News from here and there

WHO announces end of the Covid-19 global health emergency

In a detailed media briefing on 5 May 2023, Dr Tedros Adhanom Ghebreyesus, Director-General of the WHO, declared that the global Covid-19 emergency status had ended. This announcement came over 3 years after the initial declaration about the onset of the pandemic. Dr Tedros stressed that nations should now manage the virus alongside other infectious diseases. However, he warned that Covid-19 continues to remain a global health threat.

On 4 May 2023, the Emergency Committee of WHO had recommended that the global health agency announce the conclusion of the Covid-19 pandemic as a 'public health emergency of international concern (PHEIC)'. WHO had declared the Covid-19 pandemic a PHEIC on 30 January 2020.

The Emergency Committee's recommendation was based on data analysis showing a massive decrease in Covid-19 deaths, as well as lower rates of related hospital admissions and intensive care cases. In addition, there was substantial population immunity to SARS-CoV-2, the causative agent of Covid-19. The WHO Director-General stated that this announcement was not only a moment for celebration, but also a time to reflect. He emphasized that the suffering borne by people across the globe, the harsh lessons learnt, the investments made and the capacities built, must not be wasted.

Dr Tedros drew attention to the fact that despite all the available technologies and tools that could have helped us plan better, detect quicker, respond faster, and mitigate the impact of pandemics, Covid-19 still occurred. A global deficiency in coordination, equity and commonality resulted in ineffective use of pandemic-related tools and technologies. This resulted in the needless loss of lives. The Director-General reiterated that millions continue to suffer from long Covid and many continue to be in intensive care units across the world.

Considering the end of the emergency status, a WHO review committee will provide long-term advice on the management of the virus. Furthermore, the WHO has updated its Covid-19 Global Strategic Preparedness and Response Plan (SPRP) for 2023–2025. This edition underscores expandable, safe healthcare, emergency preparation, and shared surveillance.

A look at the statistics reveals the harsh reality that humanity has faced since 2020. As of 3 May 2023, there have been 765 million confirmed cases and 6.9 million deaths reported due to SARS-CoV-2.

A pivotal point in the Covid-19 saga was the accelerated development and distribution of numerous effective vaccine platforms including mRNA vaccines, subunit vaccines, inactivated virus vaccines, and adenovirus vector vaccines across the globe by several vaccine manufacturers. Among these, the major players are Oxford-Astra Zeneca, Pfizer-BioNTech, Moderna, Johnson & Johnson, Bharat Biotech, Novavax, Gamaleya, Sinopharm and Sinovac.

Over 13.3 billion doses of vaccines have been given globally as of 30 April 2023. According to the WHO, coverage in the priority groups was 82% for adults over the age of 60 years, and 89% for healthcare workers. Yet, the virus continues to mutate and there are now over 26 variants of the original SARS-CoV-2 strain. The currently dominant variants include XBB.1.5 and XBB.1.16, the former accounts for 45.4% of global cases, while the latter accounts for 4.3%.

As Dr Tedros stated in his press conference, the scars left by the current pandemic should remind us that new viruses will continue to emerge and many will be destructive. Many mistakes were committed. Humanity should promise itself and the generations to come that such mistakes are not committed again.

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India becomes the first country in the world to develop its own model for estimating tuberculosis burden

Inaugurating the 'One World TB Summit 2023' in Varanasi, Uttar Pradesh, the Prime Minister of India Mr Narendra Modi had reiterated India's commitment to eliminate Tuberculosis (TB) by 2025, five years ahead of the global goal of 2030 and stated that 'India's efforts are a new model for the global war on TB'.

The 'Global TB report' brought out every year since 1997 by the WHO and the interactive WHO website (available at *www.who.int/teams/global-tuberculosis-programme/data*) have been considered to be the reference standard for estimates on TB. Moving away from the WHO estimates, India became the first country to unveil its own model for estimating TB burden. Data from the National TB Prevalence Survey in India 2019–21 (available at *https://tbcindia.gov.in/showfile.php?lid=3659*), Nikshay portal (the TB registry of India), trends in case loads in the public and private sectors, drug sales in the private sector, the subnational certification (SNC, a district-level initiative of the National TB Elimination Programme [NTEP]) have been used for generating the model (Mandal S, Rao R, Joshi R. Estimating the burden of tuberculosis in India: A modelling study. *Indian J Community Med* 2023;**48:**436–42). According to this model, the TB incidence rate was estimated to be 196 per 100 000 population compared to 210/100 000 population estimated by the WHO. The TB mortality rate estimated by the Indian model was 23/100 000 population compared to the WHO estimate of 35/100 000 population.

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National Medical Commission issues guidelines for professional responsibilities of medical teachers and students

In April 2023, the Ethics and Medical Registration Board (EMRB) of the National Medical Commission (NMC) released the

Guidelines on Professional responsibilities of (i) medical teachers and (ii) medical students.

In the guidelines for professional responsibilities of medical teachers (available at *www.nmc.org.in/MCIRest/open/getDocument?path=/Documents/Public/Portal/LatestNews/Guidelines%20on%20Professional%20Responsibilities%20of%20Medical%20Teachers.pdf*), the personal attributes, conduct of teacher (teacher as role model), teaching–learning process, assessment and examination process are described. The teacher–student interactions, including bedside teaching, the role of a teacher as a researcher and voice of science responsibilities of teachers towards colleagues and community at large have also been listed. The preamble of the guidelines refers to the medical teacher as a *guru*—a friend, philosopher and guide, who leads the students from the darkness of ignorance to the light of knowledge. The guidelines highlight the role of the teacher in developing a competent, caring empathetic and ethical medical graduate as a facilitator/mentor.

