

A tale of pandemics: when and how do they end?

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The end of pandemics in recorded history has seldom been a singular point; it has been a gradually progressing, complicated and chaotic process to say the least.

When we say "end", we do not necessarily mean "eradicate", which entails permanently bringing the global incidence of the said infection to zero. The sole disease we eradicated is smallpox, a bygone menace with a whopping 30% mortality rate. Multiple factors contributed to this exceptional success.

The disease's innate nature to produce obvious symptoms led to earlier detection and isolation of cases. The intensive worldwide vaccination campaign by the World Health Organisation (WHO) using a vaccine conferring lifelong protection substantially tilted the scales in our favour. So did the absence of an animal reservoir transmitting the virus.

When the deadliest pandemic in history, the horrendous 1918 influenza pandemic, the misnamed Spanish Flu, swept through the globe, it infected nearly 500 million and killed between 20-50 million. In four separate waves, it ravaged the world till 1920.



As time wore on, the virus mutated to become less lethal and morphed into the relatively benign seasonal flu. As it circulated worldwide and infected nearly one-third of the then global population, people eventually grew immune. And at one point, the virus ran out of enough susceptible hosts that it could infect to create a pandemic-level impact. Restrictions like social distancing, mask-wearing were put in place even back then to decelerate transmission.

The H1N1 influenza A virus, which caused this pandemic, persisted and kept making comebacks; its descendants went on to cause newer pandemics. Of them, the (H1N1) 2009

pandemic, informally labelled as Swine Flu, is one of the recent past. Being a novel flu virus with genetic materials from humans, birds and pigs in unique combinations, it briskly spread because people did not have pre-existing immunity to it. While most infections were mild, they still caused around 100,000-400,000 deaths in 2009.

Winding back centuries, we were outright helpless in the throes of the three plague pandemics; the Black Death of the fourteenth century causing over 50 million deaths in Europe is one spine-chilling history. Caused by a bacterium named Yersinia pestis, it spread by the bite of rat fleas and

respiratory droplets of infected humans. While easily treatable with antibiotics today, Congo, Madagascar and Peru continue to be the most endemic countries for the plague.

Experts opine this pandemic will end gradually. While the eradication of the virus is unlikely, its transmission can be controlled to the point it no longer poses a pandemic-level threat and instead, settles down to an endemic disease with sustained, baseline-level transmissions or seasonable outbreaks. It is the stage when the catastrophe being unleashed now becomes far less disruptive. Of course, different countries will reach this milestone at a different

pace.

This is the first coronavirus pandemic ever, that too caused by a novel virus. Unlike the influenza viruses causing the previous pandemics of this century, coronaviruses spread more easily, make people stay contagious for longer and cause more serious infections and deaths.

The immune landscape of the world population will be a cardinal determinant. As more people become immune, the collective defence against the virus rises and the virus runs out of susceptible hosts and slows down. The bright side is that we have several available effective vaccines, which will immensely help us in actualising this goal eventually. But without their equitable distribution globally, prospects of optimism are bleak; while countries like the United Kingdom have vaccinated around 60% of their population with at least one dose, most African countries could only vaccinate less than 1% of theirs so far.

We have so much to do in terms of fostering the political goodwill that tackles vaccine nationalism. We also have to innovatively resist the variants that could evade immunity.

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DID YOU KNOW?



Long working hours increasing deaths from heart disease and stroke

STAR HEALTH DESK

Long working hours led to 745,000 deaths from stroke and ischaemic heart disease in 2016, a 29% increase since 2000, according to the latest estimates by the World Health Organisation (WHO) and the International Labour Organisation (ILO) published in Environment International recently.

In a first global analysis of the loss of life and health associated with working long hours, WHO and ILO estimate that, in 2016, 398,000 people died from a stroke and 347,000 from heart disease as a result of having worked at least 55 hours a week. Between 2000 and 2016, the number of deaths from heart disease due to working long hours increased by 42%, and from stroke by 19%.

The study concludes that working 55 or more hours per week is associated with an estimated 35% higher risk of a stroke and a 17% higher risk of dying from ischemic heart disease, compared to working 35-40 hours a week.

Governments, employers and workers can take the following actions to protect workers' health:

- Governments can introduce, implement and enforce laws, regulations and policies that ban mandatory overtime and ensure maximum limits on working time;
- Bipartite or collective bargaining agreements between employers and workers' associations can arrange working time to be more flexible, while at the same time agreeing on a maximum number of working hours;
- Employees could share working hours to ensure that numbers of hours worked do not climb above 55 or more per week.

HEALTH bulletin



Latest global data estimates nearly 8 million deaths from smoking in 2019

The most comprehensive data on global trends in smoking highlight its enormous global health toll. The number of smokers worldwide has increased to 1.1 billion in 2019, with tobacco smoking causing 7.7 million deaths - including 1 in 5 deaths in males worldwide, published in *The Lancet* recently.

