Introduction

In China, tuberculosis is the main cause of death among the infectious disease among adults. Approximately 1.4 million people contract active tuberculosis each year and in 1990 alone about 360,000 persons died from this disease in China. Globally TB is positioned third as the major cause of disability and death among adults of between 15 years and 59 years, almost 33% of the population of the world is infected with the disease. Out of these cases approximately 9 million become ill as a result of the weakening of their immune system and consequently about 1.76 million die from the disease. Even though Asia has over 50% of all patients with TB, the rates of TB are highest in parts of sub-Saharan Africa. Regardless of the effort world wide there are few indications that the epidemic is reducing, the incidence of the disease is increasing globally at an approximated rate of 0.6% and it is much quicker in parts of sub-Saharan Africa.

Mycobacterium tuberculosis is the bacterium that causes Tuberculosis and it is passed on through infected air droplets that are spread by talking, coughing or sneezing by active carriers of TB. In most instances an individual who has come into contact with the TB bacteria can prevent further advancement of the disease, the bacteria then lies inactive in the individual's body with no symptoms developed. Latent TB carriers cannot spread the disease to other people but have a high probability of developing Tuberculosis at some future point in their lives and especially when there is depression of the immune system.

For more than 50 years the use of antibiotics has been applied in the treatment of the standard cases of TB; however their efficacy relies a lot on the strict adherence of the patient to medication. The Antibiotics should be taken for not less than 6 months, nevertheless most patients stop using the drugs once the coughing has decreased, when they experience side effects such as confusion, jaundice and vomiting or when they cannot access or afford the treatment. Patients who are not fully cured can still spread TB and this leads to a very grave public health concern as it can lead to the development of multi-drug resistant TB.
1. what are some of the factors that contribute to the high burden of tuberculosis in China?

In China over 400 million individuals have TB and the burden is heavy for people and the government at large. TB is the ranked first among the leading cause of death as a result of infectious disease; approximately 1.4 million individuals develop active TB every year. In 1981 the government of China developed a national TB program in an attempt to reform the efforts in controlling the disease and to broaden the system for treatment and reporting. However, lack of enough financial support hampered the technical capacity and human resource of the program in a number of areas, specifically in provinces that are poor and those that lack proper infrastructure in primary family health care.

As much as little progress was made in the 1980s, the program encountered problems such as lack of enough diagnostic laboratories, poor treatment compliance, and insufficient systems of evaluating and reporting cases. In addition, the treatments available in most urban hospitals are beyond the reach of many patients as they are too expensive. The other problem is that patients don’t adhere to medication and some even abstain from the treatment. (Liu, 2003)

2. How might Russia and Eastern Europe benefit from the Chinese model?

In China the DOTS model is being used, the model mainly concentrates on early detection of Tuberculosis patients by using Smear microscopy together with 6 month directly observed treatment in the community or dispensaries until the individual is fully cured. Eastern Europe and Russia can benefit a lot from this model from early detection of patients with TB. The model has been very powerful and successful in China, China was able to attain its target of curing 85% of the patients identified and 95% cure rate for cases that were new. This rate is the highest ever recorded and considering the program was large scale; this is a big improvement as compared to a meager 52% before the DOTS program was initiated in 1991. about 67% of this improvement was experienced in the first 2 years after the Dots program was put in place. (Tang, 2004)
3. What countries have the highest burden of multi-drug-resistant TB? What do you think explains this pattern?

In spite of the success witnessed in China and elsewhere from the use of DOTS program, Multi-drug resistant TB has been on the increase. This kind of TB is difficult and dangerous to treat this is because this kind of TB is resistant to numerous powerful anti TB treatment that is currently available. The 400,000 cases of multi-drug resistant TB are reported each year in countries such as Russia, India and china.

Multi-drug resistant TB arises due to the failure by patients to finish the standard TB treatment due to health or economic reasons and also the lack of proper treatment. It is further accelerated by the fact that individuals having this strain of TB also develop the same resistance to drugs. Most first line treatments are not effective in the treatment of this strain of TB and in as much as the second line drugs exist they are costly and toxic and can cost approximately 1000 to 3000 times more than the first line drugs. This makes them unaffordable and therefore inaccessible to patients with this strain.

4. Is directly observed therapy coercive? Why or why not? under what conditions does the state have the right to require individuals with communicable diseases to undergo treatment?

The use of directly observed therapy is an important tool in the strategy to reduce mortality and morbidity in the world from cases of tuberculosis. It is not coercive at all because it involves the voluntary participation of patients. It involves the use of enablers and incentives, use of education, personalized attention to promote the participation of patients and also watching patients as they take their medication.
The state has the right to ask individuals with communicable diseases to get treated in cases whereby the communicable diseases spread extremely fast and is fatal to the well being of the population of a country for instances in cases where there is an outbreak of Ebola or Swine Flu.

5. In addition to the implementation of the DOTS program, what else should the Chinese government be doing to reduce the burden of TB?

In addition to the implementation of DOTS program, the program should be rapidly expanded to increase its coverage. This will need sufficient levels of supervision and training and also to ensure the control and maintenance of quality. The government of China should strengthen its political commitment at numerous levels of government. The program should be supervised by the vice mayors and vice governors at each level so as to ensure that it succeeds.

The government should also increase its incentives to both providers and patients; this includes the free treatment and diagnosis of patients with TB. This is bound to increase the rates of treatment by patients and also the incentives given to doctors to treat or diagnose patient increase the success of the program. The government should also develop more innovative incentives to address the issue of the resistance by hospitals to refer TB patients to dispensaries.

Reference:


