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Monitoring of COVID-19 Health Impacts and Dynamic Adjustment of Health System Response

SERD Policy Network Workshop
“Measuring the Impact of COVID-19”

November 9-10, 2020

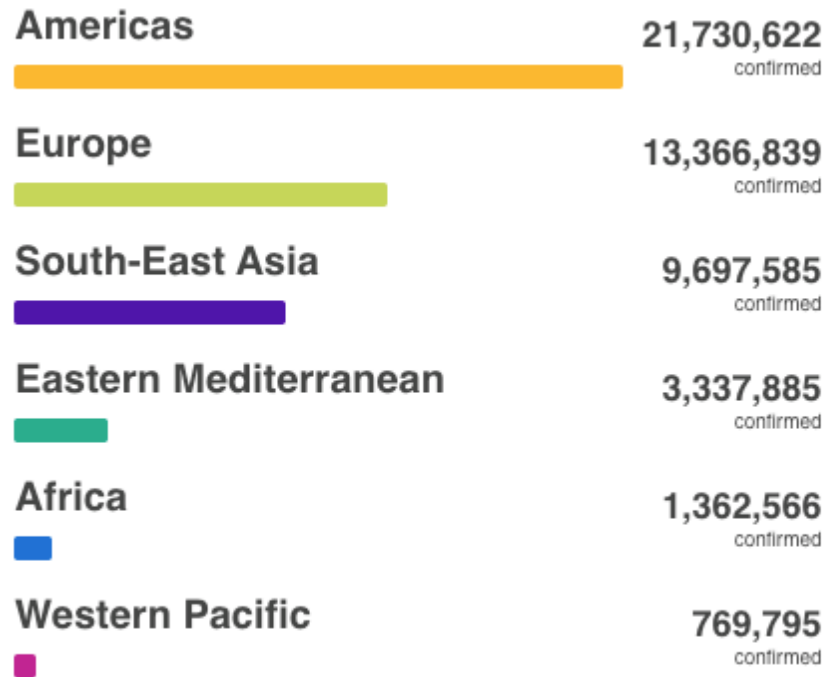
Ye Xu, Health Specialist, SEHS

Overview

- COVID-19 impact on population health
- Health system for health security (HSfrHS) framework for outbreak detection and response
- The dynamic adjustment of intervention measures and policies to suppress transmission

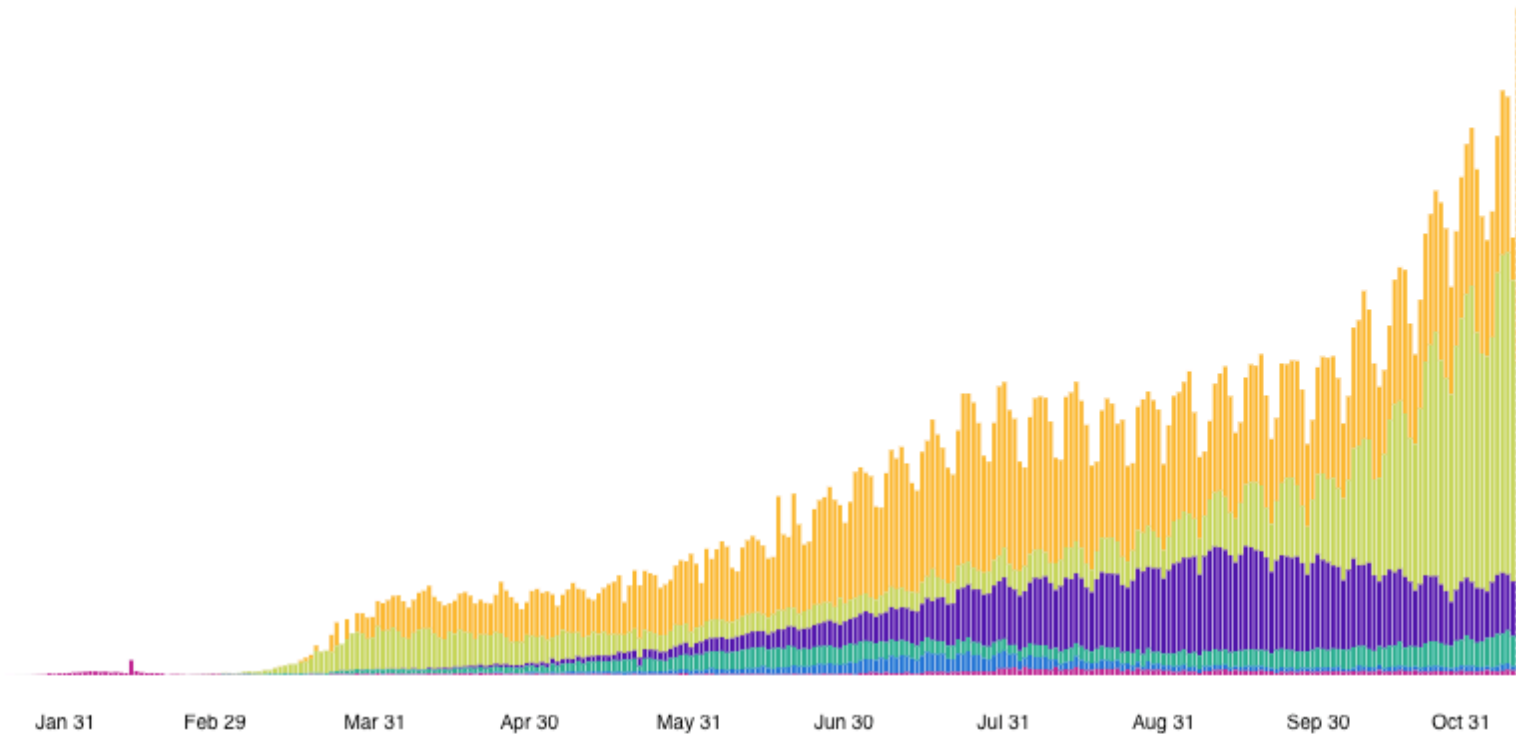
COVID-19 is first-of-all a health emergency

