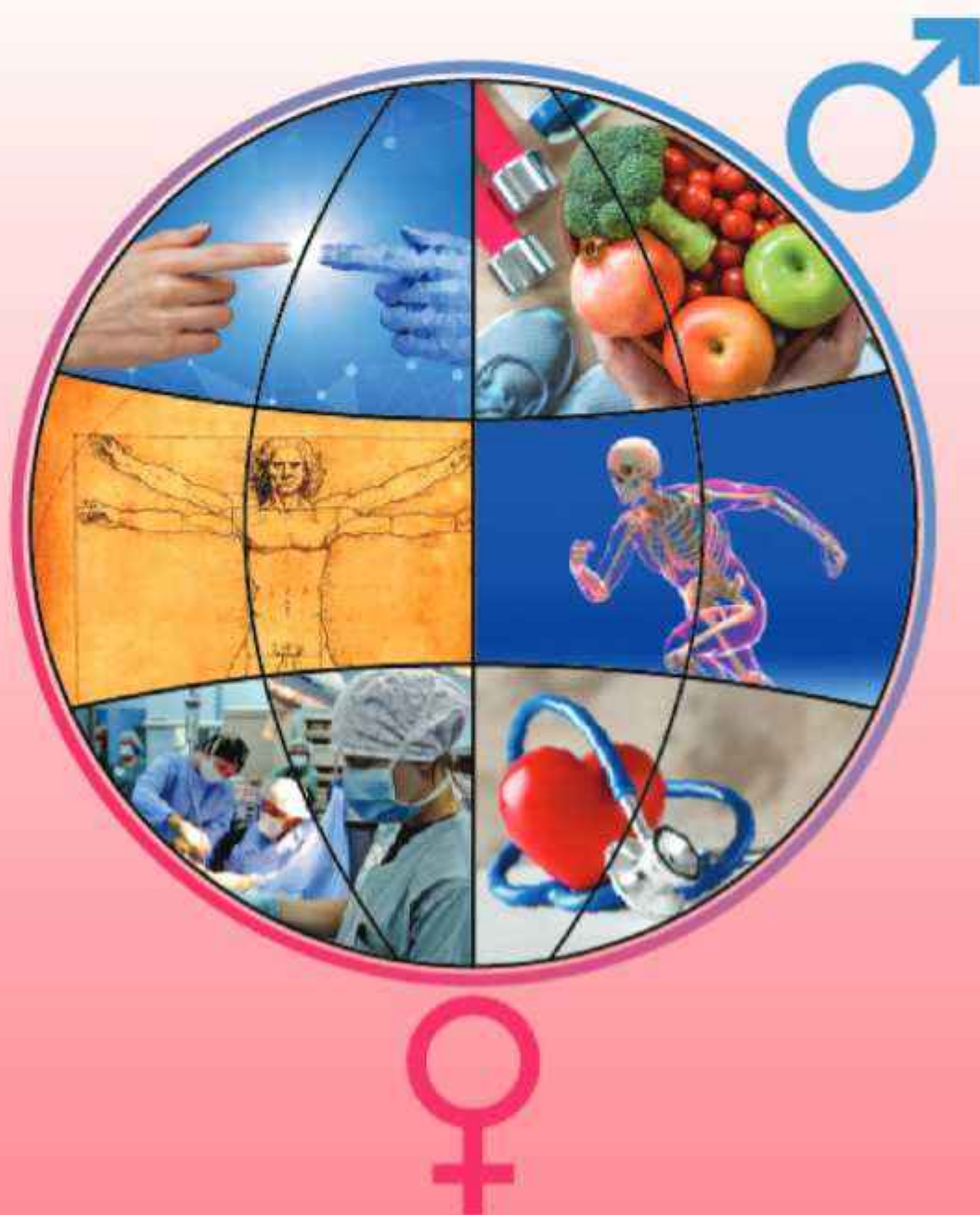




# THE SCMC CHRONICLE

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## A SPECIAL ISSUE ON HEALTH



## EDITOR'S NOTE

Since the outbreak of Covid-19, the health beat has become the most important area of reporting for the news media. The spread of the pandemic, uncertainty about the viability and availability of vaccines and the interdependence of nations affected every person in the world. Most nations could not anticipate the severity of the first wave and were ill-prepared to face the second wave. There was a massive surge in the generation and consumption of content related to the scourge that had seized the world. In India, we observed strict lockdowns followed by an unprecedented migration crisis. The situation was confounded by shortage of testing facilities, hospital beds, medical oxygen, ambulances and medicines. This issue of The SCMC Chronicle highlights various aspects of Covid-19 ranging from how India faced this crisis to the everlasting impact on us. Due to the priority given to patients with Covid-19, many other patients had to postpone surgeries. It isn't easy to measure the impact of Covid-19. Every family is affected. Many have lost their near and dear ones. Many livelihoods have been lost. Grief, distress and uncertainty have taken a toll on the mental health of many. Women's healthcare is an area that is chronically under-researched and under-funded. The last two years were not exceptional. Studies have shown that Covid-19 harms women's reproductive health. The articles 'The increasing negative impact of junk food on children and young adults', 'Food or health - a poor dilemma', 'Overuse of antibiotics' reflect different perspectives on health-related issues. There were some positive developments as well. The articles 'Future of medical treatment', 'Artificial intelligence in personalized treatment' and 'WHO approval of the world's first malarial vaccine' underlines the use of science in solving our health-related problems.

DR SAGAR GOKHALE  
(EDITOR)

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# The downside of junk foods

By Sayanta Sengupta

With the evolution of humankind, times have drastically changed, and people's lives have become quite quick-paced and fast. People hardly get any spare or free time. That is where the dependency on junk food and fast food starts creeping in as they are prepared quickly and are highly alluring to the taste buds because of the excess amounts of salt and sugar and unhealthy fats present in them.

Even though there are certain good fast foods like salad and sandwiches, most junk food falls under the fast-food category itself. These unhealthy foods attract a lot of children and young adults as they are very tasty, are convenient to make (at times it does not need cooking), and have lower prices.

However, there are umpteen number of downsides and cons to junk food and continued in-take of junk food affects the health of individuals adversely and leads to long-term chronic health issues like cardiovascular diseases and obesity.

According to a study conducted by the Women's and Children's Health Network, an unhealthy diet impacts the studying habits of children. It plays a significant role in depleting the concentration levels of children and young adults.

The excessive amounts of sugar in junk foods prevent children from studying for long hours. Having junk food also leads to obesity, and children then lose the impetus to go out and play. Not playing and not having an active life-

style leads to a calorie excess food lifestyle of the children, which is perilous to their health.

Obesity issues have increased manifolds in young adults and children as the salt-rich foods they consume are detrimental to their health and play a huge role in increasing weight. Children consume lesser fiber and other organic food items like fruits and vegetables and therefore miss out on many nutrients.

Junk foods have very limited or no nutrients and are extremely addictive. This was proved by a study published in a research paper named 'Pediatrics', published in the year 2004.

## Hazardous Impacts of junk food

Another side effect which obesity has is depression and low self-esteem. Therefore, consuming junk foods is related to a child's low self-esteem and low self-confidence. They are often ridiculed by their peers for their physique and have negative and detrimental impacts on one's growth, development, and overall well-being.

Certain important and pivotal fatty acids like omega-6 polyunsaturated fatty acids and omega-3 fatty acids are missing in junk food. They have severe impacts on the bodies of young adults and children, especially in the manufacture of cell membranes in the body.

Proper education about the hazardous impacts of junk foods needs to be given, and parents and guardians need to step up and intervene in the food habits of young adults and children. This age is very formative and having a healthy and balanced diet needs to be of paramount importance.



Apart from having low nutrition and unhealthy ingredients, junk food also has far more calories than healthy food

Crashed at 40km/h

Source: Transport for NSW



## Cars more safe for men than women drivers

By Sophia Navagaonkar

It is an ever ongoing endeavor to make human lives not only easier, but also safer through technology. This is especially true for the automotive industry, which is constantly improving its products to make driving safer, and reduce the risk of injury for its occupants. Car crashes are one of the leading causes of death and injury in many countries, and these companies make their cars safer every year to combat that problem.

An integral part of making automobiles safer is automotive crash testing. These testing programs make use of dummies to simulate humans during a crash. This allows the scientists and engineers to get data that would be impossible to get from an actual human without risking their life.

However most of these dummies are modeled after human males, which means that the data collected and the developments made are done according to the male population only.

The resultant gender differences in design have led to women being more prone to severe injuries compared to men in comparable crashes. For example, in the event of an accident, the airbags in the car will strike a male driver in the upper chest, thus creating a cushion for the body and head. However in the same car, and the same accident, the airbag is likely to have a different outcome on a female driver, as smaller women will come in contact with the airbag chin first, which will snap their head back and possibly lead to serious neck and spinal injury.

The University of Virginia's Center for Applied Biomechanics conducted a study of actual crashes, and found that women had a 47% more chance of sustaining severe injuries than their male counterparts in similar crashes. Risk

for moderate injury was also 71% more, and women were 17% more likely to lose their life, according to the study.

Since the 1950s, developers have been using crash test dummies. For years now, the most commonly used dummy has been one based on the 50th percentile male. This dummy is significantly taller and heavier than the average woman with male spinal columns and male muscle mass proportions.

It wasn't until 2011 that female crash test dummies began to be used for testing in the US. But, these dummies were simply scaled-down versions of the male ones, and weren't modelled after female bodies. Female-typical characteristics like lower bone density, differences in distribution of muscle mass, and differences in vertebrae spacing were not accounted for in these "female dummies".