Of particular concern are the persistently high rates of smoking among young people, with over half of countries worldwide showing no progress in reducing smoking among 15-24-year-olds. 89% of new smokers become addicted by age 25. Protecting young people from nicotine addiction during this critical window will be crucial to eliminate tobacco use among the next generation.

In half of countries, reductions in prevalence have not kept pace with population growth, and the number of current smokers has increased. The ten countries with the largest number of tobacco smokers in 2019, together comprising nearly two-thirds of the global tobacco smoking population, are China, India, Indonesia, the USA, Russia, Bangladesh, Japan, Turkey, Vietnam, and the Philippines.

Published ahead of World No Tobacco Day (31st May), the authors call on all countries to urgently adopt and enforce a comprehensive package of evidence-based policies to reduce the prevalence of tobacco use and prevent initiation, particularly among adolescents and young adults.

Pins and needles: an uncomfortable experience

DR OPURBO CHOWDHURY

Pins and needles, called paraesthesia in medical science, is an uncomfortable experience. More or less, everyone endures this kind of situation. It happens if nerve sensation in the blood vessels does not function correctly.

When you have pins and needles, some parts of the body pinned like thorns, sometimes the legs or hands are numb or tingling. It appears when a part of the body is pressed somewhere for a long time. It can be for a few minutes or a few seconds. The feeling goes away when the blood supply to the blood vessels and the nerves' sensation become normal.

Even if such a momentary occurrence in the body is not fatal, it must be understood that there are severe problems in the body behind it, if it has happened repeatedly or for a long time. Then it is essential to find out the reason more than the experience of pinned irritation. It is more on hands and feet. Sometimes it can happen on the back, thighs, buttocks, even on the neck, shoulders.

Pins and needles are caused by diabetes, Raynaud's phenomenon, sciatica, multiple sclerosis, radiation, medicines, chemotherapy, etc. It can emerge if there is pressure anywhere in the spinal cord. It is more developed in arthritis. Taking many antibiotics and seizure drugs can result in pins and needles. Autoimmunity can also raise pins and needles.

There are thousands of blood vessels all over the body to supply blood to the body. There are two types of blood vessels: the artery and



the veins. There are many nerves in the blood vessels to control blood flow. The function of the nerves is to regulate the constriction and relaxation of the blood vessels.

If you are sitting on the body part for a while, obstructing the nerves and blood vessels to conduct its function. On the one hand, the blood vessels cannot deliver proper oxygen; on the other hand, the blood vessels are staved off from sending sensations. After a while, when the pressure shifts, the oxygen supply to the blood vessels of that part suddenly rises, the nerve comes out of its sensation barrier and signals the brain. The brain suddenly stops and mistakes the sudden return sensation and gives feelings

like pin or thorn. And what we feel in that is the pins and needles.

Consult a doctor if the phenomenon repeatedly takes place, even if there is no risk of death for pins and needles. It refers to underlying problems that are happening in your body. The doctor will initially confirm by the description of the problem, history, and physical examination. MRI, X-ray and blood tests are done if it repeatedly happens in any part of the body for a long time.

Pins and needles go away on their own. The only treatment is to find out the reason why it is frequently happening.

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Successful brain tumour removal in Evercare Hospital Chattogram

Evercare Hospital Chattogram had successful neurosurgery for a brain tumour of a 42-year-old woman in the port city, says a press release.

Providing insight on the patient's ailment, Dr Md Anisul Islam Khan, Senior Consultant and Coordinator, Neurosurgery Department at Evercare Hospital Chattogram, said, "Since the patient had been suffering from the effects of the tumour and the accompanying complications for quite some time, it was the best-case scenario to conduct the high-risk surgery to remove it."

Evercare Hospital Chattogram is the largest and first-ever state-of-the-art tertiary care multidisciplinary hospital in the port city, claimed the hospital authority. Since its inauguration, the hospital is redefining healthcare in Chattogram and achieved some remarkable milestones for the healthcare services in the city.

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The thyroid is a butterfly-shaped gland located in front of the lower neck, known as the master gland regulating body metabolism

More than 5 crore population of our country suffer from some kind of thyroid disorders, of which 3 crore are not even aware of it!

Mother-Baby-Iodine: The Importance of Iodine on the Woman and her Baby

Thyroid disorders can cause infertility, abortion or miscarriage in women, or they can give birth to mentally or growth retarded babies. The extent and consequences of iodine deficiency disorders on women of reproductive age, especially pregnant and lactating mothers, are known to affect children during their first 1000 days of life from conception.



World Thyroid Day
25 May 2021
International Thyroid Awareness Week
25-31 May 2021

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