As of 9 November, 50.3 million confirmed cases and 1.2 million deaths reported worldwide. (WHO COVID-19 Dashboard)

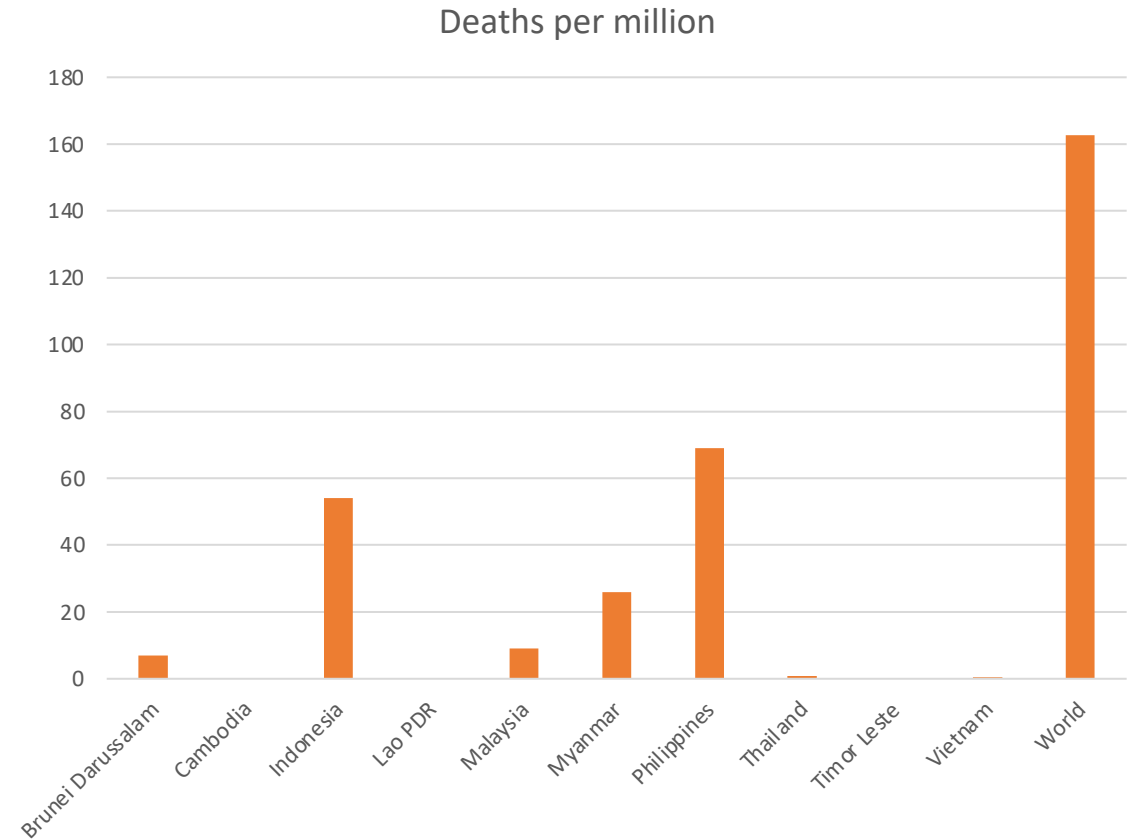
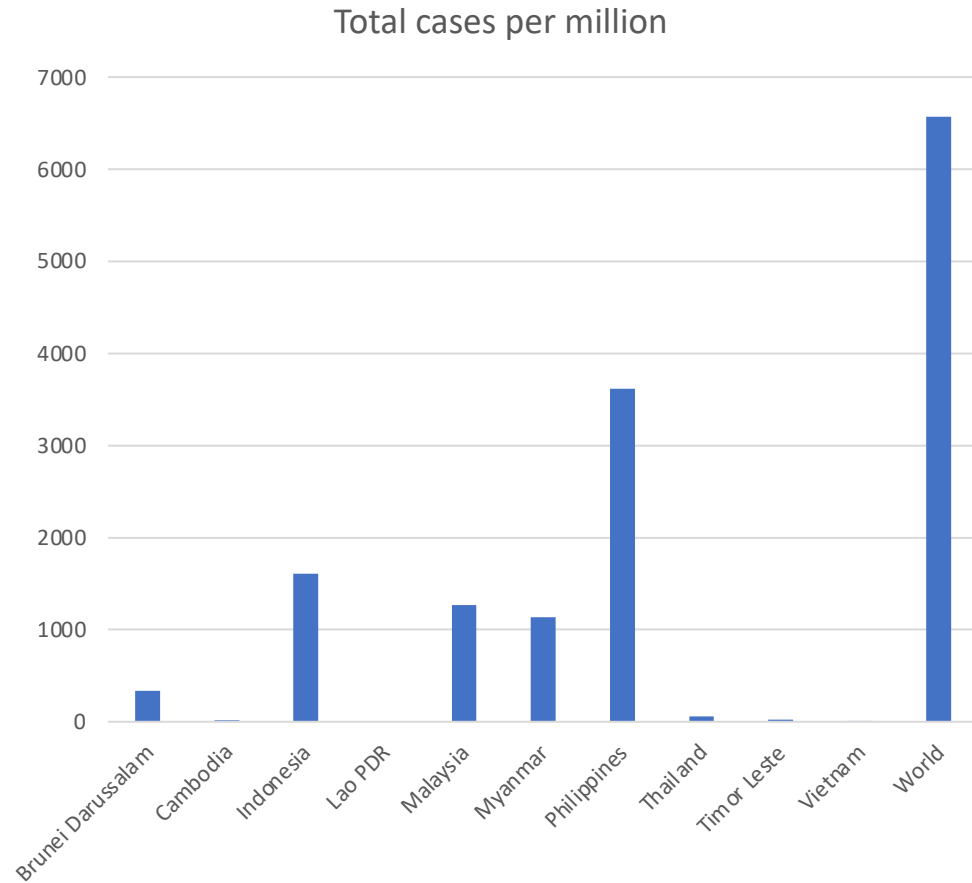


Source: World Health Organization

▨ Data may be incomplete for the current day or week.