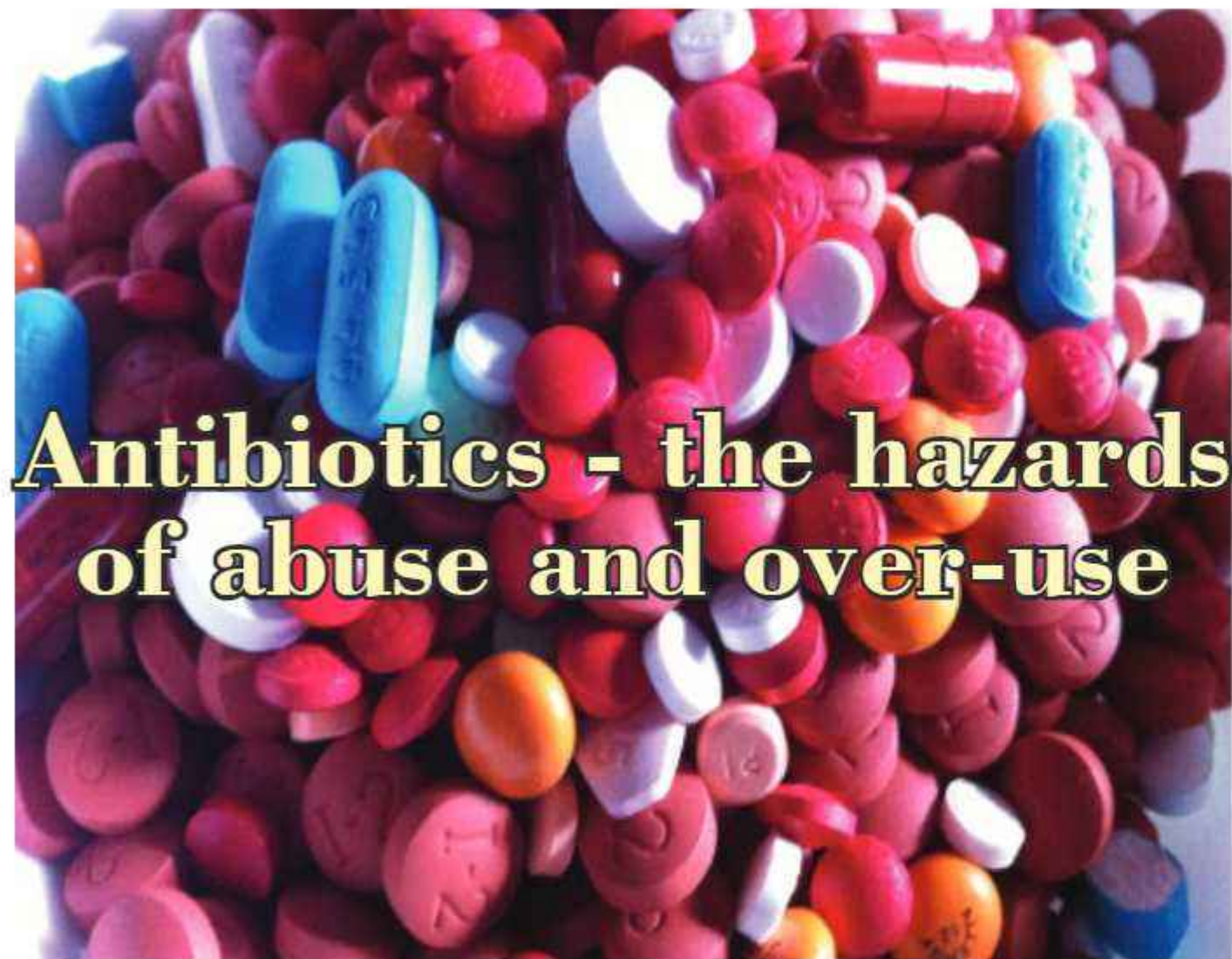
This has given rise to women's safety being completely ignored when it comes to development of automobiles. It is about time that women get their due and become a point of consideration in the development of technology.



SOURCE: Dynamic Test Center, AGU Zürich

50th percentile male crash dummies being used in a low-impact collision test.





## Antibiotics - the hazards of abuse and over-use

By Akshat Bhatnagar

Bacteria are a domain of single cellular living organisms. They were one of the first living organisms to exist on this planet. Bacteria are an essential part of various natural processes that occur on earth. They are also crucial for most multicellular organisms that exist on this planet, like us. The bacteria present in our gut help us digest our food and, in turn, produce energy used by our bodies to stay alive and complete day-to-day tasks.

Nevertheless, not all bacteria are beneficial. Some species of bacteria are pretty harmful and can cause terrible diseases like anthrax, cholera and leprosy. Up until the 20th century, these diseases were deadly and large scale outbreaks were frequent. This was because we did not have an effective tool to fight these harmful bacteria.

Although there are records of antibiotics being used since ancient times, modern antibiotics were only discovered in the 20th century. These modern antibiotics were the tools that we needed. They were remarkably effective and were seen as miracle drugs.

However, these antibiotics come at a high cost. Uncontrolled use of antibiotics can lead to and has led to bacteria evolving new methods of protecting themselves and getting stronger and more resilient to these antibiotics. These drugs help save millions of lives by killing harmful bacteria, but on the other hand, their unchecked use leads to the evolution of the very thing they aim to destroy.

This powerful weapon that we have created is capable

of damaging our ecosystem in unimaginably catastrophic ways. Its overuse could create a world where super bacteria, immune to all known forms of medicine, become a common occurrence. This would ironically take us back to the pre-20th-century era when we were unarmed against these terrible diseases.

Antibiotics are a gift of science, and they need to be used in a controlled manner. But nowadays, we take this gift for granted. Over the counter, antibiotics are readily available, and people consume them for the simplest of things, such as a minor cold or a sore throat.

In reality, these drugs should be used as a last resort. An even bigger abuser of antibiotics is the livestock industry. Animals are kept in miserable conditions, in congested and unhygienic cages.

These conditions create the perfect grounds for bacterial infections to spread. To prevent this, livestock is given strong antibiotic drugs, which should be strictly controlled. Due to this, in 2015, a super bacteria was discovered in China, which was resistant to Colistin.

Colistin is a powerful antibiotic that is reserved for highly deadly infections. This drug was being used in several Chinese pig farms. Resistance to Colistin is catastrophic news since Colistin was considered one of the strongest antibiotics ever discovered.

We are already starting to see the horrible effects of the overuse of these precious drugs, and we need to regulate their use before it's too late.

## Air pollution has affected 84.5 percent of Delhi's population

By Mayura Ghate

Delhi, India's capital, has become the hub of India's highly polluted cities. Delhi has faced issues such as excess population, developing infrastructure, increasing number of private transports, and industries. The stubble burning is also blamed for the depleting air quality in the capital city, which adversely affects people's health.

Post-celebration of Diwali, the pollution level in Delhi has increased. The air pollution reached the extent that the Delhi government had to shower water on the roads to control the smog (a mixture of smoke and fog).

What are the major factors responsible for pollution? One of the major causes of high pollution is the release of harmful pollutants from the industries, emission of carbon monoxide from vehicles, stubble burning the farmers in the neighboring states of Delhi, and of course, use of fire crackers during festivals.

The Air Quality Index (AQI) is the air quality indicator. As the value of AQI rises, the health risks increase. For the AQI range 0-50, air quality is recognized as satisfactory. AQI in the range 51-100 is considered moderate. According to various research, people can suffer from lung problems, such as asthma, bronchitis, and cancer, even for this level.

For the range 101-150, the air quality is unhealthy for the sensitive group of people who already suffer from health issues such as dry cough, wheeze, breathlessness, chest discomfort. If AQI in the range 151-200 indicates unhealthy air and 201-300 is very unhealthy. The range 301-500 is considered hazardous. Delhi's AQI was in the severe zone for seven days between 20 October 2021 and 14 November 2021. Doctors said they have been getting more patients with respiratory conditions such as asthma, respiratory infections, heart attacks, and stroke.

People like the traffic police, street vendors, and delivery personnel who have very high levels of exposure are facing the highest risk from air pollution. High levels of pollution have also been linked to premature births and deaths due to pneumonia in children.

Many studies revealed that 84.5 percent of people were suffering from health problems due to the increased incidence of smog. It was found that 76.8 percent of people reported irritation in the eyes, 44.8 percent reported irritation in the nose, and 45.5 percent reported irritation in the throat.

Those who already have a history of respiratory conditions are advised to stay indoors as possible. Patients with severe asthma or Chronic obstructive pulmonary disease (COPD) are advised to use air purifiers.

According to doctors, the high pollution levels can be bad news for those who have recently recovered from Covid-19. A large proportion of people have post-pneumonic pulmonary fibrosis and long Covid-19. They are

more likely to get cough, breathlessness, chest discomfort, lung infection, just like those with other chronic respiratory conditions when the pollution levels shoot up.

With air pollution in Delhi reaching new peaks, there is an urgent need to adopt unconventional and unpopular measures that tackle the causes of air pollution and benefit all city residents.





# How pandemics have shaped human society

By Adarsh Tripathi

According to Dr. Walter Scheidel, there are four types of inequality in human society. These are mass-mobilization warfare, transformative revolutions, state collapse, and lastly as we have been experiencing for over a year now, catastrophic pandemics.

When you think about it, the coronavirus pandemic has been somewhat of a leveler in terms of status and suffering, although not nearly one as dramatic as some of the other events in history. Everyone has suffered. Nearly everyone has lost a loved one, or knows someone who has lost a loved one. Without a doubt, we can say that the coronavirus pandemic has impacted our culture and lifestyle as a species in a way that will have far-reaching consequences.

Pandemics in human history have played a huge role in shaping our society today. Take for example the Antonian Plague that occurred in the Roman Empire between 165–180 AD. Owing to the extent of the Roman Empire under its great leader Marcus Aurelius, the pandemic spread as far and wide from Italy and Western Europe to Africa and even Asia Minor.

It destroyed almost a third of the population in some areas, even claiming the life of Marcus Aurelius himself. According to historians, the Antonian Plague is one of the most important reasons behind the spread of Christianity throughout Europe. The pandemic left the Roman Empire reeling, and the behemoth empire soon buckled.

This, however, left the gap for a renewal of faith and spirituality, leaving the door open for Christianity to shape the centuries ahead. Even today, the head of the religion is in Rome.

The first global pandemic in the right sense of the term came with the Black Death. The effects of the outbreak are still very visible in human society. For starters, people did not bathe everyday before the pandemic.

The pandemic itself was attributed to the bubonic plague, and actually originated in China before travelling down the Silk Road in 1347. By 1400, it had claimed the lives of almost 60% of Europe's population.

It was during this time, that the concepts of quarantine and plague doctors were established in various parts of the world. Modern medicine would have developed very differently without the Black Death.

Some of the most devastating pandemics have seen huge differences in the life of humans before and after. As humans gear up for more socially distant lives in a world with limited space for a booming population, we stand at the precipice of one of the biggest challenges we have faced as the human race.

However, it is going through the crucible of suffering that paves the way for a better, newer human race, and as we have always done before, there is hope for a new dawn after this pandemic.



Plaque in Weymouth, England, noting the entrance of plague into the country.

# Covid-19: what we need is predictive surveillance



Continued vaccination drives across the country have led to overall caseload dropping in India, pushing towards endemicity.

By Hannah Sarasu John

Amidst predictions of the third wave of the coronavirus pandemic in India, experts hope for an endemic turn of the pandemic to return to normalcy.

In the month of June, 2021, the reported daily number of coronavirus infections began falling below 50,000 daily cases, reducing to 40,000 and 30,000 daily cases in the months of August and September. With numbers dropping even further in the month of October, predictions of the chances of a devastating third wave are becoming slimmer as India inches forward towards 100 per cent vaccination of its sizable population.

