Engaging hospitals to improve TB care and prevention

In 2009, WHO initiated a project to help intensify TB case detection in five countries in Africa and Asia. Intensified hospital engagement, mainly targeting hospitals in urban areas, was the main intervention in all five countries. Through a consultative process involving NTPs, departments responsible for hospitals within the ministries of health, directors of participating hospitals, and WHO, a total of 86 hospitals covering a total population of 10 million were involved. This included 20 hospitals in Kinshasa in the Democratic Republic of the Congo; 10 in Accra, Ghana; 17 in Manila, The Philippines; 36 in Swaziland; and the 3 largest national general hospitals in three cities in Viet Nam (Hanoi, Ho Chi Minh City and Hue). The initiative was funded by the Department of Foreign Affairs, Trade and Development of Canada.

Prior to the project, hospitals provided TB diagnosis and treatment for many patients without following national guidelines or having formal referral and notification routines. The specific objectives of the project were to improve TB diagnosis and management of patients presenting to hospitals through setting up mechanisms for internal coordination, and to improve external networking to help intensify TB case detection and notification. The main activities were improving identification of people with suspected TB; standardization of diagnostic routines and introduction of external quality assurance in hospital laboratories; establishing a ‘hospital DOTS unit’; a systematic approach to internal referrals so that cases diagnosed in hospitals would be referred to the hospital DOTS unit; formalization of routines for external referral of cases to health centres and feedback about referrals from health centres; ensuring proper treatment and follow up of patients started on treatment in hospitals; and introduction of standardized recording and reporting.

After successful implementation of project activities, total hospital notifications increased from about 2000 per year across the five sites before the project to about 12 000 per year in 2012. The documented number of people tested for TB with a bacteriological test increased in all sites, and the average increase was roughly fourfold (Figure B3.4.1).

3.2.2 Community contributions to TB notifications and treatment support

Community-based TB activities can be defined as activities that are conducted outside the premises of formal health facilities, within community-based structures (for example, schools and places of worship) and homesteads. Such activities can be implemented by community health workers1 and community volunteers,2 regardless of whether they are employed and supervised by a government department or by a nongovernmental organization, and make an important contribution to health services including prevention, diagnosis, improved treatment adherence, care and support. In the specific context of TB, community activities can help to increase case notifications and improve treatment outcomes, especially in settings where people with TB have poor access to formal health services.

As shown in section 3.3, approximately one third of people with TB are diagnosed but not reported to national surveillance systems, or not diagnosed at all.

Accurate documentation of the contributions of communities to TB notifications and treatment support has been challenging. One reason has been the lack of standardization of indicators that can be used for routine recording and

1 Community health workers can be defined as people with some formal education who have been given training to contribute to community-based health services, including TB prevention and patient care and support. Their profile, roles and responsibilities vary greatly among countries, and their time is often compensated by incentives in kind or in cash.

2 Community volunteers can be defined as community members who have been systematically sensitized about TB prevention and care, either through a short, specific training scheme or through repeated, regular contact sessions with professional health workers.
BOX 3.5

The ENGAGE-TB approach

The ENGAGE-TB approach describes the need for nongovernmental organizations and other civil society organizations to integrate community-based TB activities into their existing work. Pilot projects in five African countries (the Democratic Republic of the Congo, Ethiopia, Kenya, South Africa and the United Republic of Tanzania) are showing promising results. Selected nongovernmental organizations in these countries have started integrating TB services into community-based programmes for HIV, maternal, newborn and child health (MNCH), and cancer screening, with financial support from the Bristol Myers Squibb Foundation.

<table>
<thead>
<tr>
<th>NGO</th>
<th>COUNTRY</th>
<th>PROJECT FOCUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Femmeplus</td>
<td>Democratic Republic of the Congo</td>
<td>Integration of TB services into community-based HIV activities in two major cities (Kinshasa and Kikwit)</td>
</tr>
<tr>
<td>AMREF</td>
<td>Ethiopia</td>
<td>Integration of TB/HIV services into community-based MNCH activities in a pastoralist region</td>
</tr>
<tr>
<td>CUAMM</td>
<td>Ethiopia</td>
<td>Integrated community-based TB, HIV and cancer screening project</td>
</tr>
<tr>
<td>Save the Children</td>
<td>Ethiopia</td>
<td>Integration of community-based TB/HIV services into MNCH programmes in pastoralist communities</td>
</tr>
<tr>
<td>Centre for Positive Care</td>
<td>South Africa</td>
<td>Strengthening integration of TB into community-based HIV activities</td>
</tr>
<tr>
<td>Pathfinder</td>
<td>UR Tanzania</td>
<td>Integration of TB services into community-based HIV services</td>
</tr>
</tbody>
</table>