SERD countries have fared well in the pandemic



As of 9 November 2020

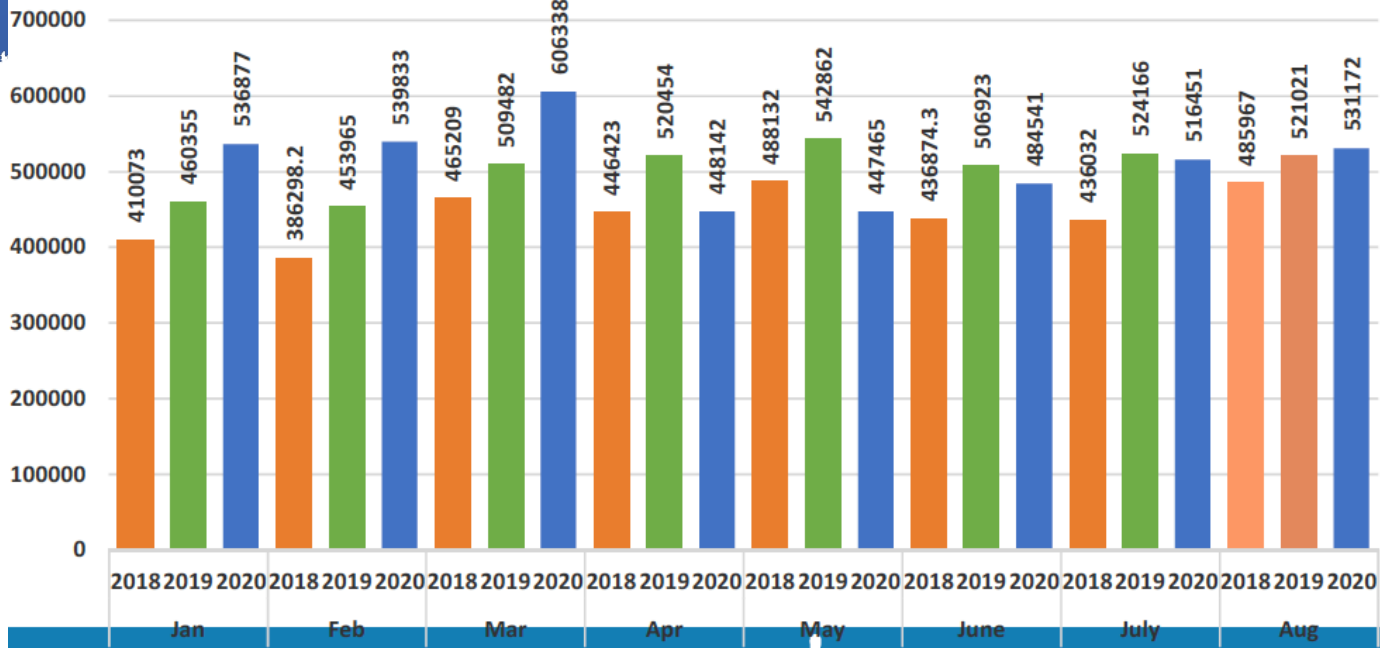


COVID-19 affects all health services

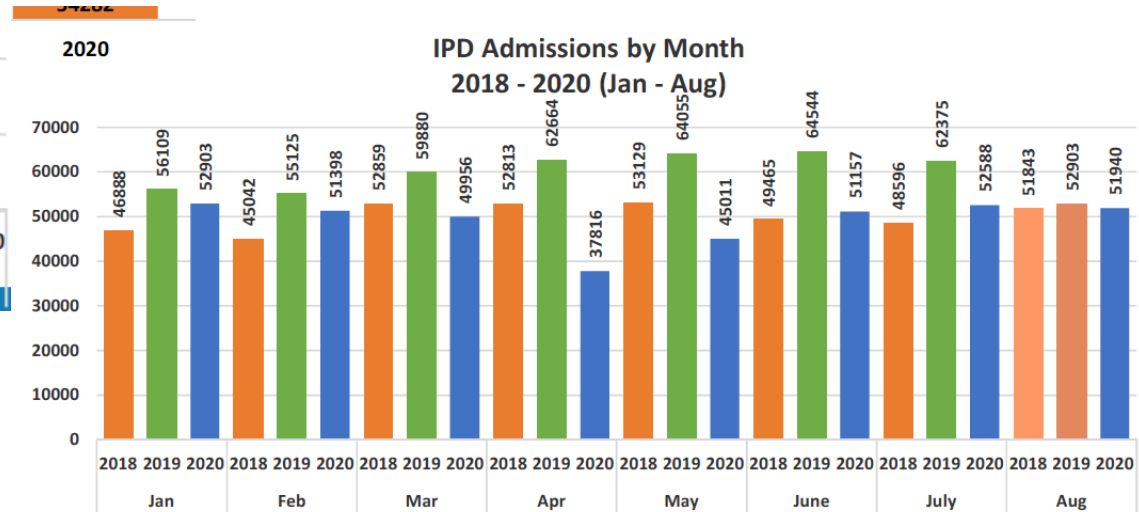
- Routine immunization rates dropped. Vaccination coverage gaps widened.
- WHO and UNICEF warn of resurgence of measles and polio
- Mounting backlog of delayed access to care, including poor management of long-term conditions, avoidance or delay of seeking care, leading to worse outcomes.

