Half of the global population lack access to basic diagnostics

STAR HEALTH DESK

Nearly half (47%) of the global population has limited or no access to key tests and services essential for diagnosing common diseases, such as diabetes, hypertension, HIV, and tuberculosis, or basic tests for pregnant women such as hepatitis B and syphilis. Without access to accurate, high-quality, and affordable diagnostics, many people will be overtreated, undertreated, or not treated at all, or exposed to unnecessary and potentially harmful treatment.

The analysis was led by The Lancet Commission on Diagnostics, an in-depth report bringing together 25 experts from 16 countries to transform global access to diagnostics. The Commission highlights the centrality of diagnostics for any functioning health care system and calls on policymakers to close the diagnostic gap, improve access, and expand the development of diagnostics beyond high-income countries.

As the Commission notes, an early lesson of the COVID-19 pandemic was the crucial importance of timely, accurate diagnosis. Unfortunately, early issues developing tests hampered the understanding of and response to the outbreak, resulting in the rapid emergence of unreliable, inaccurate (even false) tests. Moreover, in high-income countries, the ability to use existing public health laboratories, in addition to the private sector, was critical in ramping up testing capacity. Still, many low and middle-income countries without access to this infrastructure were disadvantaged and left unable to reach total testing capacity.

In much of the world, patients are treated for diseases without access to critical diagnostic tests and services. This is the equivalent of practising medicine blindly. Not only is this potentially harmful to patients, but it is also a significant waste of scarce medical resources. For the first time, the analysis shows the shocking scale of the challenges we are facing, and the report offers recommendations on how we close the gap.

The COVID-19 pandemic has put testing at the top of the political and global health plan, and it must be a turning point in ensuring to prioritise diagnostics for all diseases. Diagnostics include a collection of key tests and services that are essential to understanding a patient's health. These might consist of blood, tissue, or urine samples collected and analysed at the bedside or in a laboratory, or diagnostic imaging such as x-rays, ultrasound, MRI, CT, or nuclear medicine.

The World Health Organisation recommended tests for antenatal care to provide a global estimate on access to essential diagnostics. These tests, including syphilis testing, urine dipsticks, haemoglobin testing, blood glucose testing, and ultrasounds, represent basic diagnostic tests and should be available within a two-hour travel time of the patient.

Diagnostics are fundamental to quality health care, but as the Commission states, this notion is under-recognised, leading to underfunding and inadequate resources at all levels. Globally, they estimate that nearly half (47%) of the population lack access to diagnostics. The diagnostic gap is most significant in primary care. Only about 19% of low- and lower-middle-income populations have access to the simplest diagnostic tests (other than HIV or malaria).

Three things are essential for health security: *diagnostics security*, *vaccine security*, and *therapeutic security*. Robust health systems, and strong public health systems, require all three. Therefore, equity starts with regionalising the production of health security commodities as much as possible – and this includes diagnostics.

At a global level, narrowing the diagnostic gap for just six conditions (diabetes, hypertension, HIV, and tuberculosis, plus hepatitis B and syphilis for pregnant women) from 35-62% to 10% would reduce the annual number of premature deaths in low-income and middle-income countries by 1.1 million.

The COVID-19 pandemic has illustrated the risks involved in relying on a small number of medical suppliers. Therefore, a key priority is expanding diagnostics production by locating more research, development, and production in low- and middle-income countries.

Other recommendations from the Commission included improving affordability, enhancing regulatory frameworks to oversee the quality and safety of diagnostics, and democratising diagnostics (increasing availability of point-of-care tests, self-sampling, and self-testing).

UPDATE

WHO's revised Essential Medicines Lists highlight diabetes and cancer meds

World Health Organisation (WHO) recently updated its Model Lists of Essential Medicines and Essential Medicines for Children, including new cancer treatments and diabetes medicines.

Insulin was discovered as a treatment for diabetes 100 years ago, and human insulin has been on WHO's List of Essential Medicines since it was first published in 1977. Unfortunately, limited insulin supply and high prices in several low- and middle-income countries are currently a major barrier to treatment.

Long-acting insulin analogues provide patients with additional clinical benefits by allowing long-term blood glucose control without requiring a booster dosage. They are beneficial for people who have dangerously low blood glucose levels while using human insulin. In addition, flexibility in timing and dose of insulin analogues has increased patients' quality of life. However, human insulin is still used to treat diabetes, and its availability and pricing must be improved.

Breakthroughs have been made in cancer treatment in the last years, such as medicines that target specific molecular characteristics of the tumour, some of which offer much better outcomes than "traditional" chemotherapy for many types of cancer.

Four new medicines for cancer treatment were added to the Model Lists. The listing for imatinib was extended to include targeted treatment of leukaemia. In addition, new childhood cancer indications were added for 16 medicines already listed, including low-grade glioma, the most common form of a brain tumour in children.

The lists attempt to address global health priorities by identifying the most beneficial medicines available and affordable to all.

Source: World Health Organisation

HEALTH *bulletin*

High BMI linked to death, and longer ICU stay in COVID patients

In patients with COVID-19, a high body mass index (BMI) is associated with an increased risk of death and prolonged intensive care unit (ICU) stay, according to a new study published recently in the open-access journal PLOS ONE by the University of Gothenburg, Sweden, and colleagues.

