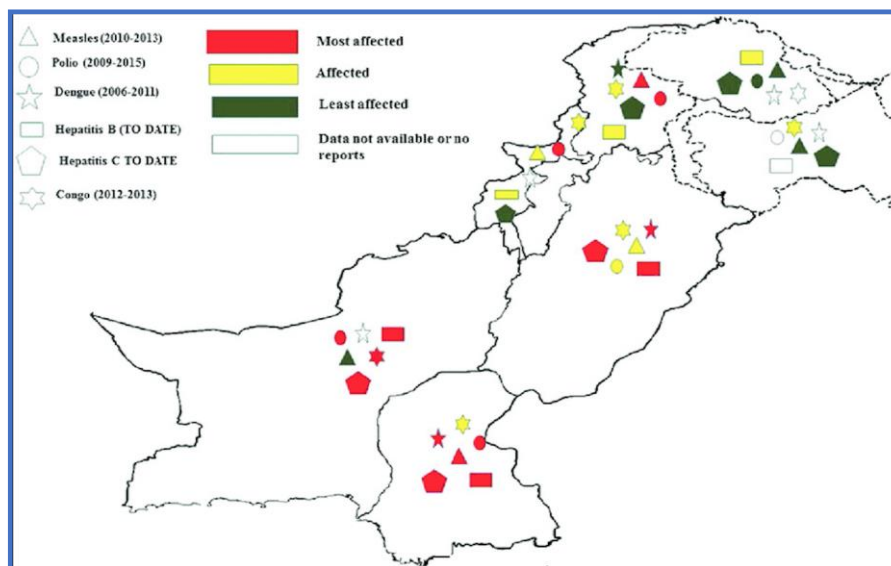


Building a Different Kind of Bridge

Public Health Emergencies' Preparedness: A Post-COVID-19 Agenda

Reflecting on the devastating effects of the COVID-19 pandemic on Pakistan, we are experiencing weak health infrastructure, lack of disaster preparedness, economic vulnerabilities, and social-behavioral issues. However, this is not the first time we are in such a grave situation. People of Pakistan have suffered from various infectious outbreaks such as dengue, Crimean-Congo flu, hepatitis, measles, HIV/AIDS, and polio, to name a few. Human-made and natural disasters in the past, such as earthquakes, droughts, floods, and terrorism, have also cost millions of lives, livelihoods, and displacements. Considering our history with disease outbreaks and disasters, country's response to COVID-19 could have been better. Figure below shows the intensity of a few viral outbreaks in the last two decades.

Intensity of Different Recent Outbreaks in Pakistan¹



What is our preparedness for public health emergencies? Or better ask, what other nations do when any such disasters hit them? Pharmaceutical Stockpile is one such measure. In the USA, the state of California is provided with 358,381 N95 masks and approximately one million surgical and face shields to fight with COVID-19². Also, the European Commission has decided to create a Rescue EU Stockpile to help European countries to deal with the corona pandemic³. It is important to note that Pharmaceutical Stockpile is not a replacement

¹ Khalil, A. T., Ali, M., Tanveer, F., Ovais, M., Idrees, M., Shinwari, Z. K., & Hollenbeck, J. E. (2017). Emerging viral infections in Pakistan: issues, concerns, and future prospects. *Health security*, 15(3), 268-281.

² https://www.washingtonpost.com/national/health-science/desperate-for-medical-equipment-states-encounter-a-beleaguered-national-stockpile/2020/03/28/1f4f9a0a-6f82-11ea-aa80-c2470c6b2034_story.html

³ https://ec.europa.eu/commission/presscorner/detail/en/ip_20_476

for the supply chain. It can fill the supply chain gaps and respond to sudden spikes in emergency-induced demands.

What is Pharmaceutical Stockpile?

Pharmaceutical Stockpile can be used to deter, mitigate, or treat adverse health effects from any kind of emergency in public health. These emergencies may be arising from a major earthquake, pandemic flu, other infectious outbreaks, or the chemical, nuclear and explosive terrorist attacks⁴. Pharmaceutical Stockpile (also called Strategic National Stockpile) is defined as ‘a repository of potentially life-saving pharmaceuticals and medical supplies for use in a public health emergency in which local supplies have been or may be depleted.’⁵ Stockpile contains a wide variety of medical countermeasures, including both pharmaceutical interventions, and non-pharmaceutical interventions.

Pharmaceutical Stockpile Examples	
Pharmaceutical Interventions	Non- Pharmaceutical Interventions
Vaccines/ Antivirals	Ventilators
Antimicrobials	Personal Protective Equipment
Antidotes	Surgical Supplies
Antitoxins	Foldable Beds

A Brief History of Pharmaceutical Stockpile

In the USA, The National Pharmaceutical Stockpile was first established in 1999 to ensure the country’s readiness for a possible natural disaster or bioterrorism. The goal was to procure vast quantities of vital medical supplies that could be shipped to states within 12 hours of the federal decision during an emergency. After its establishment, the stockpile has responded to many emergencies, including the 9/11 attack, flooding, hurricanes, and pandemic influenza. In 2003, the stockpile was renamed as National Strategic Stockpile. It is important to mention that pharmaceutical stockpiling for civilian use is not one that is limited to the US alone. Many other governments around the world built similar antiviral stockpiles. For example, France, Austria, Ireland, Luxemburg, Switzerland, Netherlands, Belgium, Hong Kong, Slovenia, the United Kingdom, Malta, Spain, Portugal, Finland, and Sweden have pharmaceutical stockpiling for the civilian population⁶.

How does Pharmaceutical Stockpile work?⁷

- The stockpile has prepackaged and prepared medicines and supplies for quick delivery anywhere within hours of a government decision.
- From stockpile, drugs can be delivered to a national emergency location where the severity of the emergency might or may have already exceeded the local public health services.

⁴ <https://www.phe.gov/about/sns/Pages/default.aspx>

⁵ <https://www.hsdl.org/?abstract&did=799144>

⁶ Elbe, S., Roemer-Mahler, A., & Long, C. (2015). Medical countermeasures for national security: A new government role in the pharmaceuticalization of society. *Social science & medicine*, 131, 263-271.

⁷ Centers for Disease Control and Prevention. (2008). Receiving, Distributing, and Dispensing Strategic National Stockpile Assets: A Guide to Preparedness, Version 11. Retrieved from: <https://www.hsdl.org/?abstract&did=799144>

- Most of the stockpile's assets are kept in storage and retained as managed inventories.
- Maintained inventories for drugs and medical supplies allow the stockpile to respond timely during emergencies with the right product. In case the illness or agent is unknown, the first line of help from the stockpile is to provide a wide variety of pharmaceuticals supplies.
- Drugs and supplies in the stockpile are checked for the shelf life/expiry.
- The stockpile is strategically placed in warehouses across the country.

People's welfare requires more than conventional investments. Our country's previous and current record provides no precedent for what we could do to cope with any potential health disasters. Pharmaceutical stockpiles may not satisfy all the demands of a health emergency, but stockpile serves the purpose of a survival bridge. It is time we start planning to build such bridges in Pakistan.

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