The guidelines are not intended to penalize any teacher, but seek to remind the medical teacher of the professional role in training medical students and other healthcare professionals. This introspection is intended to improve the quality of teaching. The administration of medical colleges is expected to provide an environment conducive for teachers to function at an optimal level. Medical education units (MEUs) in medical colleges are to use these guidelines to train teachers. These guidelines are expected to be reviewed annually.

In the guidelines for professional responsibilities of medical students (available at *www.nmc.org.in/MCIRest/open/getDocument?path=/Documents/Public/Portal/LatestNews/Guidelines%20on%20Professional%20Responsibilities%20of%20Medical%20Student.pdf*), the NMC specifies the responsibilities of medical students towards personal and academic growth, the society and national goals. Stating that medicine is a social and moral endeavour, the guidelines mention the appropriate and modest dress code for medical students. The duties of medical students towards the nation, participation in community events related to health education, health promotion and prevention, sense of social service and nationalism are described. The guidelines encourage medical students to keep abreast of the new health laws being discussed in parliament/state legislature and respond when comments are sought from the public. Further, the students are encouraged to organize regular environmental audits of the campus, identify and initiate appropriate programmes, such as planting trees, reduction of single use plastic, among others.

The teachers and MEUs are expected to use these guidelines to instil responsibility among Indian medical graduates (IMGs) rather than for punitive action. The guidelines remind IMGs of their social obligations during the training period and help them align with the goals of the curriculum.

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Human Cell Atlas: Monumental but lesser known project

The Human Genome Project (HGP), launched in 1990, was an immense success both as a scientific project and as a public awareness initiative with the public getting to know and understand the scientific terms used in the project due to the hype created around it by excellent story telling of how important the results of the project would be.

Another project of similar importance and magnitude, the Human Cell Atlas (HCA) headed by two women scientists, Dr Aviv Regev and Dr Sarah Teichmann, which aims to identify and categorize the 37.2 trillion cells in the human body akin to alphabets of any language, was launched in October 2016. This project is as relevant to histology and histopathology as was the HGP to genetics. As of March 2023, a total of 2704 researchers from 1483 institutes in 86 countries are working on the HCA project. Since 2017, the Chan-Zuckerberg foundation has contributed nearly $254 million towards this project. The HCA intends to publish the first draft of the atlas by 2025.

According to the *American Association for the Advancement of Science* meeting held in March 2023, the project is as important for medical science as was the genome project. The unique points of this project are inclusion of even the remote ethnicities from all continents; assigning sub-atlases to different organ systems; use of freshly harvested tissues unlike its predecessors; goal of classifying cells not only in health but also in disease and also classifying same cells at different stages in life.

The Cell Atlas played an important role during the breakout of Covid-19 when, by using the knowledge of which molecules SARS-CoV-2 attached to, to gain entry into respiratory cells, scientists could identify which other tissues have the same kind of cells that could be prone to an onslaught by Covid-19; they found that liver, heart and kidney cells are prone to damage by Covid-19 virus.

While the initial estimate was of nearly 300 different cell types in the human body, work over the years has shown that the number exceeds thousands. Their data show that as an organ system the brain has the largest number of cells (more than 3000!). The project will help us understand diseases such as cystic fibrosis, inflammatory bowel disease, malignant melanoma, Covid-19, and for cell engineering and studying the effect of drugs on different cells.

Dr Ram Datar (CEO, Circulogix Inc., USA and Founder Co-Director, Dr John T. MacDonald Foundation Biomedical Nanotechnology Institute at the University of Miami, FL, USA), in an email to this correspondent, said that 'Relative to HGP, the HCA project addresses several levels higher amount of organizational complexity, and together with data from HGP, HCA will help us derive much more information about functioning of normal human cells and tissues, as well as anomalous functioning which results in disease for each human organ.'

He added: 'The main techniques in HCA include single cell transcriptomics, epigenetic sequencing and spatial genomics. In each case, use of fast computing power to analyse and make sense of big data is crucial. While HGP led primarily by a few select countries introduced genomics to the general public, HCA involved worldwide collaboration of laboratory scientists, physicians and data scientists which will result in tangible benefits to human health within the next decade, thus really blurring the boundaries between ivory tower academic research and general public.'

Dr Datar, a cancer researcher, holds that HCA, by making considerable inroads into decoding cell types involved in the composition of ovary and pancreas, will be particularly rewarding since cancers of these two organs are among the most aggressive and are often diagnosed only in advanced stages. He added that

'identification of better cellular and molecular targets will significantly ease the early diagnosis and targeted therapeutic approaches for these malignancies'.

He stated: 'As the world fractured by geopolitical conflicts desperately tries to heal through global collaborative efforts, it is heartening to see the fruit of two women scientists leading an international research collaborative effort of nearly 1500 scientists spanning 86 countries, while joining hands with a philanthropic organization led by an academician and leaders of a worldwide business.'

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The National Medical Journal of India is looking for correspondents for the '**News from here and there**' section. We are particularly interested in getting newswriters from the north and northeast regions of India as well as from other countries. By news, we refer to anything that might have happened in your region which will impact on the practice of medicine or will be of interest to physicians in India. The emphasis of the news items in this column, which are usually from 200 to 450 words, is on factual reporting. Comments and personal opinions should be kept to a minimum if at all. Interested correspondents should contact SANJAY A. PAI at *sanjayapai@gmail.com* or *nmji@nmji.in*