at the same time liaise, guide, and share work and expertise with lower incidence areas. Collaborative working arrangements will be key to successful delivery. TB control boards will work through appropriate arrangements with commissioning structures, CCGs, local authorities and health and wellbeing boards, in addition to using the Director of Public Health's 'assurance role' to hold commissioners to account.

Conclusion

The main way to prevent tuberculosis is with the BCG vaccine (Bacillus Calmette-Guérin). This vaccine should be given to children at birth, or, at most, up to 04 years, 11 months and 29 days of age and protects against the most serious forms of the disease, such as miliary tuberculosis and meningeal.

Also, as a preventive measure, it is necessary to evaluate family members and other contacts of the patient so that they do not develop the active form of tuberculosis.

Tuberculosis is one of the diseases strongly influenced by social determinants, with a direct relationship with poverty and social exclusion. Thus, in addition to the factors related to each person's immune system and exposure to bacillus, illness is often linked to precarious living conditions, affecting population groups in situations of greater vulnerability, such as: people deprived of liberty; people living with HIV/AIDS; homeless people.