Few More Lessons Learnt from Covid-19: Health Technology Assessment (HTA) Perspective

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Authorities were busy with planning and management to deal with non-communicable diseases as they thought that they had got near control over majority of communicable diseases. Then in December 2019, a series of pneumonia cases of unknown cause emerged in Wuhan, Hubei, China, with clinical presentations largely resembling viral pneumonia and considering the shared history of exposure to Huanan seafood market across the patients, an epidemiological alert was released by the local health authority on Dec 31, 2019, and the market was shut down on Jan 1, 2020. An expert team of physicians, epidemiologists, virologists, and government officials were soon formed after the alert. Deep sequencing analysis from lower respiratory tract samples indicated a novel coronavirus, which was named 2019 novel coronavirus (2019-nCoV). Coronavirus declared global health emergency by WHO on 31st January 2020. Later this was termed as Covid-19 (Coronavirus Disease-19). Covid-19 virtually touched every soul across the globe in some or the other way. It has ruined economy; people were compelled to do business which they were not supposed to do under normal circumstances. Initially it was addressed just as a form of viral pneumonia, latter it was declared as a matter of international concern and ultimately a Pandemic on 11 March 2020.[1] It also debunked health infrastructure and health services in each corner of the world. Resources are always scarce whatever the financial status of a country. Covid-19 is an unprecedented situation to all of us leading to dilemma in the management across the globe. The classical triad of History, Examination and Investigation were formulated and revised from time to time for early and accurate diagnosis. RT-PCR (Real time Reverse Transcriptase Polymerase Chain Reaction), Rapid diagnostic test kits, Chest CT (Computed Tomography) were some noticeable methods utilized. Similar was the situation with treatment modalities which were also revised a number of times with limited success. Various treatment options were tried after some success reports from different parts of the world including Chloroquine[2], Vitamin-C[3], Vitamin-D[4], Ivermectin[5], Remdesivir[6], Antiretroviral drugs[7], anti-influenza drugs[8] and many more. Majority of these failed to show significant impact on disease progression on large trials and so dropped later. One very enthusiastic treatment modality was Plasma Therapy which was also found limited effectiveness on larger trials.[9] Various preventive measures were adopted on the basis of limited information available about the disease and using basic knowledge available about prevention and control of Epidemic/Pandemic. Regular and repeated Hand washing, Physical distancing, use of Face mask at public place, Sterilization tunnel, cough etiquettes and basic sanitary measures for IPC (Infection Prevention and Control) were reinforced. Researchers around the world were continuously sharing their experiences about the management and control of the issue. This resulted in flooding of information and misinformation.[10] Authorities were also continuously being challenged by Infodemics in the present era of social media. One more challenge was changing strains and nature of the virus leading to questionable efficacy of previously formulated treatment and control guidelines. Ultimately vaccination against the covid-19 was projected as the most cost-effective and time-tested solution of the pandemic and largest vaccination drive obtained Emergency use authorization globally using different vaccines trial one after another. Vaccination first started among frontline workers, later covered to high-risk groups like elderly then to almost entire population.

Health Technology assessment (HTA) is an evidence-based multidisciplinary policy analysis comparing properties and effects of new and existing health technologies (surgical or interventional procedure, drugs, vaccines etc.) with current standard using unbiased, reproducible systematic scientific methods. In other words, it is a form of policy research that examines short- and long-term consequences of the application of existing and upcoming healthcare technology (ISPOR, International Society for Pharmacoeconomics and Outcome Research).[11] It also revisits knowledge gap about classic technologies used in past. HTA includes but not limited to assess Safety, Efficacy, patient-reported outcomes, real-world effectiveness, cost and cost effectiveness, their social, legal, ethical and political impacts. HTA team includes various stakeholders needed for economical and effective utilization of resources. So, it includes Clinicians, Engineers, Epidemiologists, Economists, Sociologists and Government representatives. Although HTA is an established concept in developed world it only recently gained attention and acceptance in low-income countries like India. The Department of Health Research, Ministry of Health and Family welfare, Govt of India has set up a health technology assessment body named as "Health Technology Assessment in India (HTAIn)" to evaluate all kinds of Medical Technologies.[12,13] HTAIn aims to maximize health of the population, reduce out of pocket expenditure and lessen inequity. It supports the process of decision-making in health care at the Central and State policy level by providing reliable information based on updated scientific evidence and helps to develop systems and mechanisms to assess new and existing health technologies by a transparent and verified processes. HTAIn will appraise health interventions and technologies based on available data on resource, cost-benefit, clinical effectiveness, and safety concerns. HTAIn collect and analyze evidence in a systematic and reproducible way and ensure its accessibility and usefulness to inform health policy makers. Dissemination of research findings through authentic sources and resulting policy decisions to educate and empower the public to make better informed decisions for healthcare are done.[14] Covid-19 pandemic further reinforced application of HTA to a greater extent. By proper practice of the concept of HTA we can make optimal utilization of scarce resources. HTA can be very helpful in policy and decision-making, particularly for developing and emerging countries. It is high time to popularize the concept of HTA across the globe so that efficient use and equitable distribution of various technologies, medications and resources can be ensured and we take further concrete step towards India's Global commitment of Universal Health Coverage (UHC).

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