Lao PDR: OPD and IPD trends

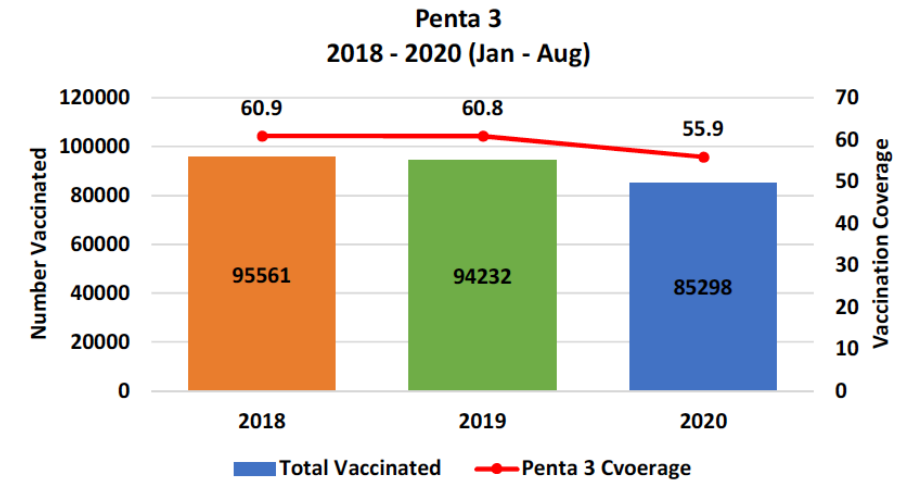
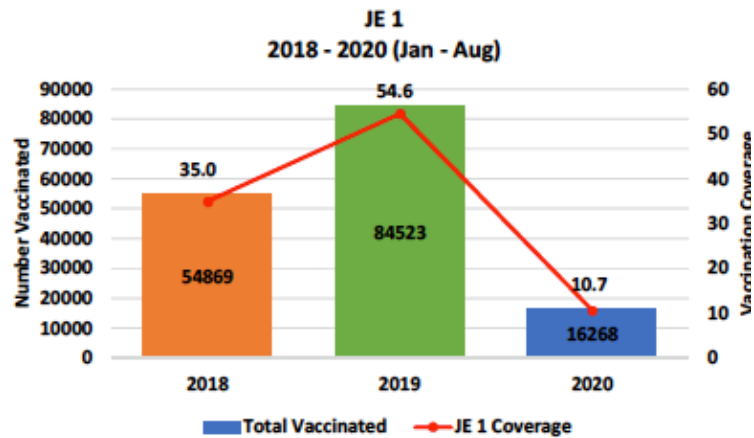
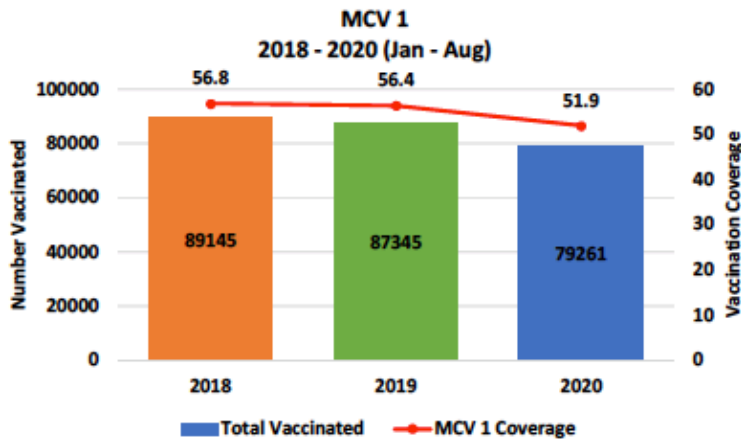
