

Assessing infection control

Infection control

Objectives: at the end of the assessment reviewers should comment on –

- the administrative measures in place, especially those enabling early detection of active TB cases;
- measures in place at facilities for reducing transmission of *Mycobacterium tuberculosis* by patients with infectious TB;
- whether infection-control measures have been implemented to protect health-care workers.

Background:

The association of TB with HIV infection and AIDS, the lack of concern paid to the transmission of TB in health-care and congregate settings, and the absence of TB infection-control interventions create a suitable environment for the transmission and spread of susceptible TB, MDR-TB and XDR-TB among patients, health-care workers and the community.

TB infection control combines measures aimed at minimizing the risk of TB transmission within populations. The foundations of TB infection control are early and rapid diagnosis of infection, and effective management of TB patients. TB infection control requires and complements the implementation of core interventions in TB prevention and control, HIV control and the strengthening of health-care systems. Countries should include TB infection-control procedures in their national policies for preventing and controlling infection, and should maximize the synergies that exist among programmes that handle infection prevention and control, and those focusing on controlling TB and HIV. The most effective strategies to control the spread of TB cross disciplines.

Specific recommendations for TB infection control are described in *WHO policy on TB infection control in health-care facilities, congregate settings and households* (WHO/HTM/TB/2009.419). They include four major activities:

- managerial activities at the national level and health-facility level;
- implementation of administrative controls;
- implementation of environmental controls;
- the use of personal protective equipment.

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Location: outpatient clinic at a health facility, hospital ward, HIV-care clinics, any health facilities that see TB patients or patients suspected of having TB

Staff to be interviewed: health-care staff, TB manager

Assessment

- a. Has the facility implemented workplace and administrative infection-control measures?
 - i. Does the facility have an infection-control plan? Has a staff member been designated to be in charge of infection control in the facility? (If yes, this person should be interviewed.)
 - ii. Have health workers been trained in infection-control procedures? If yes, when was the training held, and who provided it?
 - iii. Has there been any coordination or communication between the TB programme and the HIV programmes about infection control?
 - iv. Is there a triage plan in place to separate people with TB symptoms from other patients in the health facility?
 - v. Are HIV-positive people and other at-risk patients separated from TB patients and people suspected of having TB?
 - vi. Is cough hygiene taught to and practised by TB patients?
 - vii. Does the facility try to minimize the time that an infectious patient spends at the facility?
 - viii. Are patients provided with educational materials about TB?
 - ix. Do health workers have appropriate knowledge about the signs and symptoms of TB, and TB infection-control procedures?
- b. Has the facility implemented environmental infection-control measures? (Observe the waiting areas for patients, the treatment rooms and patients' rooms. Note any overcrowding, small and narrow spaces, whether ventilation is adequate, and the flow of patients.)
 - i. Is there ventilation in the facility? If yes, what kind of ventilation (natural or mechanical)?
 - ii. Is there evidence of air filtration, such as air cleaners or the use of high-efficiency particulate air (HEPA) filters in high-risk areas, including in isolation rooms, sputum-induction rooms, bronchoscopy and surgical suites, and autopsy suites?
 - iii. Is ultraviolet germicidal irradiation used?

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- c. Has the facility implemented personal protective infection-control measures for patients and staff?
 - i. Are respirators available and used? If yes, what kind of respirators, where are they used, and who uses them?
 - ii. Is the fit of respirators evaluated, and do staff check the fit regularly?
 - iii. Do patients use surgical masks? Are surgical masks used by health-care workers?
- d. Does the facility regularly record the proportion of health-care workers who develop TB during a specified period? Is there a TB register for health workers?
- e. What infection-control measures are used for MDR-TB patients treated on an ambulatory basis and who remain smear-positive or culture-positive?
- f. What measures are used for MDR-TB patients for whom treatment has failed and who have no treatment alternatives?
- g. Are HIV-positive health-care workers provided with a package of preventive interventions and care interventions, such as ART or isoniazid preventive therapy (IPT)?
- h. Do health-care workers engage with implementation partners (including civil society organizations) to increase awareness of the need for infection-control procedures in congregate settings to reduce the risk of transmission, especially in communities with a high burden of TB.

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Indicators for: Assessing infection control		
<i>Indicator</i>	<i>Observations</i>	<i>Source of information</i>
Infection-control plan in place	Choose: Yes, No, Partially	Policy document from the national TB programme
Focal person for TB infection control identified	Choose: Yes, No	Organogram of national TB programme
Surveillance for TB among health-care workers established	Choose: Yes, No	Register of patients suspected to have TB, TB treatment register
Triage, separation of infectious patients and cough hygiene established	Choose: Yes, No, Partially	Observation of practical skills of staff
Package of prevention and care interventions established for HIV-positive health-care workers	Choose: Yes, No, Partially	Occupational health reports, activities reports established at intermediate health levels, others
Ventilation systems functioning well	Choose: Yes, No, Partially	Smoke test
Ultraviolet germicidal irradiation used	Choose: Yes, No, Partially	Visual examination of TB wards and facilities
Particulate respirators available for staff	Choose: Yes, No, Partially	Visual examination
Surgical masks or tissues available for TB patients and patients suspected to have TB	Choose: Yes, No, Partially	Visual examination