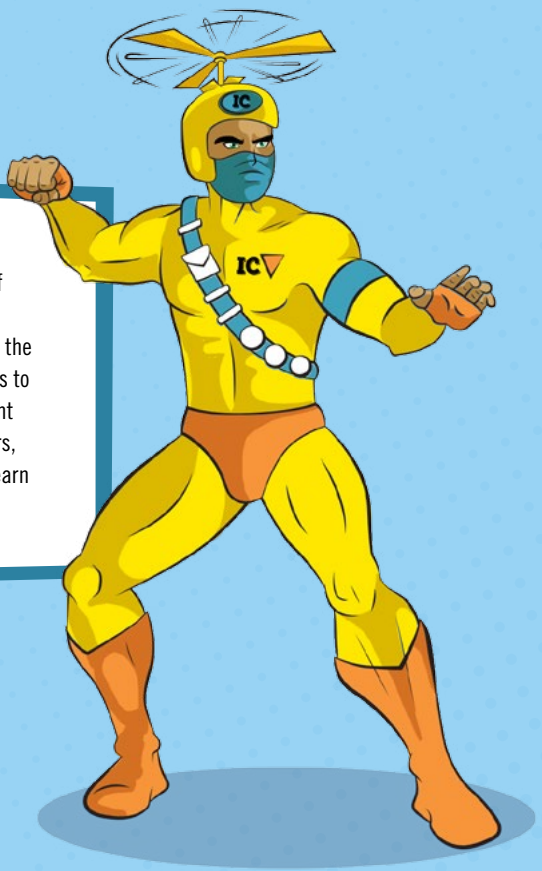
TB INFECTION CONTROL (IC)

My name is **Infection Control (IC)**
My job is to stop TB from spreading. I use a combination of measures aimed at minimising the risk of TB transmission within populations. This requires widespread knowledge in the community around the signs and symptoms of TB and ways to control and treat it. I promote essential measures to prevent the spread of TB to vulnerable patients, health care workers, the community and those living in congregate settings. Learn below how I do my work and see me in action…



27 What is meant by TB infection control? Why is it important?

TB infection control is a combination of measures aimed at minimising the risk of TB transmission within populations. Successful infection control requires widespread knowledge in the community around the signs and symptoms of TB and ways to control and treat it. TB Infection Control measures are essential to prevent the spread of Tuberculosis to vulnerable patients, health care workers, the community and those living in congregate settings. With the increasing numbers of people with drug resistant tuberculosis, community based innovations need to be strengthened, as this is becoming a state of emergency for public health systems.

28 What is nosocomial transmission and what is the risk of nosocomial transmission of TB?

Nosocomial transmission is TB infection that happens in a hospital or health care facility. The risk of TB among health workers in health-care facilities is higher than the risk among the general population. Various studies have shown that as compared to the general population, health care workers were 6 to 10 times more likely to develop latent TB infection, and 2 to 6 times more likely to develop TB disease. The greatest risk of transmission occurs when patients remain undiagnosed and untreated.

29 What are congregate settings? Why are there increased chances of spread of TB in congregate settings?

Congregate settings are places where people live close to each other. They range from correctional facilities and military barracks, to homeless shelters, refugee camps, dormitories and nursing homes.The risk of TB in congregate settings is higher than other settings because of the crowded living conditions, poor nutrition and other illnesses that weaken the immune system and make people in congregate settings more vulnerable to developing active TB. [52]

30 What are the different levels of infection control in health care settings?

All health-care settings need a TB infection control program designed to detect and treat people for TB (or referral of persons to health facilities who have suspected TB disease in other settings), as well as ensuring clean breathing air.

The following levels of TB infection control measures are recommended in health care settings:

FACILITY-LEVEL MEASURES

- Develop an infection control plan for the health facility and identify a person responsible for its implementation.
- If possible, rethink the use of available spaces and consider renovation to improve infection control.
- Monitor TB disease among health workers and patients.
- Promote and educate health workers, patients and visitors on infection control.
- Monitor and evaluate the implementation of TB infection control measures.

ADMINISTRATIVE CONTROLS

- Promptly identify people with TB symptoms, separate infectious patients, control the spread of TB (cough etiquette and respiratory hygiene) , and minimise time spent in health-care facilities.

- Provide a package of prevention and care interventions for health workers, including HIV prevention, antiretroviral therapy and isoniazid preventive therapy (IPT) for HIVpositive health workers.