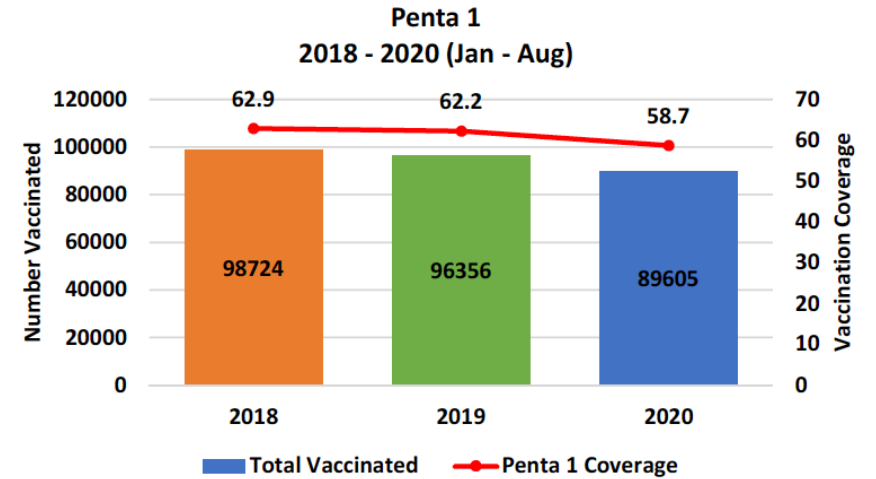
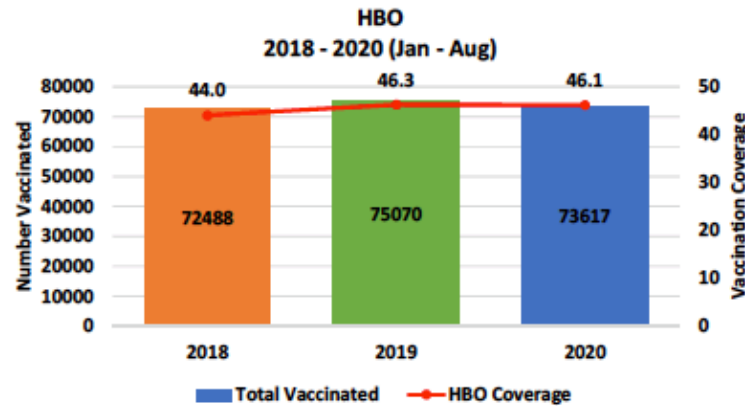
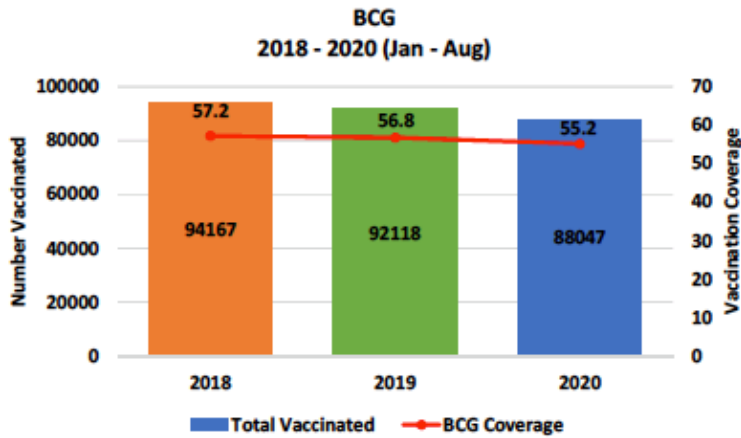
OPD Episodes by Month
2018 - 2020 (Jan - Aug)



