

Global rise of multidrug resistant TB threatens to derail progress

STAR HEALTH DESK

The rise of multidrug-resistant (MDR) and extensively drug-resistant (XDR) tuberculosis (TB) threatens to derail decades of progress in controlling the disease, according to a new report in *The Lancet Respiratory Medicine* published on World TB day on 24th March.

Although a small number of repurposed and new drugs have recently become available to treat drug-resistant TB, the authors warn that without accurate diagnostic tests to deliver individually targeted treatments, clear prescription guidelines on appropriate use and improved control efforts to prevent transmission, optimal dosing and administration, and well-functioning health care systems, the effectiveness of the drugs could be rapidly lost.

Approximately 1 in 5 cases of TB are now resistant to at least one major anti-TB drug and approximately 5% of all cases of TB are classed as MDR or XDR. Globally in 2015, there were an estimated 4,80,000 cases of MDR-TB. But, migration and travel mean that highly drug-resistant TB strains have emerged in almost every part of the world.

MDR and XDR-TB are associated with high mortality, are a



threat to health-care workers, prohibitively expensive to treat, and are therefore a serious public health problem. The mortality rate is extremely high at around 40% for patients with MDR-TB, and 60% for patients with XDR-TB.

Of the US\$6.3 billion available in 2014 to respond to the global

TB epidemic, about a third (\$1.8 billion) was for MDR-TB (despite drug resistant TB forming only 5% of the total caseload).

TB is caused by a bacterial species called *Mycobacterium tuberculosis* and is treated with a combination of antibiotics. The treatment of TB was revolutionised in the 1950s with the intro-

duction of three antibiotics: streptomycin, isoniazid, and para-aminosalicylic acid. The extensive overuse and abuse of antibiotics worldwide has led to a rise in bacteria that are drug resistant. Drug-resistant genetic mutations in the bacteria can occur as a result of inadequate treatment or can be passed on

from one bacteria to another. Bacteria can acquire multiple drug resistance traits over time, making them resistant to several different types of antibiotics.

Until recently, it was thought that drug-resistant strains of TB were less transmissible, and that MDR- and XDR-TB was mainly acquired by individuals as a result of poor compliance to treatment. However, recent molecular and epidemiological studies, outlined in the Commission, have challenged this belief. In most regions of the world, drug-resistant TB is now predominantly caused by transmission, with an estimated 95.9% of new cases infected with MDR-TB strains due to the drug resistant bacteria spreading from one person to the next.

The Commission sets out key priority actions for the next two, five and ten years for the research and policy communities, and outlines key treatment recommendations and procedures for doctors treating patients with MDR or XDR-TB.

The report is being launched at a conference at the University of Cape Town, South Africa, co-funded by the South African Medical Research Council and the South African Thoracic Society.

ANTI-TOBACCO



ধূমপানের কারণে হাদরোগ হয়

Graphical health warnings on cigarette packs found effective

STAR HEALTH REPORT

A recently completed sample-based study done in Bangladesh claims that the health warning labels describing the harmful effects of tobacco products using text and/or pictures are found to be effective.

Health warnings on cigarette packages are among the most prominent sources of information about the harms of smoking and tobacco use. Indeed, even in high-income countries where millions of dollars are spent on anti-tobacco mass media campaigns, smokers still report getting information about the risks of smoking from cigarette packages almost as much as from television, and much more than from other sources such as print media.

Therefore, in a country such as Bangladesh, where very little information about the harms of tobacco use appears on television and other broadcast media, warning labels on tobacco packages represent an even more important opportunity for informing the public about the harms of tobacco. Given their tremendous reach and frequency of exposure, health warnings are an extremely cost-effective public health intervention compared to other tobacco prevention efforts such as paid mass media advertising – these came out of a sample-based survey.

Findings from the survey revealed, 98.1% of the respondents opined that they supported the current practice of both-side for pictorial/graphical health warnings (GHW) and 77.5% respondent informed that they thought that the current use of GHW of 50% of the cigarette pack for warnings was good enough to demotivate and reduce the use of tobacco products. Considering up to 50% of the cigarette pack, around 89% were supporting this.

The findings revealed – about 72.7% of the respondents reported that they felt very unpleasant to see the pictorial warning on the tobacco packets (74.1% in urban and 72.7% in rural areas). The survey also reported that the pictorial warning was very realistic to 65.6% of the respondents and extremely realistic to 17.0% respondent (18.8% in rural and 15.3% in urban areas).

The psychological impact of GHW on the respondents was also examined. 13.9% of the respondents were extremely worried and 61.7% were very worried to see the pictorial warning on the cigarette package.

In summary, the study found that the graphical health warnings (GHW) were realistic to provide health-related information and are very effective in creating an unpleasant feeling and sense of worriedness among the smokers to aware them regarding the harmful effects of smoking.

