

9. Human Resources Development

Introduction

Developing and maintaining a competent health work force is crucial if the global goals for TB control are to be reached and sustained. Human resources development has, for many years, been limited to either training courses or to development of management systems for handling staff. However, for the overall development of health services and the attainment of specific disease control targets, it is necessary to address the issue of human resource capacity in a much more fundamental way than has been done to date.

NTPs need to ensure that staff at different levels of the health system, clinical and managerial, have the necessary skills knowledge and attitudes (i.e., they are competent) to successfully implement and sustain TB control activities. This includes the implementation of new and revised strategies and tools and, in relation to HIV management, the availability of enough staff to implement the strategy. The NTPs are directly responsible for the competence development of existing staff through training and supervision. The first two indicators presented below relate to the competence of existing staff.

The measurement of the availability of enough staff time to ensure adequate case detection and management is complex. However, even an approximation of staff availability will significantly assist in the program management. The responsibility for designing the human resource (HR) component of health systems typically lies with an HR planning unit (or equivalent department or other entity) of each country's MOH. The HR planning unit helps to establish MOH's overall long- and short-term vision for HR needs, partly on the basis of information supplied by the various technical programs operating within each country. On the basis of information supplied by the HR planning unit, MOH is responsible for ensuring that the health work force is sufficient to meet program needs. However, NTPs should be able to express their specific needs. The third indicator presented below aims at assessing the staffing situation.

From a management point of view for HR development, countries will go through three different phases:

- Initial implementation of the DOTS strategy
- Expansion from pilot areas to the whole country
- Sustainability and quality assurance.

The indicator for HR development presented in this section should be interpreted within the above framework for DOTS expansion.

Indicators

- TB microscopy units with at least one laboratory technician trained in AFB microscopy
- Health care units with at least one health care professional trained in TB case detection and treatment
- Adequate staffing at all levels to enable implementation of DOTS

Resources

Pio A, Chaulet P. *Tuberculosis handbook*. Geneva, World Health Organization, 1998 (WHO/TB/98.253).

Training for better TB control: human resource development for TB control—a strategic approach within country support. Geneva, World Health Organization (WHO/CDS/TB/2002.301).

Indicator 9.1

**TB MICROSCOPY UNITS WITH AT LEAST ONE LABORATORY TECHNICIAN TRAINED
IN AFB MICROSCOPY**

Definition

Percentage of TB microscopy units (levels 1, 2, and 3) involved in TB control with at least one member of the staff trained in acid-fast bacilli microscopy for DOTS within the past 3 years. Training includes continuing education and refresher courses.

$$\frac{\text{Number of TB microscopy units with at least one laboratory technician trained in AFB microscopy in the past 3 years}^*}{\text{Number of TB microscopy units}} \times 100$$

The denominator can also be “All TMUs involved in DOTS implementation,” which could be useful for countries with limited DOTS coverage.

**This number should include new technicians who received their initial training in AFB microscopy within the past 3 years and technicians who received refresher training during the same period.*

What It Measures

One of the five components of DOTS is the use of smear microscopy to diagnose pulmonary TB. Trained individuals, along with adequate laboratory capacity and supplies, are critical to the delivery of high-quality TB control services. This indicator measures the degree of up-to-date (within the previous 3 years) training of laboratory staff (levels 1, 2, and 3) involved in the implementation of the DOTS strategy. It gives an impression of the system of ongoing training activities and the ability to identify staff turnover in laboratories and ensure the training of new staff, as well as the collaboration between laboratory services and the NTP. It also gives an indication of a country's commitment to HR development for TB control and motivation in following current recommendations and international standards. The NTP should work towards achieving 100% on this indicator or at least an increasing trend over time.

A low numerator would indicate 1) a high staff turnover with no system in place to monitor the presence of trained staff and to take action on identified gaps, and/or 2) a poorly managed training system with few persons trained, and/or 3) an absolute shortage of staff.

How to Measure It

The number of TMUs with at least one laboratory technician trained in the previous 3 years is the numerator. The total number of TMUs involved in TB diagnosis is the denominator. If no information is available at the administrative level, the number of TMUs having at least one trained professional staff member during the monitoring visit is the numerator, and the total number of laboratories is the denominator.

Data Sources

- NTP training records
- List of certified laboratory technicians and laboratory of employment
- Interviews with staff members, laboratory technicians

Frequency & Function

This indicator should be measured annually.

Strengths & Limitations

Attendance at training courses is a relative measure, and training courses vary greatly in quality (and in duration, content, methodologies used, and skills evaluation).

