TB Control in China

EQUI-TB

China EQUI-TB programme

With 4.5 million cases of active tuberculosis (TB), China has one of the highest TB burdens in the world. Poor and vulnerable people are most likely to get TB and also face the biggest economic and social barriers to accessing TB care and treatment. The EQUI-TB Knowledge Programme in China has, since 2001, carried out trans-disciplinary research focusing on the links between poverty, vulnerability and TB and assuring quality of TB care for poor people. EQUI-TB, funded by the UK Department for International Development, is based at the Liverpool School of Tropical Medicine (LSTM) and also has partner organisations in Malawi and Zambia carrying out research on similar themes.

In the past five years, EQUI-TB has supported and participated in several research projects on TB control in China including activities in Shanghai, Shandong, Chongqing, Inner-Mongolia, Liaoning, Fujian, Henan and Xinjiang. This policy paper is a synthesis of research findings. Using a range of research methods such as case control, quantitative and qualitative studies, EQUI-TB China has uncovered some critical challenges facing TB control in China. These include economic and social barriers preventing poor and vulnerable people and, in particular, migrants from accessing TB care and treatment, practical issues arising with Direct Observation of Therapy (DOT), and delays in TB diagnosis and treatment. A number of potential solutions have also been identified including revising healthcare financing mechanisms to allow poor and rural people to access free services, increasing medical insurance coverage and raising awareness among the general public and across the health sector of the availability of free TB diagnosis and treatment.

Background

The Chinese government has gradually expanded the implementation of the World Health Organization (WHO) recommended strategy for TB control, DOTS. In 2000, DOTS was being implemented in over 60% of the country.

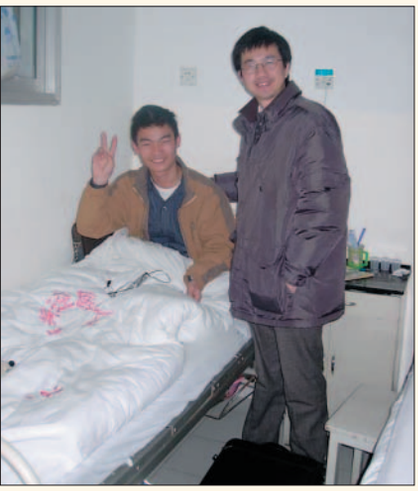
Although case detection and treatment success rates have been improving as a result of this increasing DOTS coverage, research shows that China still faces some substantial challenges in providing effective TB control. One significant problem is that multi-drug resistant TB is increasing. Another is that migration from rural to urban areas due to rapid and uneven economic development has led to an increase in TB cases in urban areas. Ensuring high quality DOTS implementation is also a major challenge.

DOTS relies on prompt access to quality diagnosis and treatment of TB. Despite recent improvements in both areas, research shows that there are still significant problems in the field with access and case detection and adherence to treatment.

Barriers to access and case detection

Many TB patients experience long delays between the onset of symptoms and seeking health care. Subsequently, patients often experience long delays between first seeking health care and being diagnosed with TB. EQUI-TB's research found that lack of knowledge about TB as a disease along with patchy awareness of the availability of free diagnosis and treatment for it, patients' financial burden, slow diagnosis process, low referral rates, and social factors such as gender, age, educational level and migrant status are the main reasons why people experience delays between first symptoms and an accurate TB diagnosis. There is considerable interplay between these barriers.

- **Low awareness of TB and availability of free services** – Lack of knowledge about the symptoms and dangers of TB is widespread. Over a quarter of people failing to seek care after two weeks of the onset of symptoms said it was because they did not know their illness was serious. People with lower education, particularly older women, tended to have less knowledge about the disease and of the availability of free TB diagnosis and treatment. People with higher education experienced the shortest delays.



A rural to urban migrant worker in Shanghai receives TB therapy as an in-patient. He lost his job as a result of having TB. With him is Shenglang Tang who is a lecturer with LSTM

Financial Burden – Seeking healthcare for any illness can be costly but TB care services and treatment are provided free in China. There can, however, be hidden costs when doctors recommend patients buy medication to counter any side effects of TB treatment and people need to make repeat visits to health care providers. Lack of money is a main reason given by patients for delaying seeking diagnosis for TB symptoms. However, many people in China perceive the overall cost of TB care (including costs such as those incurred in travelling to TB dispensaries) to be higher than it actually is.

Slow diagnosis process – When patients do reach the healthcare system, there is often a delay before an accurate diagnosis of TB is reached. In some areas up to 30% of TB patients had to make more than six visits to a health care provider before diagnosis. During these visits patients have to pay for various procedures, including blood tests and chest x-ray examinations, which are repeatedly prescribed. The majority of patients who experienced delay did not receive a TB diagnosis for over four weeks.

Low referral rate – The National TB Program recommends that people with suspected TB should be sent to TB dispensaries for further diagnosis and treatment. However the majority of TB suspects are not referred there by their doctors. Low knowledge and awareness of TB symptoms by general health care providers is one reason for this. In addition doctors lose out on private fees if they refer a patient elsewhere.

Lin Xiaoyun, a lecturer from Fudan University is showing the typical living conditions of migrants in Minhang district, Shanghai

Gender related factors – Gender and gender relations influence delays in diagnosis. Women tend to experience longer delays between symptoms, diagnosis and treatment. This is because women often have fewer resources than men to access TB care and men are perceived as providers and the backbone of the workforce, so are prioritised for health care.

Social stigma – This affects both men and women of all ages although it affects some groups more than others. Young people, particularly women, have difficulty in finding a partner and getting married, if it is known in their communities that they have or have had TB. Rural migrants working in the service sectors of urban areas are likely to lose their jobs if it is found out that they have TB. This prevents people from taking their symptoms seriously and seeking diagnosis.