The decrease in cases could be attributed to a large section of the population developing antibodies, either through vaccinations or by getting infected leading to a condition known as endemicity.

An endemic condition, as per the epidemiological terminology refers to predictable disease transmission with reduced severity (as seen in cases of influenza, seasonal colds or flu and in vector borne diseases such as dengue).

This prevents chances of outbreaks, and limits the radius of infection to more sporadic outbreaks which can be easily controlled. According to the Indian Council of Medical Research, roughly about two-thirds of the population in India had developed antibodies against the virus.

Leading Virologist at Ashoka University, Shahid Jameel stated that it was because of these infections and the subsequent development of antibodies, that the population would be protected from severe infections and symptomatic infection when the pandemic becomes endemic. For the endemic nature of SARS-CoV-2 to occur, the rate of vaccinations must be more than the virus's ability to mutate through infection, making the limiting of transmission crucial for India to achieve this.

It should be noted that although the recorded number of Covid infections have decreased, the country's condition has not yet become endemic. Warning against complacency, Dr. Anant Mohan, the head of the AIIMS Pulmonary Medicine department, Delhi, emphasized on the conditions required for India to achieve endemic status such as in countries such as the United Kingdom and the United States, who have reopened and are functioning normally.

These conditions implied the limiting of transmission to prevent the mutation of the virus to more transmissible and more resilient variants.

The push towards an endemic India is beneficial to allow for predictive disease surveillance. The second wave of the pandemic was extremely destructive, with extreme spikes in infections and fatalities due to Covid and Covid-related complications. A predictive model of endemicity is crucial for better planning and disease control along with the current consistent pace of vaccinations.



# How the pandemic has affected the migrant labourers in India

By Abhishek Anand

The pandemic has profoundly impacted the world. It has resulted in more than 22 crore cases and around 45 lakh deaths across the globe. Our country has also seen highly devastating sights and uncountable grievances of people. However, visuals from one such incident will keep haunting the national leaders for generations to come.

additional concerns of access to food and finding jobs in their hometowns.

When asked about the impacts of lockdown and the pandemic, Rajesh, 32, a migrant worker from Bihar, said, "We had no hope left. I thought we would not survive, but I could not leave my children alone. We kept walking and finally reached here. I broke down when I met my mother,



*Stranded migrant workers walking back to their hometowns*

The sight of workers walking back to their hometowns and carrying their children and belongings questioned the legitimacy of our country's health and transportation framework. During the second wave, migrant workers had no hope left. With no money left, an upsurge in the unemployment rate, no access to healthcare and risks to life forced the migrant workers to take this drastic step of walking more than 1,000 kilometres to reach their hometowns.

According to a report published by the Stranded Workers Action Network (SWAN), the most affected workforce was from the informal sector. While the effects were similar to the first wave, the second wave resulted in compounding problems for workers as they had no access to healthcare.

SWAN recorded conversations with around 8,000 workers along with their family members. It observed the lack of access to primary healthcare, lower incomes and savings, increasing debts, and struggles to survive in an expensive metropolitan city. The report did not include the

and since then, my family has refused to go back."

Bihar recorded close to 2.5 million workers coming back to their villages out of desperation and frustration. The media houses still failed to cover their grievances in detail. Manoj Jha, a Member of Parliament from Rashtriya Janata Dal party, while highlighting the problems of the poor people, said in his parliamentary speech, "Deaths during the second wave remains a living documentary of the government's failure."

The video went viral, and it further probed individuals to think about the kind of things and governance they have experienced in the last year. He further explained in his speech that nothing is free, and hence everyone contributes equally in this welfare state.

The plights of the migrant workers have failed to gain the attention of the government and the media.

With an impending third wave, the government has to plan carefully to avoid serious economic and health implications on migrant labourers.

# At last, a vaccine to fight malaria !



*The World Health Organisation recommends all countries suffering from malaria to provide the vaccines, especially to children.*

By Aadhya Venkatesh

Mosquirix, the world's first malarial vaccine approved by the World Health Organisation (WHO), is the world's only vaccine to cure parasitic diseases. With sanctions to use the vaccine, malaria-ridden regions in sub-Saharan Africa have the chance to eradicate a disease that has been skyrocketing over the years.

Malaria kills more than 4,00,000 people a year, a large majority of which are children in Africa. Even though not severe, countries like India also face bouts of recurring malarial infections during the monsoon seasons and subsequent deaths because of the parasitic virus. With the WHO approval of the "Mosquirix" vaccine, modern medicine is one step closer to eradicating the potentially deadly disease.

Several malarial vaccines have been registered for trials and testing over the years. The RTS, S was the only one positively reviewed in 2015 by the European Medicines Agency. It was the first vaccine of its kind to pass regulatory enquiry.

The Mosquirix vaccine helps fight one of the deadliest *Plasmodium falciparum* malarial infections. The Director-General of WHO, Dr Tedros Adhanom Ghebreyesus, called the long-anticipated vaccine a "breakthrough for science, child health and malaria control".

The malaria vaccine is a boon for the life expectancy of children in sub-Saharan Africa. The country faces over 2,60,000 deaths in children under the age of five

because of having contracted malaria.

WHO Regional Director for Africa, Dr Matshidiso Moeti, said that the "recommendation offers a glimmer of hope for the continent which shoulders the heaviest burden of the disease". He also further added that the vaccine would increase the life expectancy of children in Africa.

India, too, will have a significant role in the production of Mosquirix. GlaxoSmithKline (GSK), the innovators of the vaccine, have partnered with the Hyderabad-based Bharat Biotech to procure a major component of the vaccine. GSK will subsequently acquire the S antigen, produced in India's Bharat Biotech.

The World Health Organisation has recommended immunisation in four stages. Four doses of the vaccine will be administered to children from 5 months of age.

Malaria is not only a cause of great concern in Africa but in India as well. A total of 5.6 million malaria cases occurred in India in 2019. This statistic is enough to prove that the malarial vaccine will be a huge step forward in reducing the number of disease cases and eventually eradicating it.

The medical breakthrough in the form of Mosquirix adds a necessary armour to the toolkit in the battle against malaria. Like so many diseases, immunisation is the only way to eliminate it. The approval of the first vaccine is also a reinforcement and stepping-stone for other vaccine developers to create more malarial vaccines.

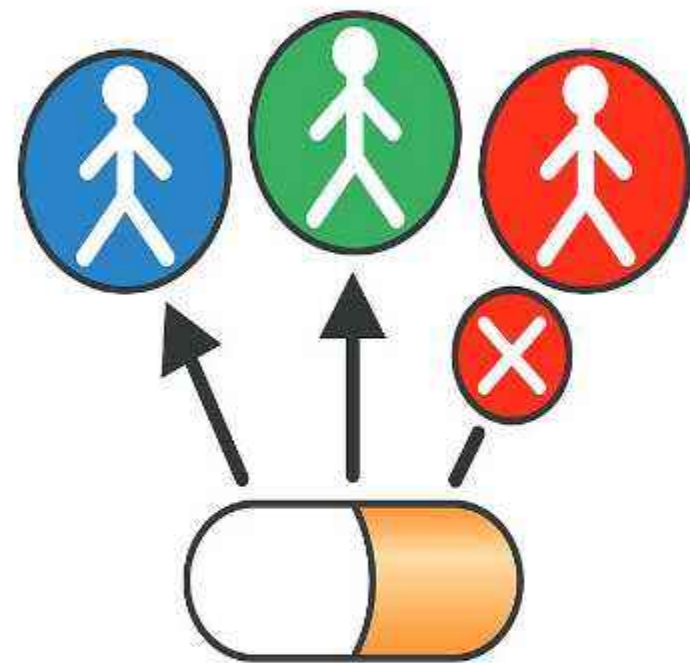


# How AI is helping create personalised medication

By Vijayhardik Josyula

"If you want to predict the future, look at what rich people have today". It is a quote by Hal Varian – Chief Economist at Google.

Toby Walsh, a leading researcher of artificial intelligence (AI), used the quote at a panel discussion of the future of medicine. He used it to describe the personalization of healthcare in the future. Making a statement based on the quote by Varian, Walsh predicted that all of us end up with personal doctors in the future.



Personalised medicine

Technology is the catalyst that transforms the world of medicine. This transformation will be pioneered by large amounts of data and AI. AI serves as the bridge between the collected data and personalized medicine. The use of artificial intelligence and machine learning helps build models to collect and analyze data.

The process of data collection is not a novel exercise. It has become a part of our everyday life. We wear Fitbit devices that act as fitness monitors and pedometers. Our data is collected by these devices daily.

The government proposal to have digitized electronic health records is an extension of the idea. It provides the doctors with a comprehensive medical history of the patient. It probably promoted the idea of having a unique health identity in the country.

The foundation, however, was laid in the latter half of the 20th century. The advent of medical genetics and the discovery of the DNA structure paved the way for personalized medicine. It opened up the possibility of treating patients based on their genetic code.

The result of these discoveries was the creation of the

Human Genome Project. The project collected genomic sequences of 20,500 human genes. The published results of the project provided great insights into the study of disease and their treatment. Findings that emerged out of it form the basis for personalized medicine.

The idea of personalized medicine is in its infancy. Lack of technological capacity to compute massive chunks of data, coupled with the complexity of the human body, slowed its progress.

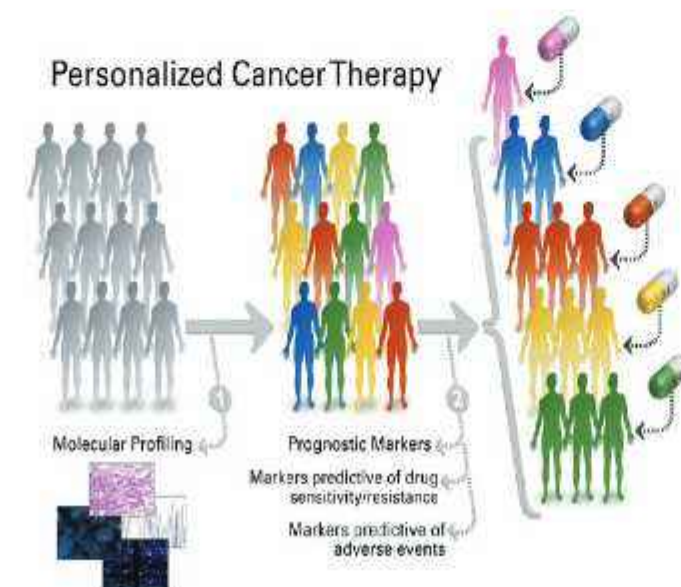
However, applications for personalized medication driven by AI find use in oncology and molecular medicine. The treatment is provided by studying the genetic markers of the patient. It helps doctors in the early detection of tumors and cancerous cells.