IPD Admissions by Month
2018 - 2020 (Jan - Aug)

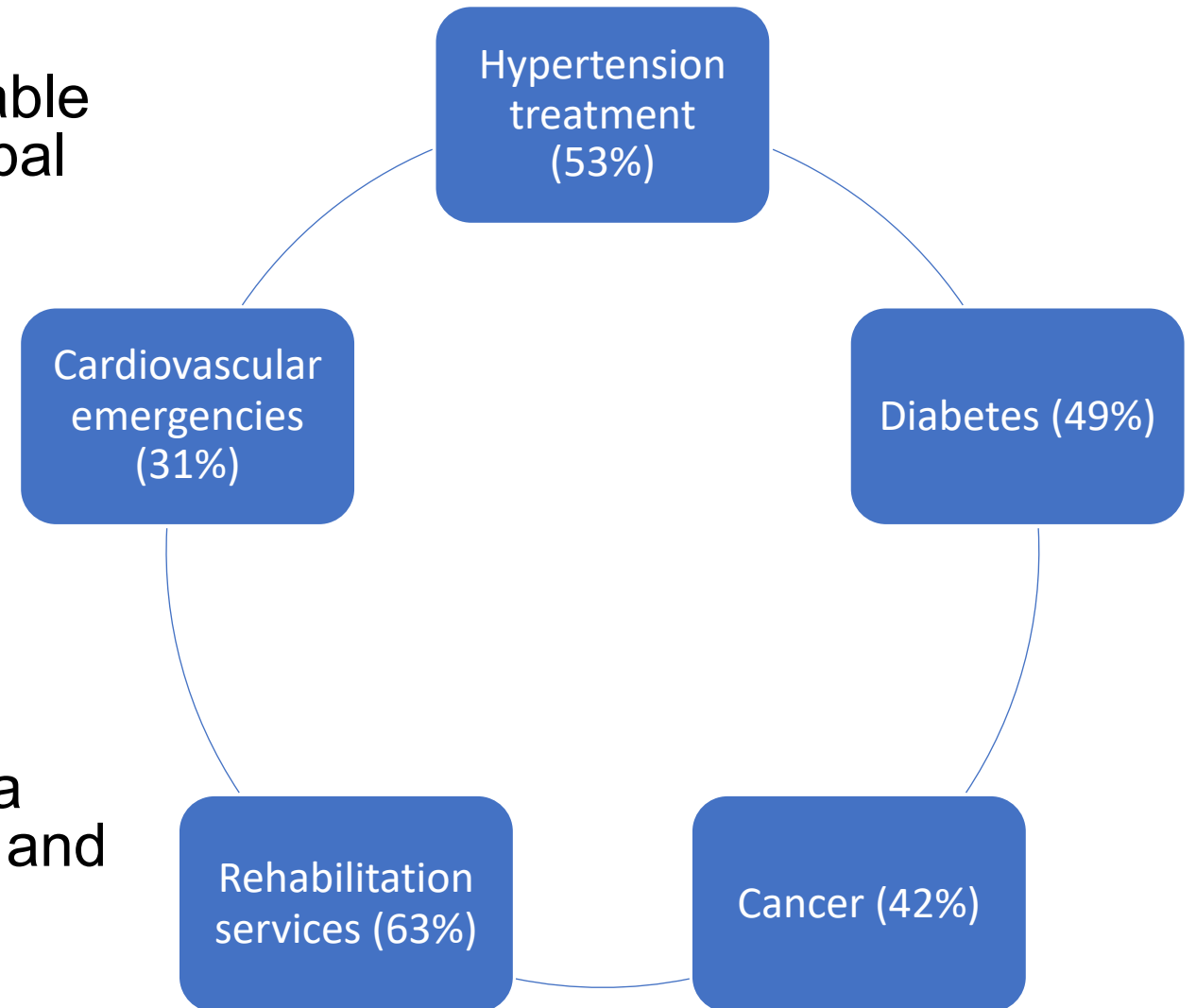


Lao PDR: immunization trends



Prevention and treatment for noncommunicable diseases

- WHO survey confirmed that partial or complete disruption to noncommunicable diseases services are severe and global (June 2020)
- In the majority (94%) of countries responding, ministry of health staff working in the area of NCDs were partially or fully reassigned to support COVID-19.
- Cancellations of planned treatments, a decrease in public transport available and a lack of staff.

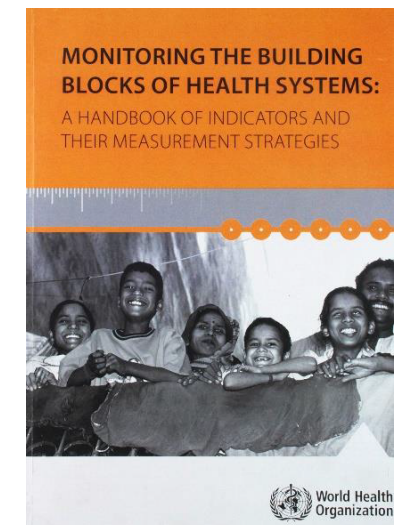
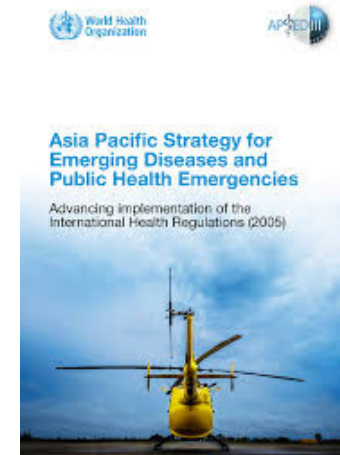
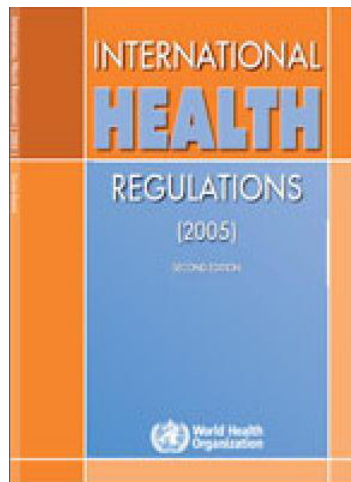


Replicated or exacerbated health inequality

- Elderly people faces higher mortality risks
- So are males...
- Social determinants were found to be significantly correlated with the risks of infection and death from COVID-19.
- Healthcare and social service-related occupations face excess risks

Country Preparedness for Outbreaks

- International Health Regulations (2005) and WHO benchmarks for IHR capacities define requirements and recommended actions that countries can take to build capacities to better manage health emergencies.
- Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III) provides a common framework for action in the Asia Pacific region for strengthening IHR capacities.