Age – Older people experience specific barriers to seeking care for TB symptoms because they tend to be economically reliant on their children. They have low knowledge about TB and less ability to reach health services. Older women have the lowest priority for health care expenditure.

Migrants – Over 150 million people have relocated in the last five years from poor rural areas to better-off urban areas seeking higher income and improved living conditions. People who migrate from rural to urban areas tend to suffer more from TB than urban residents. Migrants experience very low detection and treatment rates as they have less access to information on TB and knowledge about how to access healthcare services. Also urban TB control systems tend not to pay enough attention to migrants. They are not required by policies to focus on the needs of migrants and provision of services for them is considered ‘extra’ work. Many staff have the impression that TB control for migrants is not important.

> “Many people in China perceive the cost of TB care to be higher than it actually is”

Barriers to adherence to treatment

The Chinese government has taken many measures to improve adherence to TB treatment such as promoting DOT, strengthening supervision and providing training. Barriers to providing treatment and support for adherence still remain. Ways of financing health care and TB services are particularly important to people's ability to pay for healthcare in general and TB services in particular. Quality of DOT implementation, awareness of TB in the general population and among health care providers, health systems financing mechanisms and the financial burden of treatment are other major factors that influence access to and adherence to treatment. Low socio-economic status of patients combined with health system factors combine to increase barriers to effective TB treatment.

Quality of DOT implementation – Although anti-TB drugs are provided free of charge, many doctors prescribed tests and other medication to protect the liver from side effects of TB drugs. Many patients reported that these extra costs were the reason that they interrupted their treatment.

WHO's recommended standard regimen for TB treatment is six months, however some providers advised around one third of patients to take a two-to-three month treatment course. Some had also extended treatment beyond six months and required fees for this additional provision.

Health financing mechanisms – General and TB specific health staff have a requirement to generate income to cover their salaries and so may be less inclined to adhere to WHO and national policies about free diagnosis and treatment. Social assessment of four provinces found that repeated outpatient visits and over-prescription of unnecessary drugs or treatment has resulted in high economic burden for the TB patients surveyed.

Current incentives for health care workers at township and village levels to participate in public health and work on different models to ensure TB treatment adherence are ineffective.

Country-level TB control staff report that the lack of contributions to the TB control programme by local government, and the slow or incomplete disbursement of funds from central government means funds available to provide training and incentives to general health care providers can be limited.

Lack of coordination and cooperation between different healthcare and TB service providers also contributes to low referral rates to TB dispensaries when symptoms are apparent.

Low coverage of medical insurance is an important factor in TB control especially for people in rural areas.

Patient barriers – Although treatment is free in TB dispensaries, not everyone has access or is referred to these dispensaries. Tests, x-rays and treatment to protect against side effects do cost, and may not always be necessary. People perceive the cost to be high and in some cases it actually is high.

Migrants from rural to urban areas often experience poor TB case management. Many migrants self treat for TB symptoms as they are unable to bear the costs of diagnosis and treatment, and do not know how to access healthcare services in a new area. When migrants do receive treatment, their cure rate is low compared to that of resident TB patients as they are less likely to complete the course of medication.

A typical job done by rural to urban migrants is street-selling

> "Migrants from rural to urban areas often experience poor TB case management"

Conclusion

EQUI-TB's research shows that economic barriers, geographical barriers, social and cultural barriers, and health system barriers affect the way in which poor and vulnerable people seek and access diagnosis and treatment for TB.

High levels of economic burden among poor and vulnerable people and long distances from health services can result in people not seeking health care at all for TB. Gender, age and socio-economic status all influence how, when and if health care is sought. These factors combine with a lack of awareness of TB and social stigma to increase barriers for effective TB control.

Ineffective health systems also play a major role in reinforcing barriers to poor and vulnerable people. A lack of cooperation and coordination between national, regional and county health facilities and TB services can prevent patients from gaining accurate diagnosis and treatment. Lack of awareness of TB symptoms by healthcare providers, low referral rates to TB centres, and extra "hidden" costs for patients contribute to a less effective response to TB in China.

The research leads to some key recommendations for national government, national TB control programmes and local health care providers.

Recommendations

- Adopt appropriate financial mechanisms to ensure that free TB treatment can really be available to service users. Increase coverage of medical insurance to alleviate the financial burden of health care for rural people. Strengthen implementation of TB service fee reduction programmes for rural people and rural to urban migrants.
- Raise public awareness of TB and how to access diagnostic and treatment services, including providing accurate information about patient costs.
- Improve access to health systems and TB services for rural to urban migrants and other vulnerable groups. Support health service providers to understand that TB control for residents and migrants in cities are equally important.
- Reduce the delay between first health care seeking action and receiving an accurate diagnosis of TB. Provide increased training for staff to recognise the symptoms of TB and know how to act upon it.
- Investigate and address barriers to implementing effective DOTS to improve adherence rates among the most poor and vulnerable.
- Address health system structures that discourage doctors from referring patients with suspected TB to specialised TB clinics.
- Improve communication and coordination between national, regional and district health care services and TB centres.

> "hidden" costs for patients contribute to a less effective response to TB in China.

About EQUI-TB

The Equi-TB knowledge programme at the Liverpool School of Tropical Medicine has been carrying out poverty focused research on tuberculosis since 2001. Partnering with key institutions in China (Fudan University, Shanghai; Chongqing University of Medical Sciences; Shandong University, National TB Control Programme); Zambia (University Teaching Hospital, Lusaka); UK (UCL London), and Malawi (REACH Trust, Lilongwe) research has focused on assuring quality of TB care for poor people in resource constrained settings. Healthlink Worldwide is working with the EQUI-TB Knowledge Programme to support the communication and dissemination component of the research programme.

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