

# Communicable disease



Tuberculosis is an infectious disease that attacks the lungs and can also attack other parts of the body. The disease is spread from person to person after living in close contact during a long period. A person with tuberculosis can spread the disease through the air by sneezing, coughing, talking, and singing. The germs are spread through the air and a person who is not infected who breaths these germs have a chance of contracting the disease. Tuberculosis is the cause of death of approximately 2 million people per year globally.

The incidents of tuberculosis during the 20th century have been declining in industrialized countries. In African countries such as Gambia and South Africa the rates have been rising. Tuberculosis germ does not develop into tuberculosis disease in some people. People who are at risk of contracting the disease are people with HIV, babies and young children, those who inject illegal drugs, elderly people and people who were not treated correctly for TB (American Lung Association, 2010). People who have been infected with tuberculosis disease can control the disease by using a daily dose of Isoniazid (INH) for 6 to 9 months.

Tuberculosis is a Public Health threat in the United States. In the United States has 10-15 million infected Americans each year. People believed that tuberculosis was cured a long time ago and nothing has been done in the past 50 years to update how tuberculosis is treated and diagnosed. The tests and drugs used a 100 years are the one still being used. World Health Organization (WHO) reported that some parts of the world have been facing situations of patients with tuberculosis cases that do not respond to any drugs.

Countries like China and India have 50% cases that do not respond to drugs. Congress in the United States urged that funding should be made available for scientists and public health for the purpose of finding new ways to diagnose tuberculosis, production of new drugs, developing a vaccine to be administered to children and elderly people. Funding of tuberculosis control programs in United States and abroad will help control the disease. A third of the world's population is infected by mycobacterium tuberculosis (International Union against TB and Lung Disease 1999).

Tuberculosis is spread through the air by coughing, sneezing and the disease is especially spread in crowded surrounding. Chapman and Dyerly, 1990) urged that people living in crowded house have a high risk of developing tuberculosis if an occupant is infected For example, in a small house with four individual and two children living with an infected person, the risk of the children being infected is greater that children living in a large house because a small house does not have enough circulation air compared to large house.

Tuberculosis is associated with poverty and crowding, behavior factors has been overlooked apart from alcoholism, HIV infection and drug abuse and other lifestyles such as smoking are mostly linked to lung cancer, but those behaviors also causes tuberculosis disease and mortality. Lueng and Chung, 2008 urged that malnutrition or underweight is also associated with increased risk of tuberculosis disease, while obesity appears to be protective. Diabetes mellitus is also associated with the high risk of tuberculosis disease for diabetes patients with poor diabetic control.

Although the risks of tuberculosis are moderate for most lifestyle factors, in Asian communities tuberculosis prevalence has been increasing rapidly because of overcrowding (Lueng & Chung, 2008). Riegelman, 2010, urged that the link between social economics and public health is often overlooked. Socioeconomic status has a huge influence in controlling tuberculosis. Socioeconomic factors such as education, family income, living conditions and culture contribute to how tuberculosis influences individuals and become a public health burden.

Individuals with higher education can understand the dangers of tuberculosis compared to an illiteracy individual. A household earning higher income can afford to have a better insurance and be able to have access to high quality foods than individuals with low-incomes. Living conditions plays a huge role in combating tuberculosis, TB is mostly associated with crowded living areas and individuals with better living accommodation has a low risk of contracting tuberculosis disease. Individual culture has a significant role in how the individuals views treatment of tuberculosis.

In some African countries, they have religious sects that do not allow children to be immunized or seek treatment when they are sick. The people believe in using traditional herbs or praying for the sick. State and local health departments' role is to prevent and control tuberculosis through the guidance of Centre for Disease Control and Prevention. The Centre for Disease Control developed and recommended ways that state and local health departments can control and prevent tuberculosis.

The programs developed by the Centre for Disease Control includes six component and the state and local healthdepartments must have program

directors to monitor the progress of disease management. The six components required to eliminate and control tuberculosis are that state and local health departments should have a planning and developing policy, managing and finding suspected and confirmed tuberculosis cases, collection of data, provision of laboratory and diagnostic services, finding and managing latent tuberculosis, and provision of consultation, training, and education (National Prevention Information Network, 2009).

These TB programs are performed by state, local health departments, health care providers, and infectious disease society of America to control effectively the public health risks caused by tuberculosis. In the United States of America, the responsibility of controlling and prevention tuberculosis rests with the public health system. The public health with collaboration with professional medical societies, state and local health departments and TB control programs continue to work together to eliminate TB.

Federal agencies continue to provide financial and technical support for TB control and elimination. Public health departments continue to support the collection, distribution of surveillance data through local health departments and states TB programs. Development of education and training helps to control and eliminate TB. The public health will continue to research for the improvement of TB diagnosis, treatment, and prevention.

Developing of public health plan that is updated regularly and distributed widely to all states and local health departments is another way the public health continues to control, prevent, and eliminate TB. The control plan will have information such as guidance to local laboratories processing TB

samples consistent to legal statutes related to TB control. Tuberculosis data from WHO includes incidences, prevalence, mortality, detention, and treatment. The estimated global incident data is 9. million and 55% are from South-East Asia. African Region is 30%; European 5% and America 3%. Countries with largest cases in 2008 are India with 1. 6-2. 4 million and China 1-1. 6 million. WHO confirmed that mortality rates in 2008 were still above the 1990 level. The data from WHO had 5. 7 million relapsed cases and these case notified by national TB programmes. Globally, treatment for new cases in 2007 was 86% and it exceeded the global target of 85% that was set by World Health Assessable in 1991 (WHO, 2008).

The public health's plan is to ensure quality health by pursuing high quality DOTS expansion, by making DOTS available to all in need. Ensuring that communities undertake the task of TB control by empowering them. The public health aim is to eliminate TB 1 case per million (WHO, 2008). The public health effort and progress against TB enhances and sustains the nation's confidence. Public health efforts in partnership with state, local health departments and infectious disease association, diagnostic, prevention, treatments methods that includes vaccines will help control and eliminate TB.