A good news that the study uncovered was 75.8% respondents tried to reduce or quit smoking after seeing the pictorial warning on the cigarette packet. The rate is 76.3% in rural and 75.3% in urban areas. 83.5% respondents reported that they tried to reduce or quit smoking habit to see the pictorial warning. 74.8% recommended to include GHW in Biri, Gul and Jorda.

Moreover, 64.2% respondents recommended that government should take initiative for mass awareness and 85.5% recommended for more visual media (TV) coverage.



Health bulletin

Physiotherapy in the management of stroke

DR MD GAUSUL AZAM RANJU (PT)

Mr Idrish Ali, A 55 year old man came to a physiotherapist to consult about his personal complication. He had sudden weakness of the left arm, leg and slurred speech. His medical history was unremarkable except hypertension. He was a chain smoker with a smoking history of one single pac per day. The physiotherapist suggested that the man had severe left side weakness and slurred speech and he should be evaluated by a physiotherapist and a neurologist.

After performing a thorough physical examination and observing the CT scan and MRI of the brain the physiotherapist told the patient that he had a stroke (left Hemiplegia). As like as others, Mr Idrish Ali was sooted and asked that how it was possible for a poor man like him.

Worldwide, stroke is the leading cause of disabilities and second cause of death after myocardial infarction. In Bangladesh, stroke is a common condition and it is increasing day-by-day.

Strokes are of two main categories with many other sub-categories. One is ischemic due to the obstruction within a blood vessel supplying blood to the brain. Another type is haemorrhagic due to rupture and bleeds into the surroundings of brain.

Symptoms of stroke can be

detected easily by the 'FAST' method. Elaborately 'FAST' explains, F – face drooping; A – arm weakness; S – speech difficulty and T – time to call emergency or hospitalisation.

The successful and evidence-based management of this condition is physiotherapy along with medical treatment.

Following medical treatment, patients should take physiotherapy after the onset of symptoms. The approaches for the physiotherapy treatment are diagnosed based on neurophysiology, motor learning or orthopedic principles.

Treatment plan requires continu-

ing with a prolonged time until patients are recovered or minimum 3 to 6 months.

Smoking and fatty foods should be avoided. Regular cardiovascular exercise is a key technique to prevent it.

Stroke sufferers are not burden of our society. By following proper treatment, again they can join their regular life. They have the right to live a happy healthy life.

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Are vegetable oils healthy?

In small amounts, vegetable oils are healthy, as they contain fats that are essential in our diets. But our consumption of vegetable oil has increased considerably, and the health effects of high intakes are a source of scientific debate.

What researchers agree on is that vegetable oils such as safflower, sunflower, corn, cottonseed and soybean oils, are rich in a type of fat known as linoleic acid. That acid can lower LDL or "bad" cholesterol when it replaces saturated fats in the diet which primarily come from animal sources.

Whether consuming vegetable oils ultimately improves health outcomes seems to be less clear. In observational studies, which don't prove cause and effect but look at relationships between variables such as food consumption and disease, linoleic acid intake is inversely associated with heart disease risk in a dose-response manner.

Those findings don't seem to be the final word on the subject. A meta-analysis of randomised clinical trials on the topic, published in the *BMJ*, concluded that although replacing saturated fat with vegetable oils does lower LDL cholesterol, it does not necessarily translate into decreased deaths from heart disease.

Tuberculosis

Tuberculosis is an infectious disease that usually affects the lungs. Compared with other diseases caused by a single infectious agent, tuberculosis is the second biggest killer, globally.

In 2015, 1.8 million people died from the disease, with 10.4 million falling ill.

Who is at risk?

People with compromised immune systems are most at risk of developing active tuberculosis. HIV suppresses the immune system, making it harder for the body to control TB bacteria. People who are infected with both HIV and TB are around 20-30 percent more likely to develop active TB than those who do not have HIV. Tobacco use has also been found to increase the risk of developing active TB. Over 20 percent of TB cases worldwide are related to smoking.

Prevention of tuberculosis

If you have active TB, a face mask can help lower the risk of the disease spreading to other people. A few general measures can be taken to prevent the spread of active TB. Avoiding other people by not going to school or work, or sleeping in the same room as someone, will help to minimize the risk of germs from reaching anyone else. Wearing a mask, covering the mouth, and ventilating rooms can also limit the spread of bacteria.

TB vaccination In some countries, BCG injections are given to children in order to vaccinate them against tuberculosis. It is not recommended for general use in the U.S. because it is not effective in adults, and it can adversely influence the results of skin testing diagnoses.

The most important thing to do is to finish entire courses of medication when they are prescribed. MDR-TB bacteria are far deadlier than regular TB bacteria. Some cases of MDR-TB require extensive courses of chemotherapy, which can be expensive and cause severe adverse drug reactions in patients.

Fortunately, with proper treatment, the vast majority of cases of tuberculosis are curable. Cases of TB have decreased in the United States since 1993, but the disease remains a concern. Without proper treatment, up to two-thirds of people ill with tuberculosis will