Attendance does not necessarily produce a technician able to perform the key tasks listed in the respective job descriptions related to TB control. Furthermore, ability to perform does not automatically mean a change in laboratory practice to conform to the DOTS strategy. This emphasizes the need for detailed task analysis and specific (formal or informal) job descriptions. In addition, staff might have been trained but are not working in TB control (selection criteria of staff for training).

Indicator 9.2

**HEALTH CARE UNITS WITH AT LEAST ONE HEALTH CARE PROFESSIONAL
TRAINED IN TB CASE DETECTION AND TREATMENT**

Definition

Percentage of TB treatment facilities with at least one health care professional trained in TB case detection and treatment based on the DOTS strategy (within the past 3 years).

$$\frac{\text{Number of TB treatment facilities with at least one health care professional trained in TB case detection and treatment (within the past 3 years)}}{\text{Total number of TB treatment facilities}} \times 100$$

The denominator can also be “All TB treatment facilities involved in DOTS implementation,” which can be useful for countries with limited DOTS coverage.

What It Measures

Competent staff members are the key to the delivery of high-quality TB control services and the attainment of TB control targets. Measuring the availability of trained staff will provide an immediate indication of the potential for TB case detection and care. The indicator measures the degree of up-to-date (within the previous 3 years) training of professional personnel at facilities involved in the implementation of the DOTS strategy and thus the ability of the health system to deliver high-quality TB control services. It gives an impression of the system of ongoing training activities and the ability to identify staff turnover and ensure the training of new staff. It also gives an indication of the country’s commitment to HR development for TB control and motivation in following current recommendations and international standards. The NTP should work towards achieving 100% on this indicator or at least an increasing trend over time.

A low numerator would indicate 1) a high staff turnover with no system in place to monitor the presence of trained staff and to take action on identified gaps, and/or 2) poorly managed training system with few persons trained, and/or 3) an absolute shortage of staff.

How to Measure It

The number of TB treatment facilities with at least one health care professional trained in the previous 3 years is the numerator. The total number of facilities is the denominator. If no information is available at the administrative level, the number of

TB treatment facilities having at least one trained professional staff member during the monitoring visit is the numerator, and the total number of facilities visited is the denominator.

Data Sources

- NTP training records
- Employee training certificates for BMUs reporting to NTP
- Facility training registers (where available)
- Interviews with staff members at facilities at various levels

Frequency & Function

This indicator should be reported annually.

Strengths & Limitations

Attendance at training courses is a relative measure, and training courses vary greatly in quality (and in duration, content, methodologies used, and skills evaluation).

Attendance does not necessarily produce a care provider able to perform the key tasks listed in the respective job descriptions related to TB control. Furthermore, ability to perform does not automatically mean a change in practice to conform to the DOTS strategy. This emphasizes the need for detailed task analysis and specific (formal or informal) job descriptions. In addition, staff might have been trained but are not working in TB control (selection criteria of staff for training).

Indicator 9.3

ADEQUATE STAFFING AT ALL LEVELS TO ENABLE IMPLEMENTATION OF DOTS

Definition

Adequate staffing at all levels to enable implementation of DOTS. This is a yes/no indicator and should be answered separately for each level of the existing health system (i.e., central, regional, district, health facility, laboratory). This is a yes/no indicator.

What It Measures

Both a yes and a no answer should be reviewed against data on outcome of activities (case detection and treatment outcome). If there is a perception that there is adequate staffing at one particular level, or all, but the outcome of activities is low, further assessment is needed to determine whether the staffing situation in reality is adequate and poor results are due to other reasons (like poor staff competence) or whether the staffing perception is incorrect. Inadequate human resources ranked first within the top five constraints to achieving global TB control targets in 17 of the 22 high-burden countries in 2003. This includes lack of skilled and/or motivated staff, inadequate distribution of staff, poor retention, and high turnover. The availability of sufficient staff (based on job descriptions and disease burden) is the foundation for reaching and sustaining the global TB control targets.

How to Measure It

Data will be collected through record reviews, reviews of HR development plans, staffing monitoring, and interviews with staff and supervisors at all levels of the system. Supervisory reports should be reviewed, and routine information about staffing as well as job descriptions should be requested from relevant departments and units. Lists of tasks that can be used as a basis for assessment and interviews are included in Appendix F.

Data Sources

- Staffing documents or rosters
- Interviews with staff members

Frequency & Function

This indicator should be monitored at least once per year. After the baseline situation has been established, data collection is simplified.

Strengths & Limitations

Although it is difficult to collect accurate data for this indicator, the perception of managers and care providers at different levels, in combination with the service outcome data, is essential in ongoing problem analysis for improving service delivery and ensuring quality control. To date, data for this indicator have usually not been the concern of the NTP, and program staff might therefore not fully appreciate the usefulness of the information despite its lack of accuracy.