NGO: nongovernmental organization

The challenge is to scale up these experiences and significantly increase the number of community-based workers and volunteers who are providing screening for TB, referring those who might have TB for diagnosis and then providing follow-up care and support to those diagnosed with the disease. WHO is finalizing an implementation manual that will help to inform nongovernmental organizations and NTPs about how they can work together to implement integrated community-based TB activities, with a particular focus on nongovernmental organizations working on MNCH, HIV, primary health care, agriculture, livelihood development and education services.


Among the 13 countries (Table 3.4), notified TB patients referred from the community as a share of total notifications in the areas covered by reporting ranged from 2% in Myanmar (in 92/330 districts) to 33% in Ethiopia (in 98 out of 821 districts). It is possible that these figures are an underestimate, pending optimization of recording and reporting systems. Nonetheless, the finding that the contribution of communities in referring people with TB was under 10% in several countries suggests that there may be opportunities to use untapped community resources in TB prevention, diagnosis and treatment. In settings where access to formal health services is limited, more emphasis in policy and practice on the role of community referrals of people with presumptive TB as early as possible is warranted.

The share of patients receiving treatment support in the community was generally high: for example, 50% country-wide in India and 88% countrywide in Kenya.

Kenya also provides an interesting example of the untapped potential of communities. While 88% of all TB patients were reported as having received support for treatment adherence, demonstrating the spread and reach of community workers and volunteers in the country, only 5% of TB case notifications had been referred by community members. This suggests that more could be done to increase community engagement in and contribution to TB screening and referral.

It is evident that data on community contributions to referrals and treatment adherence are not collected uniformly or systematically, even in the 13 countries shown in Table 3.4. Only three of the 13 countries reported data for both indicators that covered all districts in the country (Burkina Faso, Kenya and Rwanda). The remaining countries reported data that covered only parts of the country (sometimes very limited areas) or data were not available for both indicators. Better understanding of the contribution of communities to TB services will require more routine collection of data; this is of greatest relevance in settings where community contributions are considered a necessary and integral part of TB services.

---

1 There was no attempt to compile data about the contribution of communities to programme design and implementation (including advocacy activities at local levels). Such data are not routinely available.
3.3 Trends in case notifications since 1990 and estimates of the case detection rate

Globally, the number of TB cases diagnosed and notified per 100,000 population was relatively stable between 1990 and 2000, rose sharply between 2000 and 2008 and has subsequently started to fall slowly (Figure 3.1). Globally and in all WHO regions, a clear gap exists between the numbers of notified cases and the estimated numbers of incident cases, although this has narrowed in the past decade globally and in all six WHO regions (Figure 3.2). Trends in the 22 HBCs are shown in Figure 3.3, and for other countries are illustrated in country profiles that are available online.1

The case detection rate (CDR)² for TB is an indicator that is included within the MDGs (Chapter 1). For a given country and year, the CDR is calculated as the number of new and relapse TB cases (see Box 3.1 for definitions) that were notified by NTPs (Table 3.1), divided by the estimated number of incident cases of TB that year. The CDR is expressed as a percentage; it gives an approximate³ indication of the proportion of all incident TB cases that are actually diagnosed, reported to NTPs and started on treatment.

The best estimate of the CDR for all forms of TB globally in 2012 was 66% (range, 64–69%), up from 53–59% in 2005 and 38–43% in 1995 – the year in which the DOTS strategy began to be introduced and expanded (Table 3.5). The highest CDRs in 2012 were estimated to be in the Region of the Americas (best estimate 79%; range, 74–85%), the Western

---

1 www.who.int/tb/data
2 The CDR is actually a ratio rather than a rate, but the term ‘rate’ has become standard terminology in the context of this indicator.
3 It is approximate because of uncertainty in the underlying incidence of TB and because notified cases are not necessarily a subset of incident cases that occurred in the same year; see Chapter 2 for further discussion.