In addition, the use of AI helps doctors identify the mutations in the genetic material and provide targeted treatment to the patient. It helped patients diagnosed with leukemia, lung cancer, kidney cancer can get better treatment.

Taking the idea of targeted treatment forward, researchers intend to make use of AI in molecular medicine. Molecular medicine will build upon the gains of pharmacogenomics.

Aided by AI researchers want to gain a deeper understanding of how drugs interact with genes. It would enable determining the efficacy of a drug at a personal level. And people will have drugs prescribed that are compatible with their genetic makeup.

Risks posed by AI make the medical fraternity tread with caution. But the idea of personalized medicine is gaining acceptance. Overcoming the apprehensions between medicine and technology is a slow process. This exciting new frontier of medicine is the beginning of an AI-led revolution in medicine.



Personalised cancer therapy

# Life expectancy drops after Covid pandemic

By Atharva Agashe

With a population of 1.35 billion people, India is in a leading position considering many aspects. Availability of the workforce is higher as the population is huge and thus India also counts up to the 5th largest economy in the World in terms of GDP. With a huge population and limited supply of resources, how is the life expectancy in this country? Do people live longer or are sudden deaths a possibility? We look at this issue in this article.



The mortality rate of infants and kids under the age of 5 has reduced since in 1950.

Life Expectancy refers to the number of years a person is expected to live. Life expectancy is calculated at the time of a person's birth. With the existence of Yoga, Ayurveda, and Homeopathy, the world would expect a higher life expectancy for the people in India. However, the statistics say the exact opposite. The life expectancy in India is much lower than that of the developed countries or the developing ones.

65.07% of the Indian population lives in rural areas where medical facilities are not up to date and the cost of living is also less. Many people suffer from diseases whose treatment is costly and they cannot afford it. The infant mortality rate is seven times higher than in the US and three times higher than in China. Due to this huge number of deaths in the early years of life, the Life Expectancy rate reduces drastically.

The entire medical system of the country is referred

to be on "life support" as the infrastructure, doctors, staff, and amenities are in no proportion to the population of the country.

The rate of female infanticide is high in India and thus life expectancy for females is low at the start of life. The life expectancy at the start of 2019 was 69.5 years for men and 72 years for women. The reason is, the masculine body is more prone to diseases and mortality than the feminine body. Thus women tend to live longer.

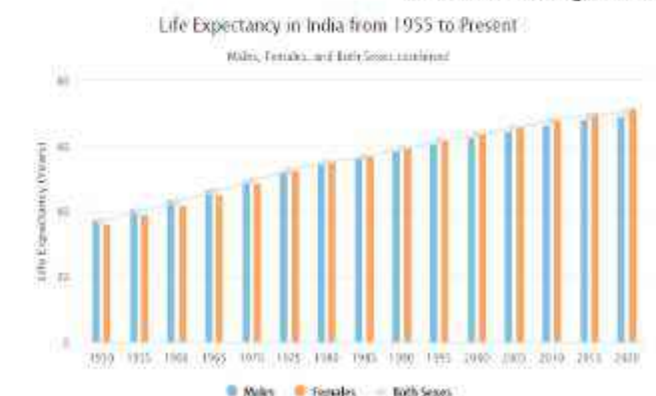
Life Expectancy in India has almost doubled from 1950 to 2020. The reason is the improvement in medical facilities and new inventions in the field of pharmaceuticals. The infant mortality rate has dropped down by 90% since 1950.

Due to the Covid19 pandemic, the life expectancy for men dropped down from 69.5 to 67.5 years and for women, it came down from 72 to 69.8 years.

The density of physicians per 1000 people is as low as 0.702 in India. During the pandemic, India had only 5 beds per 10,000 people which is a horrible ratio. Surviving in a country like India is a bit difficult for some people due to the huge population, unemployment, crime rates, inflation, and many such factors. Even Bangladesh has a higher life expectancy of 72.6 as compared to India.

Hopefully, the life expectancy would increase in the next few years with the advancement of technology and the development of healthcare systems.

SOURCE: cchidghs.co.in



The life expectancy of Indians has increased gradually over a period of time.



# Dengue case load mounts in the Delhi-NCR region



*Aedes mosquito that causes dengue fever*

By Yashvi Shah

According to the latest government data, as many as 1,16,991 cases of dengue have been registered in India this year, indicating an unprecedented surge. Delhi-NCR seems to be the worst affected. The national capital has already surpassed the 2,700 mark this year, states a Delhi civic report on vector-borne diseases released on November 8. According to a survey conducted by LocalCircles, 43% of Delhi-NCR residents have reported that someone in their family or close social network has impacted symptoms of dengue this year.

Dengue fever is a mosquito-borne viral disease that is caused by the dengue virus. It is spread by mosquito bites from *Aedes* mosquitos. These mosquito larvae breed in clear, stagnant water as opposed to those of malaria that thrive even in dirty water. Cases of such vector-borne infections are most common in the monsoon season. However, states like Haryana, Kerala, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand, Delhi, and Jammu and Kashmir continue to observe a high case-load of dengue in November, even after the withdrawal of the monsoon season.

According to news agency PTI, Delhi reported 1,171 dengue cases in the first week of November. A total of 1,072 cases and one death, were reported in 2020. In a massive surge, the number of cases has risen to over 2,700 in 2021- the most number of cases reported since 2018. Despite a decline in Covid-19 cases, 665 infections were reported in October alone, bringing the total number of cases to 1,006 on October 23.

In October, hospitals such as Apollo and Max reported a 30-60% spike in the number of dengue patients. In government hospitals, the number of COVID-19 beds has to be reduced in order to make room for dengue and other fever patients.

Doctors and experts say that prolonged rains could be a reason behind the dengue outbreak in Delhi. Delhi-based physician Dr. Sranjeet Chatterjee from Appolo Hospital also suggests that while governments were busy dealing with COVID-19, cautionary measures for dengue fever were sidelined.

Another reason for this massive dengue outbreak can be that people are not following post-monsoon precautions ever since COVID restrictions are lifted. Stagnant water at re-opened building sites and overcrowded markets can also be the causes of such a massive rise in cases.

A variety of preventive activities, both individual and administrative, can help to reduce the spread and effect of dengue fever. At the government level, public awareness about the disease and well-maintained sanitation should be the goal. Government should also provide adequate healthcare resources to deal with dengue fever such as doing house-to-house checks and fogging.

Until temperature drops in the coming weeks, individuals should ensure that water does not pool in their neighbourhoods or workplaces and dispose of garbage in a proactive and sanitary manner to avoid mosquitoes breeding.

# The 'Mutilated Male' and the medical industry

By Prishita Das

While women may no longer be prescribed confinement for their illnesses, with nothing but the yellow wallpaper for company, the medical industry continues to remain ill equipped to treat women, with sexism and gender biases running rampant.

Aristotle famously called the female the "mutilated male" in *On the Generation of Animals*. Nearly 2400 years later, this belief persists in the medical industry.

Women have been historically been valued only as much as what they could provide for men. In the USA, which conducts a lot of research, women were not required to be included in research trials by the National Institutes of Health until 1993. The persistent belief was that women were "too complex" because of their fluctuating hormones.

Another belief used to justify their exclusion was that these trials might affect women's reproductive capabilities, which were too valuable to be affected, and therefore not worthy of being studied.

Healthcare providers have also thought of female body as similar to the male body, except with a uterus. This has caused many disastrous effects in women's healthcare; one of them being the persisting idea that heart attacks occur more in men than women.

This idea, including a lack of understanding how warning signs and symptoms manifest differently in women contributes to the higher rates of women dying from heart attacks.

Women's diseases and symptoms look different and manifest differently. Add the societal expectation that women need to be accommodating, and you have women receiving their diagnosis later than men.

For example, women are typically diagnosed 2.5 years later than men for cancer and 4.5 years later for diabetes.

They are also met with more hostility when reporting pain and asked to prove its legitimacy. This is exacerbated for women of color. In a 2018 survey of physicians and dentists, many of them reported a belief that women exaggerate their pain, despite 40% of the participants being women.

When considering the effects of racial bias, the gender gap deepens, with the risk increasing every year. In the UK, black women are five times more likely to die during pregnancy and childbirth. In the USA, they are three times more likely to die after childbirth as compared to white women.

Even when health conditions are understood and researched, women have to contend with outright sexism from the doctors themselves. Under policies like the Trump-Pence administration's religious refusal policies, health care workers in the USA and around the globe could deny women services like birth control, abortion, and sterilization, based on their religious beliefs.

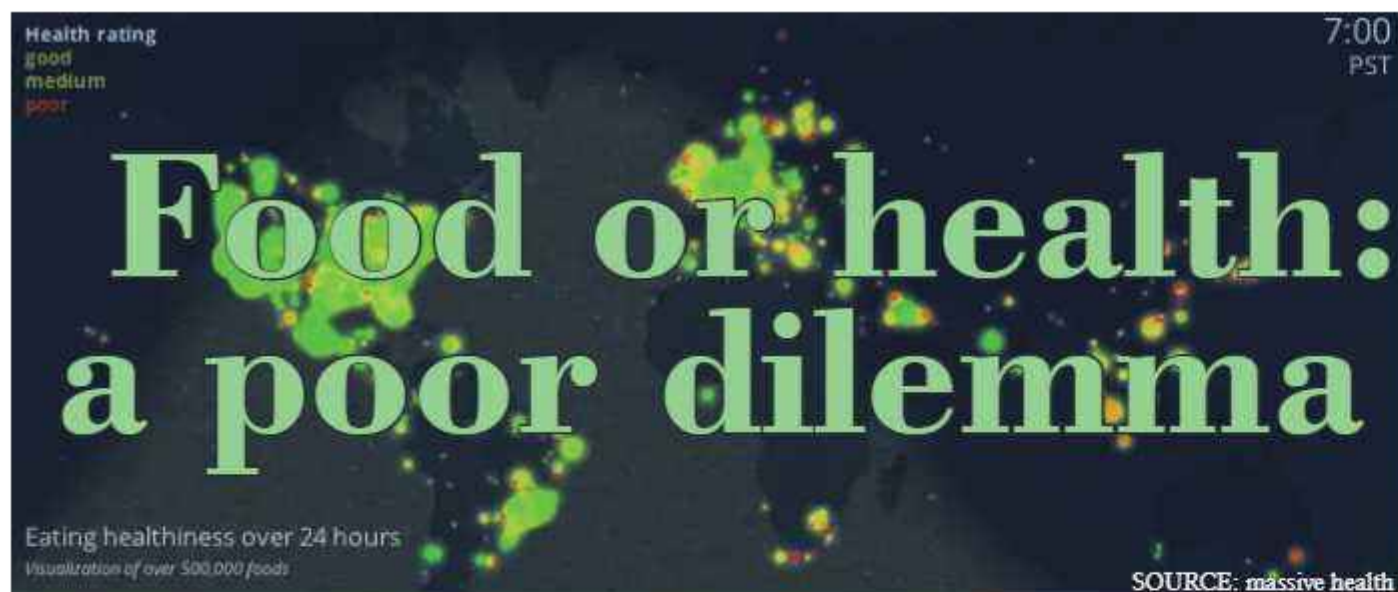
Even now, the state of Texas in the USA enacted a law in September that effectively banned all abortions in the state, with only very narrow exceptions.