[52] *WHO Policy on TB Infection Control in Health-Care Facilities, Congregate Settings and Households, World Health Organisation (2012). Available at http://apps.who.int/iris/bitstream/10665/44148/1/9789241598323_eng.pdf*

30 Continued...

ENVIRONMENTAL CONTROLS

- Use natural ventilation.
- Use ultraviolet germicidal irradiation (UVGI) fixtures when adequate ventilation cannot be achieved.

PERSONAL PROTECTIVE EQUIPMENT

- Use particulate respirators

31 Should infectious TB patients be separated in health care facilities?

It is important to separate infectious patients after they have been screened and diagnosed for TB. People suspected of having or with confirmed drug-resistant TB should be separated (preferably according to the type of resistance they have from other patients, including other TB patients).

32 How important is cough etiquette in preventing transmission of TB?

Cough etiquette, which includes covering the nose and mouth when sneezing or coughing reduces the spread of droplets that contain TB.

33 Have personal masks and respirators proven to be effective in prevention TB Transmission?

There are usually two types of personal protective wear that are used in health care settings to protect against TB transmission. It is recommended that **N95 respirators** be used for health workers when caring for patients with suspected or confirmed TB, along with other infection control measures. Respirators should not be used by patients or people suspected of having infectious TB; instead, **surgical masks** and proper cough etiquette should be used.

TYPE	HOW DOES IT WORK	ADVANTAGES	DISADVANTAGES
Surgical masks 	**Provides a physical barrier between the mouth and nose of the person wearing it**	**Effective in limiting the spread of infection from patients with TB to others** **Prevent the spread of microorganisms from the wearer**	**Do not provide protection to the wearer against TB** **Not able to block out small particles spread through coughing and sneezing of others.** **Can only be used once and must be discarded right after use.**

TYPE	HOW DOES IT WORK	ADVANTAGES	DISADVANTAGES
Respirators/N95 masks 	Filters out the air breathed in by users	Fluid resistant and able to filter out very small particles. Protects the wearer against TB	Disposable, but can be reused (should be stored in a clean, dry location) Respirators are expensive

34 What are the types of environmental ventilation? How effective is ventilation in TB infection control?

Environmental ventilation is the process of bringing in air from the outside, and/or removing the bacteria from the air. There are three main types of ventilation:

1. Mechanical ventilation uses fans to move air through a building. Mechanical ventilation can be combined filtration systems.
2. Natural ventilation uses the wind to drive the air flow through a building.
3. Mixed-mode ventilation system combines the use of both mechanical and natural ventilation

Health facilities lacking appropriate ventilation systems have reported TB transmission. Therefore it is recommended that health facilities put in place a ventilation system to control the spread of TB.

35 Are UVGI devices recommended for TB infection control?

Ventilation is essential for preventing transmission of TB in the air. When it is not possible because of climate or building structure, an option is to use upper room or shielded ultraviolet germicidal irradiation (UVGI) devices. These devices use ultraviolet light to break down bacteria in the air.

36 What specific measures are recommended for HIV positive health workers in order to prevent them from getting infected with M tuberculosis?

HIV positive health workers should be offered a package of prevention, treatment and care that includes:

a. Regular screening for active TB and a full regimen of anti-TB treatment, should they be diagnosed
b. Isoniazid preventive therapy (IPT) for latent TB
c. Access to antiretroviral therapy.

It is recommended that HIV-positive health workers should not be working with patient with known or suspected TB (in particular, they should not be working with patients with MDR-TB and XDR-TB).

37 For persons with infectious TB, what actions can be taken to reduce the risk of transmission of TB to their household members?

Household members of persons with infectious TB are at high risk of becoming infected with TB. Therefore, detecting TB early remains one of the most important interventions for reducing the risk of TB transmission in the household.

TO REDUCE EXPOSURE IN HOUSEHOLDS:

- Houses should be adequately ventilated, particularly rooms where people with infectious TB spend considerable time.
- Anyone who coughs should be educated on cough etiquette and respiratory hygiene, and should follow such practices at all times
- TB patients should
  - spend as much time as possible outdoors
  - sleep alone in a separate, adequately ventilated room, if possible
  - spend as little time as possible in congregate settings or in public transport.
  - practice cough etiquette (including use of masks) and respiratory hygiene when in contact with people.
- Ideally, family members living with HIV should not provide care for patients with infectious TB. If there is no alternative, HIV-positive family members should wear respirators, if available.
- Children below five years of age should spend as little time as possible in the same living spaces as infectious TB patients. Such children should be followed up regularly with TB screening.
- Potential renovation of the patient's home should be considered if possible, to improve ventilation (e.g. building of a separate bedroom, or installation of a window).