Previous studies have shown that a high BMI is a risk factor for severe COVID-19. Besides, obesity increases the risk of comorbidities such as type 2 diabetes and hypertension. Also, it has been shown to increase the need for mechanical ventilation associated with other respiratory infectious diseases such as influenza and pneumonia.

Data from the Swedish Intensive Care Registry, a national quality registry covering all ICUs in Sweden, were used to analyse the new study's findings. Each patient was over 18 and had current weight and height data available. The study included patients admitted to ICUs between March 6 and August 30, 2020, who tested positive for SARS-CoV-2 or COVID-19.

78.3% of the study cohort was overweight or obese. Increasing BMI was associated with a higher composite outcome of death in intensive care or a 14-day ICU stay in survivors. A BMI of 35 kg/m^2 or more doubled the risk of death or a prolonged ICU stay, adjusted for age and sex. The association persisted even after correcting for cardiovascular disease, hypertension, diabetes, liver or renal disease, and severity of illness after ICU admission.

COVID-19 raises mental health concerns in most women

STAR HEALTH DESK

According to a systemic review, in 2020, cases of major depressive disorder and anxiety disorders increased by 28% and 26%. Women were affected more than men, and younger people were more affected than older age groups. Countries with high COVID-19 infection rates and significant reductions in the movement of people as a consequence of measures such as lockdowns and school closures had the greatest increases in the prevalence of major depressive disorder and anxiety disorders.

Even before the COVID-19 pandemic, major depressive disorder and anxiety disorders which can increase the risk of other health outcomes such as suicide, were major contributors to the global burden of disease, affecting millions of men and women of all ages globally.

Lead author Dr Damian Santomauro, of the Queensland Centre for Mental Health Research, University of Queensland, Australia, said: "Our findings highlight an urgent need to strengthen mental health systems to address the growing burden of major depressive disorder and anxiety disorders worldwide. Promoting mental wellbeing, targeting factors contributing to poor mental health that have been made worse by the pandemic, and improving treatment for those who develop a mental disorder should be central to efforts to improve support services."

A recent meta-analysis using a disease modelling meta-analysis tool indicates that increased COVID-19 infection rate and reduced movement of people were associated with increased prevalence of major depressive disorder and anxiety disorders, suggesting that countries hit hardest by the pandemic in 2020 had the greatest increases in the prevalence of the diseases.

In the absence of the pandemic, model estimates suggest there would have been 193 million cases of major depressive disorder (2,471 cases per 100,000 population) globally in 2020.

However, the analysis shows there were 246 million cases (3,153 per 100,000), an increase of 28% (an additional 53 million cases). In addition, more than 35 million of the other cases were in women, compared with 18 million in men.

Model estimates suggest there would have been 298 million cases of anxiety disorders (3,825 per 100,000 population) globally in 2020 had the pandemic not happened. The analysis indicates there were an estimated 374 million cases (4,802 per 100,000) during 2020, an increase of 26% (an additional 76 million cases). Almost 52 million of the additional cases were in women, compared with around 24 million in men.

Younger people were more affected by major depressive disorder and anxiety disorders in 2020 than older age groups. The additional prevalence of these disorders peaked among those aged 20-24 years (1,118 additional cases of major depressive disorder per 100,000 and 1,331 additional cases of anxiety disorders per 100,000) and declined with increasing age.

School closures and broader restrictions limit young people's ability to learn and interact with their peers, combined with the increased risk of unemployment, meaning that young people were also more heavily impacted by major depressive disorder and anxiety disorders during the pandemic. Therefore, policymakers must consider underlying factors such as these as part of measures to strengthen mental health services.

Source: The Lancet

"Diabetes has no age limit - I had no idea about it"

ABDULLAH AL MUEEJ

"I never expected to get diabetes. I believe diabetes is linked to ageing and inactivity. I work out enough as a vegetable salesman. But I have no idea how I got diabetes. When I was thirty-five, I became increasingly thirsty and hungry. After a few weeks, I had a horrible sensation. My wife demanded I go to the hospital because she said I was in bad shape. The doctor gave me pills and a diet plan. It blew my mind. I was too young to have diabetes and worked as a day labourer.

My new way of life had begun. I had to control the disease till I died, and it fueled other diseases. As a small shop owner, I could not afford the treatment. Interestingly, many of my neighbours and coworkers were young, healthy, and hardworking, yet developed diabetes. Some of them needed insulin. Two of my neighbours got sick because they did not recognise the early symptoms.

Now being forty years old with a healthy lifestyle, I kept diabetes under control. But the expense of regular medicine is creating economic strain on me."

I was listening to a diabetic patient's experience as a part of my professional duty. Unfortunatily, this is the case for many of the diabetic patients in our society. Our community people are indeed less aware of their lifestyle, which causes the diseases.

Moreover, they barely know about the symptoms and management of such chronic diseases. Hence, the diagnosis of diseases demands immediate and costly treatments. Furthermore, this health expenditure becomes a burden for the middle- and lower-income groups. Such sufferings of poor people could be reduced by increasing awareness about lifestyle modification and food habit changes.

Urging the government, the people living with diabetes or other chronic diseases should be ensured with free essential medicines from the hospital nearby. Besides, a holistic and multi-sectoral approach by engaging community people can reduce the emerging burden of such diseases in Bangladesh.

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/StarHealthBD