While women's healthcare is under researched, underfunded, and still suffers from sexism and racism, it is important to not lose hope. Women must be advised choose diverse teams of healthcare providers, including female doctors whenever possible- mounting evidence shows that women deliver superior healthcare.

Women must also be encouraged and supported to advocate for their needs and make their concerns known, to combat any gaslighting.







By Purnima Priyadarsini

**H**idden hunger is a condition in which people suffer from micronutrient deficiencies. And according to a report by WHO (World Health Organization), nearly 2 billion people in this world are affected by this deficiency, and 1 million children die every year due to it. Around 1.6 billion people worldwide cannot afford a decent diet up to the standards set by EAT.

EAT is a non-profit organization that works to transform the global food system. Diverse diets rich in fruits and vegetables are the best antidote against hidden hunger. But then the real question is, can everyone afford it?

Unfortunately, the word "food security" has not been practiced in the real sense across different parts of the world. There are many places where food is insufficiently available. While addressing food insecurity issues, the priority is given to only making the quantity of food available. There is no consideration of a diet or measuring its nutritious value.



*What a healthy plate of daily diet looks like according to Harvard medical school*

Even in more food-secure countries, the restricted amount of resources is directed to ascertain the safety of exported food products at the cost of food sold domestically.

Individuals facing food insecurity are vulnerable to chemical, biological, and other hazards in unsafe foods, posing severe, acute, and chronic health risks (ranging from diarrhea to cancer and even death). And these individuals are prominently from a low-income background and poor or developing countries.

With food budgets that can't get any tighter, these communities have to face the dilemma of choosing between food or healthy food regularly.

When the estimated daily cost of acquiring food meeting the international health standard is compared against the available income, around 1.6 million people worldwide can't provide such diets.

In sub-Saharan Africa and South Asia, the two regions hosting most of the world's poor and malnourished people, the estimated cost exceeded the available incomes for 57 percent and 38 percent of the population, respectively.

The process of deciding to follow a poor diet is instigated by the choices available within the budget and the nutritional knowledge and unwillingness to prioritize good health.

Women, children, and adolescents get crushed under the consequences of unhealthy food habits the most. But the fact that unhealthy foods, junk foods, are cheaper than healthier options, the issue of poverty failing to secure food and health at the same time is recklessly overlooked by leaders and authorities around the world.

The very first step is, of course, increasing the income of poor and marginalized communities, but there is also scope to reduce the price of nutrient-rich food products. The need is to increase the efficiency in the agricultural system of countries across the planet so that the output is massive and healthy, and available in cheap. But these steps together are still not enough.

People need to be educated about the importance of nutrients rich food by making them aware of the consequences of unhealthy food patterns. Junk food has also become a lifestyle for many low and high-income countries, and this lifestyle is influencing millions too. But above all, the hard truth is the gap between hunger and healthy food is still a mountain to scale while no one is enthusiastic enough to be a climber at the moment.



By Shirin Pajnoo

**T**he ubiquity of digital resources has enabled telemedicine to come into picture. This would've otherwise been impossible, considering the current health infrastructure in India. India is at the cusp of a revolution that can transform lives and turn out to be a huge economic booster.

Telemedicine is the diagnosis and treatment of patient using telecommunications and digital technology, thereby making healthcare available despite barriers of distance and accessibility.

World's second largest populated country has faced the issue of equitable distribution of healthcare since time immemorial. The doctor-to-patient ratio is appalling in India, which is 0.7 doctors per 1000 people, against the World Health Organization (WHO) recommendation of 1:1000 people.

### Urban-Rural and Gender Gap

Concentration of top healthcare facilities and experienced doctors in the urban side has deprived the rural side of proper healthcare facilities. Rural people have to travel to the urban cities to access essential facilities, which takes them double the cost and efforts.

A study conducted by Harvard, revealed that access to basic healthcare is a dream for many Indian women. This all stems from the stereotypes and women tend to be silent because of pressure.

### Evolution of Telemedicine in India

In 2001, Indian Space Research Organization (ISRO) kindled the fire by setting up a Telemedicine Project by linking Apollo Hospital, Chennai with Apollo Rural Hospital at Aragonda village of Andhra Pradesh. The state of telemedicine as a game-changer today are the combined efforts of ISRO, Department of Information Technology (DIT), Ministry of External Affairs, Ministry of Health and Family Welfare (MHFW), state governments and private

hospitals.

Telemedicine augmented during the Covid-19 Pandemic, with more people opting for the service as a better and non-contagion risk method. Expert advices from doctors are just a click away. Adoption of Tele-ICU was a major technological advancement; ICU patients were monitored from a command centre.

"The coronavirus pandemic has pushed telemedicine to the forefront and it is witnessing an action-packed surge," says Vikram Thaploo, CEO, Telehealth, Apollo Hospitals.

### Efficacy and Challenges

MHFW published a report stating that GOI's Telemedicine service, 'eSanjeevani' completed 3 million consultations. Statistics suggested that citizens from tier 3 and 4 cities found it beneficial. Another initiative by Indian Council of Medical Research, 'Arogyashree' is working on the design of ECG jackets, which can be used to monitor a patient's ECG without hospitalization.

Health tech apps in India have increased the accessibility to healthcare. Platforms like Navia Healthcare, Meddo, Practo etc. have been successful in using technology to deliver services.

Even though Telemedicine is exponentially growing, the lack of guidelines and governance surrounding its practice in India is ambiguous. Legal regulations are important for encouraging the practice and giving it authenticity. Other challenges include lack of awareness, unavailability of basic internet services in rural areas, language and communication issues, digitization of health records, lack of physical environment posing a risk of wrong diagnosis etc.

All the major players need to work in tandem to boost the telemedicine ecosystem. The rapid advancement in technology hints at telemedicine becoming the future in India.





By Pranjal Nangare

accessible, efficient, and convenient for the patient."

The onset of the pandemic came along with a lot of hindrances and challenges to public health. However, accompanied by this were also many ventures that emerged in the healthcare sector. One such very noticeable upsurge was in the number of apps and sites providing telehealth services.

Telehealth or the use of two-way communications technology has affected the healthcare sector ominously. Apps like MayoClinic, Practo, Lybrate, Tata Health, or Doctor 24x7 have seen many users consulting with doctors virtually for various ailments. People have used such online portals to remedy Covid symptoms and aid respiratory ailments, diagnostic imaging systems and services, and even psychological counseling.

According to a report by Practo, approximately five crores Indians sought medical consultation virtually with around two online doctor visits per month. A 600 % growth has been registered with such sites not just in India but even abroad. As stated by McKinsey & Company, telehealth use has increased 38 times from the pre-Covid-19 baseline.

Though this trend of web diagnosing has risen post-pandemic, it has not emerged recently. The world's first VSAT-enabled village hospital was commissioned in Andhra Pradesh on 24th March 2000. In 2015 the Social Endeavour for Health and Telemedicine (SEHAT) was also launched to connect healthcare structures. So, telemedicine has not been bequeathed to India by Covid-19.

This rise, nonetheless, has been due to the pandemic. Post pandemic, there was a very hard-wearing hesitancy of people to visit hospitals and doctors. The hesitancy gave apps and sites venturing into telemedicine an opportunity to be the bridge between doctors and tentative patients. There was an escalation of doctors and medicine practisers willing to provide virtual consultancy and consumers willing to be web diagnosed. Anil Vinayak, the GCOO of Fortis Healthcare, has famously quoted, "The use of telemedicine technology allows healthcare to become more



However, since its inception in India, the growth of telemedicine has also been slow. A significant factor for this slow growth has been the apprehension about the legal notions of telemedicine. According to the legislator guidelines, a Registered Medical Practitioner can use any telemedicine tool suitable to connect to the patient, such as Practo or even WhatsApp, Facebook, and such social platforms.

Then again, there is the concern of the accuracy of such a diagnosis. According to the legal guidelines, all medical practitioners must complete a mandatory online course within three years of notification to provide diagnosis via telemedicine. Despite this, there will always be apprehension about the precision of such diagnosis since it is a technology we are letting take control of our health.

This growth of telemedicine needs to be therefore addressed with prudence. There have to be constant checks and monitoring over the services provided via such technology. The consumers of such apps and sites need to exercise discretion and caution while being web-diagnosed.

# LSD has potential for therapeutic use

By Rishabh Sengupta

The subject of psychedelic drugs has been a culturally polarising issue for decades now. Psychedelic drugs such as LSD and magic mushrooms are known for their strong association with the counterculture movements of 1960s America.

Psychedelics are known to affect the brain in a way that gives users an increased state of awareness, higher levels of introspection, and esoteric perception of reality. Substances like hallucinogenic mushrooms and LSD are considered Class A drugs by most authorities in the world and are illegal in most nations.

The worldwide disapproval of psychedelic drugs is fueled in no small part by America's War on Drugs, which was started in 1971 by then US President Richard Nixon. Now that the historical context has been established, let us now move on to the subject of psilocybin, the chemical present in LSD and magic mushrooms that causes their psychedelic effects.

Due to the heavy stigma surrounding the idea of "drugs" and the heavy regulation of psychedelic substances, scientific studies of psilocybin are few and far between. The chemical, which was known for the longest time as simply a psychotropic substance, has in recent years garnered the interest of the medical community. Studies have found it effective in treating cases of mental

illness and tobacco addiction. These new discoveries threaten to shatter our existing perceptions of psychedelic substances.

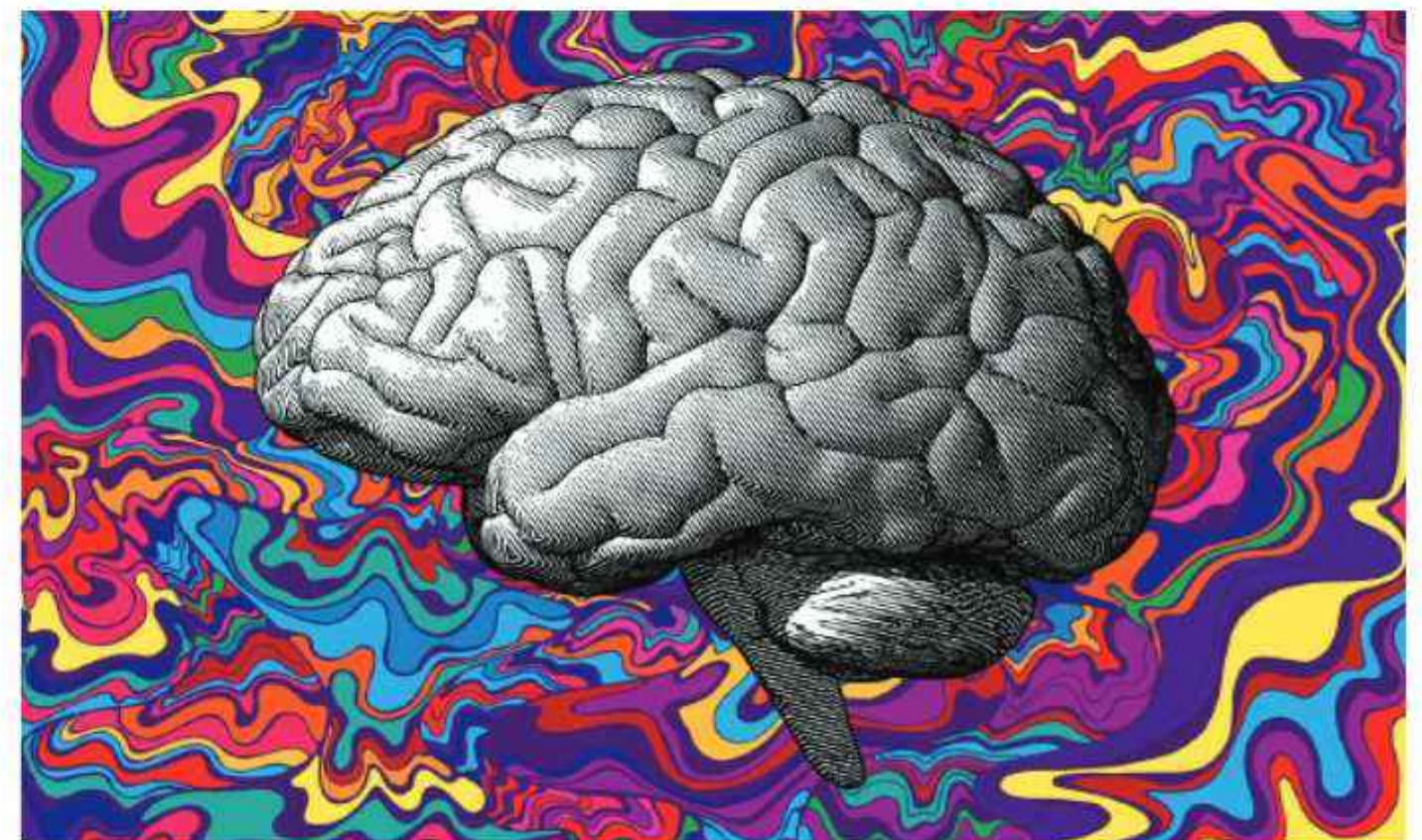
The leading study in this area is a research programme by Johns Hopkins University which has been going on since 2004. Their 2020 study was a major milestone in the field of psilocybin research.

In the study, a small group of adults suffering from severe depression were administered doses of psilocybin alongside psychotherapy. The findings were that psilocybin proved to be just as effective at reducing depressive symptoms as common antidepressants, if not more.

Several other studies have proved the efficacy of psilocybin in treating depression, anxiety, and tobacco and alcohol addiction.

Many studies show that micro-dosing psilocybin can help alleviate depression and anxiety symptoms without the side effects that common medicines have. All these findings suggest that the medicinal and therapeutic potential of psilocybin should be researched more.

Johns Hopkins University has even suggested to the American regulatory authorities that psilocybin should be reclassified from a Schedule I drug, i.e., a drug with no medical potential, to a Schedule IV drug, i.e., a tightly controlled prescription drug.







## As the pandemic took its toll, 'elective' surgeries got deferred

By Shruti Menon

India was already facing a shortage of surgeries, and then the pandemic hit.

According to the Lancet Commission for Global Surgery, low and middle income countries like India require 5,000 surgeries per lakh population, to be able to meet the surgical burden of disease.

However, we haven't been able to hit anywhere near that amount. Only 29% of the estimated number of surgeries required took place, according to a pan-India surgery market report in 2020.

When the pandemic happened in 2020, hospitals all around the world were naturally swamped, as they were dealing with an unprecedented level of people that required urgent medical care.

In such situations, hospitals were forced to prioritise, leading to the cancellation of elective surgeries, so that there would be more beds and medical personnel available for those who had contracted the coronavirus. While this sounds like a reasonable decision, it's not without major risks attached.

The name elective is misleading— elective procedures are not always optional, most of the time they are so only in that the date can be pre-scheduled. Basically, an elective procedure is anything that isn't an emergency surgery.

This postponement of elective surgeries means that a lot of people with conditions such as cancer, cardiac

problems, hernias and stones in the kidney or gall bladder who require these surgeries, risk their condition worsening. This can lead to further complications, possibly emergency surgeries, and reduce the patient's chance of survival.

This is not to say that hospitals made the wrong call in prioritising COVID-19 patients, but to point out that while the pandemic might be battering the country in wave after deadly wave, the country's disease burden isn't going anywhere.

Elective procedures also include those that are not necessarily linked to a disease— like cosmetic procedures. In 2019, India was the country with the 9th highest number of aesthetic procedures done, according to the global survey of the International Association of Aesthetic Plastic Surgery.

With studies showing that body image issues are on the rise during the pandemic, it can be expected that the demand for aesthetic plastic surgery and other cosmetic procedures will increase.

The burden on the healthcare system will not be easing with the reduction of COVID-19 cases. Hospitals will have to spend months, if not years, catching up with the backlog of elective surgeries— in just the early months of lockdown, 5.8 lakh surgeries had to be postponed or cancelled.

However, figures from December 2020 after the first wave of the pandemic show surgeries reaching 80% of pre-covid levels, and if the same trend is to repeat this year post-second wave, it can be said that hospitals are, hopefully, almost ready to get back on their feet.

## Mixing Covid-19 vaccines: is it safe and effective ?

By Rupashree Ravi

Mixing Covid-19 vaccines is emerging in a few countries as a way to inoculate the population effectively when faced with safety concerns over rare side effects and unpredictable shortage of supplies. Most vaccines against the coronavirus must be given in two doses, but several studies are testing the mix and match of vaccine products wherein one vaccine is given as the first shot along with a second vaccine of a different type or manufacturer is given as the second shot many weeks later.

A recent Lancet study conducted in Sweden found that people who received a first shot of the adenovirus vector vaccine, Oxford AstraZeneca Covid-19 vaccine followed by an mRNA vaccine shot such as Pfizer BioNTech had a lower risk of infection and a similar or even stronger immune response as compared to those who were immunised with both shots of the same vaccine.

Several other studies including the CombivacS study in Spain are now backing up this idea using preliminary evidence. AstraZeneca is also studying if using a first shot of its vaccine and a second shot of Russia's Ad26 Sputnik vaccine would be effective.

Moreover, Russia's sovereign wealth fund Russian Direct Investment Fund (RDIF), AstraZeneca and R-Pharm had found that the combined use of the Oxford AstraZeneca vaccine and the first component of the Sputnik V vaccine, Sputnik Light, showed high immunogenicity among those

inoculated. The RDIF has also initiated partnerships with other vaccine manufacturers to conduct joint studies of a combination of Sputnik Light with other foreign vaccines.

However, scientists from the World Health Organisation (WHO) have cautioned against the mixing of vaccines from different manufacturers, citing very less data available on its health impact, while stressing on the need for larger studies to investigate their safety and effectiveness against clinical outcomes. The Strategic Advisory Group of Experts (SAGE) of the WHO had recommended using the same Covid-19 vaccine for both doses.

In India, the Drugs Controller General of India (DCGI) had approved a study on mixing Covaxin and Covishield vaccines. While Covaxin is manufactured by Bharat Biotech, Covishield is produced by Serum Institute of India, the biggest vaccine maker in the world. The trial was conducted in two groups -- the first group was given Covishield as first dose and Covaxin as second dose, while the second group was given Covaxin as first dose and Covishield as second dose.

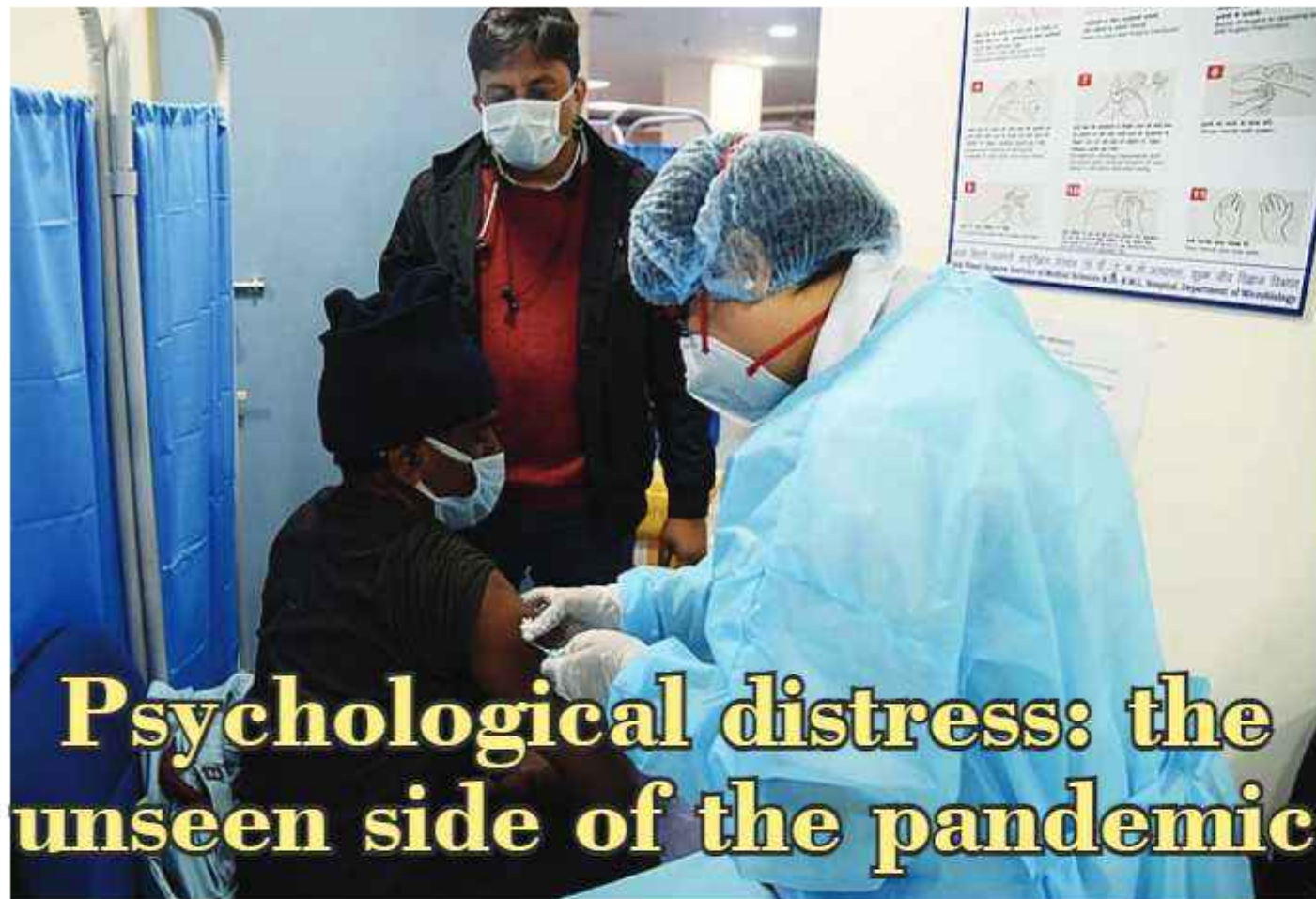
The Indian Council of Medical Research (ICMR) further said that mixing Covaxin and Covishield was not only safe, but also demonstrated better results in building immunity against the coronavirus, although there were some side effects such as pain, fatigue, fever, headache and other minor side effects.

The results of these studies will have implications for vaccination strategies in different countries.



Many countries across the world have prompted researchers and public health officials to test the mixing of two Covid-19 vaccines to tackle vaccine scarcity and use stockpiles effectively.





## Psychological distress: the unseen side of the pandemic

Health workers in India administering vaccines despite the shortcomings

By Keerthana Unni

When COVID-19 broke out in China in December of 2019, the lives of people all around the world changed drastically. This major health crisis affected millions mentally, physically and economically without class or status discrimination. With sudden restrictions in the movement for months at a time, a pandemic affecting and killing humankind in drastic numbers, being isolated from friends and family and the ever-growing fear of uncertainty had a dire effect on people's mental and psychological health.

The world was forced to implement multiple changes all at once—strict lockdown measures, mandatory use of face masks in public, social distancing, constant sanitizing, change of work and education to online. Trying to physically adjust to all these changes along with the constant scrutiny of one's health and unpredictable situations outside took a toll on the mental wellbeing of the majority of the population.

Psychological distress like stress, anxiety and panic increased notably among the general public as a repercussion of the pandemic. People in bulks lost their jobs which made it hard for them to provide for their families especially those who were the sole breadwinners. This led to an increase in anxiety and depressive symptoms among the youth.

Many were in mourning due to the loss of their near and dear ones. The availability of hospital beds, oxygen cylinders and vaccines only made the situation worse aggravating the already high-stress levels. There were also reportedly higher levels of distress, loneliness and fears due to constant confinement and the spread of misinformation.

A study conducted in China after the outbreak showed 14.4 per cent of the youth showed signs of Post Traumatic Stress Disorder. Higher levels of suicide attempts were seen due to the combining of stress and ambiguity with pre-existing mental health and psychological issues. 50.43 per cent of the participants in a study conducted in a Spanish university reported experiencing acute mental distress majorly during the first week of isolation. In Bangladesh 15 per cent of its students experienced extreme depression and 18.1 per cent experienced severe anxiety since the beginning of the pandemic.

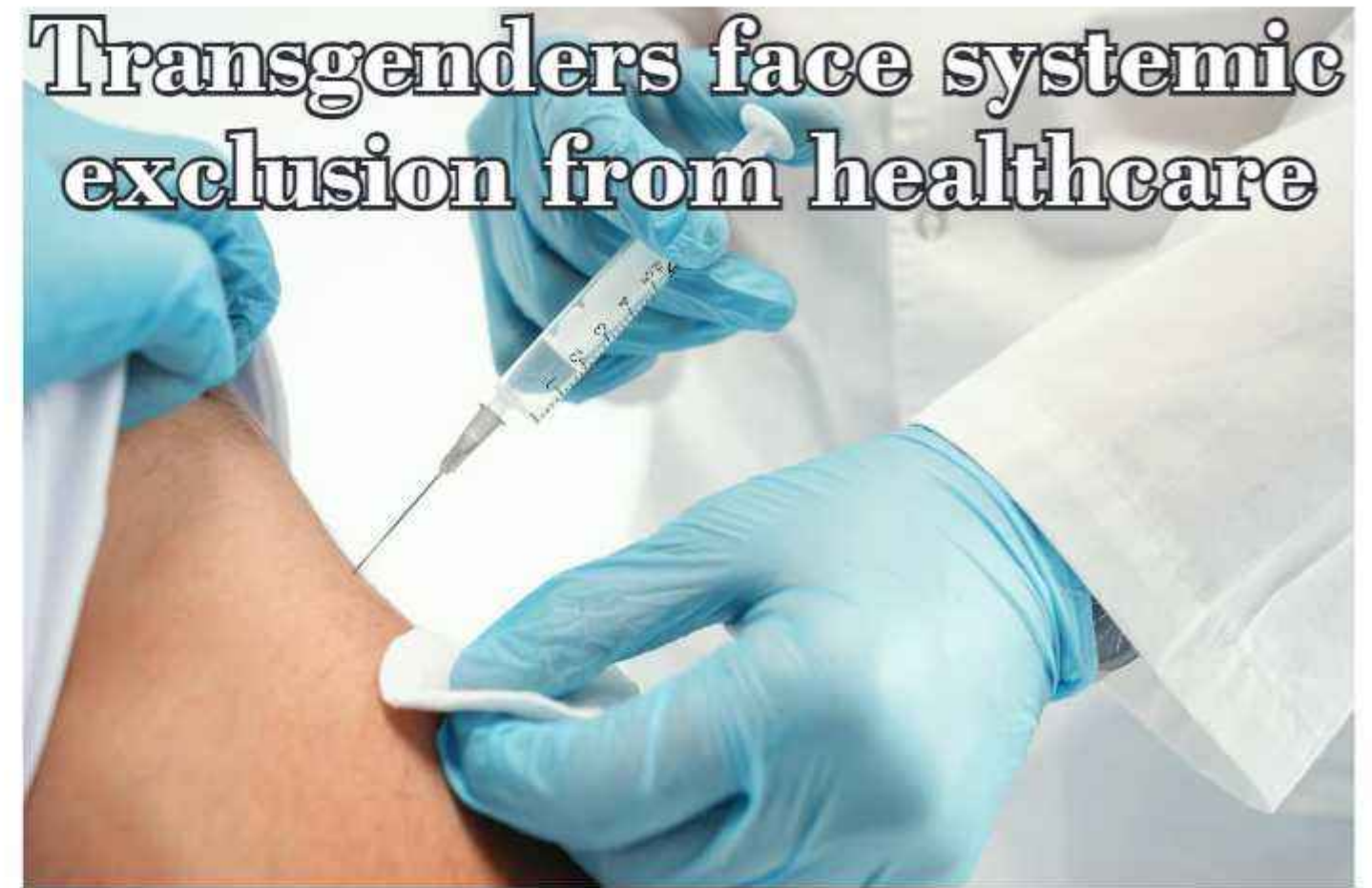
They also reported having seen a distressing amount of cases mostly among the older student population who had to support themselves financially.

Front line and health care workers' main source of stress and fear was about the safety of their family and friends and their shortcomings. While COVID in itself can be the cause of mental and neurological complications there has also been an increase in drug and alcohol use seen among the people to cope with the situation.

Other passive coping methods seen to be used are avoidance and self-blaming which are maladaptive and cause more harm to the person in the longer run.

In recent times more people have started to seek out help and help groups to cope with the increasing levels of stress and anxiety caused by the pandemic. This has led the World Health organization to prioritize mental health services along with essential services that need to be provided to every country. They have also allocated resources in the field of mental and psychological health to monitor and improve the psychological impact that has been caused by COVID-19.

## Transgenders face systemic exclusion from healthcare



By Aarya Haresh Trivedi

Large disparities in terms of access to quality healthcare are one of the most glaring realities in India where health outcomes are intricately connected to socio-economic and political status, identity, and community.

Various dynamics of society are at play in creating complex combinations of barriers that are responsible for the exclusion of vulnerable groups from accessing healthcare. Some barriers, such as poverty or distance to healthcare centres, are simpler to analyse, others at various intersections, of society, systemic discrimination, or policy lapses require a more complex approach of analysis. One of the largest social groups that faces systemic exclusion from healthcare access in India is the Transgender community.

The foremost barrier towards vaccination is apprehension, which stems from the transgender community's historically traumatic relationship with the Indian healthcare system. Many are denied care based on gender; Those who are not still find themselves against insensitive documentation processes, a hostile medical team, poor service, lack of facilities such as washrooms, among several other problems.

Furthermore, the lack of factoring of transgender people in vaccine trials causes hesitancy around how the vaccine would respond to hormone medication, gender affirmative surgery, STI or HIV-AIDS treatments. At the peak of rampage of the second wave of the COVID-19 virus, several trans individuals were afraid of being beds and medical care especially when cis-gender people found accessibility of medical care to be a challenge.

Apart from vaccine hesitancy, the CoWIN portal possesses a major challenge due a heavily digitally relied system, which does not acknowledge the digital divide

combined with the 54% illiteracy rate. Even those who have technological access are to discover that the vaccine registration form does not offer a transgender category in the gender section, and instead offers an "Other" option.

This goes against the landmark NALSA judgment, which states that the State must undertake all measures to account a person's self-affirmed gender correctly. The registration ordeal further worsens since CoWin asks for a photo identification which the several transgender people lack, having kicked out of their parental homes at young ages.

This healthcare crisis demands both, short and long-term policy measures such as socio-economic upliftment, improving literacy, repealing exclusionary laws, and allowing the right to self-affirmation for one's gender. On a short-term level measures like vaccine awareness drives, vaccine registration programmes, home to home vaccinations, separate vaccination centres, and special officers responsible for the transgender person's immunisation would boost the vaccination rate in the trans community.



Transgender community flag





## Tik Tok, Instagram - playing havoc with the health of young girls

*The hidden danger behind TikTok's glamour*

By Krishna Barot

Can we imagine our lives without social media? For many, such a possibility is out of the question. From checking Instagram in the morning to scrolling through TikTok before sleeping, the lives of millions revolve around social media.

But behind the glitz of likes, comments and shares lie a quagmire - once within, it is often difficult to escape.

Recently, Facebook whistle-blower Frances Haugen exposed shocking malpractices of the social media giant. Her accusations revealed how Facebook was aware of Instagram's detrimental effects on teenage girls - especially posts and videos of "clean eating" and "losing weight". While Facebook representatives refuted the claim, numerous families have come forward and narrated how Instagram ruined the physical and mental health of girls in their families.

TikTok is not to be left behind. With more than 1 billion active monthly users in September 2021 itself, the application also accounts for much damage done to young, impressionable users. Bridget Todd, a representative of women's advocacy organization UltraViolet, described TikTok as even more dangerous than Instagram - because of the sheer population using it.

What begins with a video with the hashtag, "#whatleatoday" triggers an algorithm that eventually leads users to videos with hashtags such as, "#thinspo", "#cleaneating", "#ketodiet", "#iwillbeskinny" - drawing young girls into a world of anorexia, mental health issues and other problems. While words like 'clean eating' seem harmless at surface level, videos on both platforms have depicted women relying on only-juice diets for weeks, starving themselves while carrying out intense physical activities.

All it takes is a glance at one video - and the rabbit hole appears. CS Mott Children's Hospital in Michigan released a report revealing an alarming rise of children admitted for eating disorders. The cases grew during the first year of the Covid-19 pandemic, as phones became a source of entertainment for people locked up in their homes. The hardest part is not the recovery but for young girls to stay away

from social media.

Incidents of young girls recovering from disorders only to fall back to their old ways because of social media are rampant - and a major cause of concern for parents. Parents described how videos on Instagram and TikTok showing what people and 'health influencers' eat in a day are disturbing - for they just eat less food in the name of being "healthy".

While Instagram and TikTok have acknowledged these issues and promised to prevent further incidents, the damage has been done. Both platforms are cracking down on accounts and posts that may trigger eating disorders and mental health issues in teenagers while attempting to guide them to sources where they can receive help for such issues. But with 1 billion TikTok users and about 1.4 billion Instagram users - removing all the harmful content on the platforms is a mammoth task.

It is ironic how content on the platforms that seemingly encourages users to live a healthy lifestyle - does the exact opposite.



*Anorexia, mental health issues, body image problems*



*A woman frontline worker wearing a PPE suit.*

By Nandita Singh Rattan

The coronavirus pandemic has impacted the health of everyone, including women, thus globally affecting their reproductive health and hygiene. This consequently has an ill effect on the emotional and mental wellbeing of menstruators across the globe.

Women — both cis and trans — around the world have faced an increased risk of domestic violence, hate crimes, and sexual oppression due to traditionally assigned roles and weighing patriarchy which have only worsened during the gruelling lockdown. This overall rise in discrimination against women leads to reducing attention towards their reproductive health.

Gender inequality, toxic traditions, and growing poverty furthered by humanitarian crises have resulted in turning periods into a time of great vulnerability to disease, destitution, and discrimination. Growing cases of poor menstrual health is one of the major health concerns of menstruating women around the globe, especially for the marginalized and less resourceful sections.

These vulnerabilities are only spreading like wild fire in the pandemic because of the lack of ease of access to sexual and reproductive health services and awareness. People with disabilities, people in prisons, refugee and migrant women, and shelter residents find it the most difficult to access decent health care.

Fortunately, organizations like UNICEF have taken initiative to reach out to the worst affected and the marginalized population around the world—of which women unfortunately make a sizable portion.

According to UNICEF around seventy percent of healthcare workers are women who are facing scarcity of

essentials such as hygiene and sanitation products such as basic toiletries, and menstrual care products like sanitary napkins, tampons, etc.

It is especially a herculean task for the hospitalized and quarantined to gain access to menstrual care products. Frontline workers like women nurses, doctors, cops, and other essential workers have found it increasingly difficult to keep up the burden of a hectic routine mixed with menstruating.

Women affected with covid have observed a drastic change in body weight and spike in stress, causing irregularities in their menstrual cycles. Wearing PPE makes it a time consuming and often big task for menstruating women to change menstrual hygiene products often forcing women to either bleed into protective suits or use contraceptives to avoid missing out on work.

On the brighter side though, social welfare organizations like UNICEF are seen taking considerable measures to bridge the gap. They do so by providing support through easy access to high-absorbency sanitary napkins, and by supplying sufficient quantities of PPE kits for menstruators deployed at the frontline.

This would help them afford breaks at least every 4 hours to change menstrual materials, especially in case of the usage of tampons, to negate the risk of toxic shock syndrome.

Another health care concern that has seen a surge during the pandemic are teenage pregnancies that may need immediate support in the form of ease to abortion and restorative care. Governments around the globe have been lacking to provide the care women need making it a lingering crisis that demands immediate corrective measures.



# Polio - the oldest virus known to humans

By Somalika Chhabra

The Covid-19 pandemic has certainly shaken and overwhelmed the world enough to have forgotten the existence of other viruses that turned into plagues and epidemics in humankind's history. Poliovirus is one such virus affecting humanity since the time of Egyptian civilizations dating back to 1400 BCE.

Polio is a fatal disease produced by a highly contagious virus that exclusively affects humans. Paralysis is the most severe symptom, and if the virus affects the muscles that let people breathe, it can result in permanent disability or death. Post-polio syndrome can cause new muscle discomfort, weakness, or paralysis in adults, even if they had polio as a child and seemed to recover completely.

In the early 1900s, polio epidemics erupted in countries with relatively high living standards, at a period when other diseases like diphtheria, typhoid, and tuberculosis were on the decline. Indeed, many scientists believe that advances in cleanliness have increased in polio cases. Infants were thought to have been exposed to polio at an early age. Polluted water supplies were primary sources of infection carriers. Infants' immune systems could quickly combat poliovirus and establish long-term immunity to it, thanks to maternal antibodies still circulating in their blood.

Jonas Salk invented the first polio vaccine. The vaccine was an injection-based inactivated poliovirus vaccination that was exceedingly safe and effective. Disposable syringes were uncommon at the time, and immunization was delayed.



SOURCE: Express File Photo by Kamleshwar Singh

*Polio drops being administered to one of the children during nationwide Pulse Polio drive in 2021 after the first wave of COVID 19*

SOURCE: UNICEF/UN0324716/Zaid



*Polio drops being administered to an infant at a government medical care centre in India*

Albert Sabin invented the Oral Polio Vaccine in 1961, which was a different type of polio vaccine (OPV). It was easier to administer this vaccine to large groups of people. A multifaceted strategy was created, and widespread distribution began. Polio eradication is one of the most arduous global health efforts in history, and it will be the second only human disease ever eradicated.

Since 1988, the number of children infected with polio has decreased by 99 percent, from 350,000 cases in 125 countries to fewer than two cases in Afghanistan and Pakistan today. Nigeria, the world's third-largest polio-endemic country, was declared polio-free in 2020, along with the rest of Africa.

However, since the outbreak of the COVID-19 pandemic, there has been a dramatic reduction in childhood vaccinations. In 2020, over 23 million children skipped their routine vaccinations, an increase of 3.7 million from 2019.

The fact that most of these children have not had a single dose of immunization and that many come from underserved communities, conflict zones, and remote locations with limited access to health care are particularly troubling. The diversion of resources due to a heavy focus on COVID-19 is one of the main reasons for this surge. The elimination of polio has been impeded by a lack of public awareness and vaccination apprehension. At the same time, the epidemic raised public awareness of vaccination and its benefits to public health. The rapid introduction of WHO-approved COVID-19 vaccinations has severely decreased mortality and morbidity in vaccinated populations.

The world is in the final stage of polio eradication. Nevertheless, pervasive challenges make this stage the most difficult yet. We must come together and rally behind the new Polio Eradication Strategy 2022-26 of the World Health Organisation to get the eradication project back on track. With a concerted effort and solid global partnership, the global health community can put the polio eradication initiative on the right track.

# Covid-19 anxiety syndrome: a new mental health crisis ?



By Yukta Patwardhan

the virus.

As the number of cases of COVID-19 slowed down over the past months, lockdown restrictions eased and people began returning to the world as we once knew it. However, this did not prove to be as seamless an experience for all. Some struggled to adapt to a world that had undergone such a drastic change. This phenomenon can be attributed to what scientists now call the COVID-19 anxiety syndrome.

The syndrome primarily stems from pandemic-induced psychological distress and causes people to experience fear, anxiety, and stress, etc. The syndrome often renders people unable to leave their houses. The person affected will obsessively start checking for symptoms of COVID-19 and avoid any kind of social situation that brings them in contact with other people, and subsequently, the virus.

In rare cases, people experience symptoms like post-traumatic stress disorder and suicidal ideation. However, these are not that common and most people have increased general stress, insomnia, and anxiety.

With the world having crossed 200 million cases over two years now, the virus has driven people to be more cautious in their interactions with public spaces.

However, such behaviour gets amplified to a much larger degree when it comes to people who experience the COVID-19 anxiety syndrome. The syndrome comes with the understanding that returning to the world as it was before will mean an increased risk of getting infected by

Some of the main causes of the syndrome seem to be isolation due to lockdown, fear, and uncertainty regarding the virus. Many people have experienced a loss of their livelihood, which has affected their mental state to a great degree. Quite a lot of people have seen deaths in close circles, be it friends or family. This has led to a sort of paranoia setting in, especially in highly neurotic individuals.

Another thing that adds to the general anxiety caused by the pandemic is the constant media coverage of new developments - be it new infections, death rates, or even new strains of the virus being discovered. Constant exposure to negative news has begun affecting people's attitudes towards their environment.

To the people affected by the COVID-19 anxiety syndrome, this manifests in either or in compulsively checking the news for updates on the situation or, in rarer cases, complete avoidance of news and current affairs.

Some scientists claim that with the pandemic receding, it could be giving way to an upcoming mental health crisis. The implications of this are disastrous. The resources and awareness levels regarding mental health are already discouragingly low in most countries. Only a small percentage of the population has the means to have continued access to mental health resources.

This comes at a time where most people have not even started recovering from the financial impact of the coronavirus. Awareness and affordable access to mental health resources must be extended to all members of society.



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