Outbreak Notification Requirement under IHR

- One of the most important aspects of IHR (2005) is the requirement that countries detect and report events that may constitute a potential public health emergency of international concern (PHEIC).
- Once a WHO member country identifies an event of concern, the country must assess the public health risks of the event within 48 hours.
- If the event is determined to be notifiable under the IHR, the country must report the information to WHO within 24 hours.
- Always notifiable diseases: smallpox, polio, new type of human influenza, SARS + Other potentially notifiable diseases/events

WHO benchmarks for IHR capacities

Core capacities (# of benchmarks)

- National Legislation, Policy and Financing (3)
- IHR Coordination, Communication and Advocacy, Reporting (2)
- National Laboratory System and Biosafety and Biosecurity (6)
- Surveillance (3)
- Human Resources (4)
- Preparedness (2)
- Emergency Response Operations (3)
- Medical Countermeasures and Personnel Deployment (3)
- Risk Communication (3)

IHR capacities for hazards



Zoonotic Disease (2)



Food Safety(2)



Antimicrobial Resistance (AMR)(4)



Chemical Events (1)



Radiation Emergencies (1)

Other IHR capacities



Points of Entry (2)

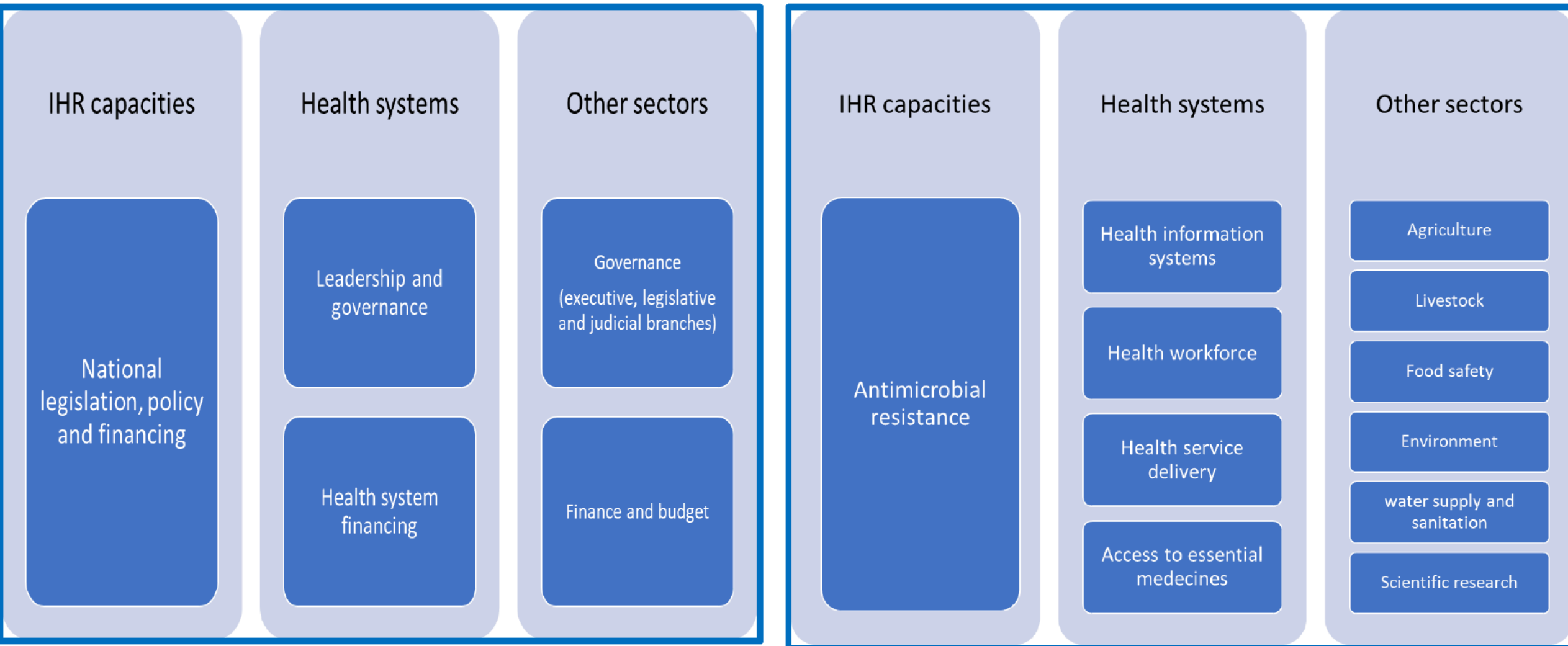


Linking Public Health and Security Authorities (1)



Immunization (2)

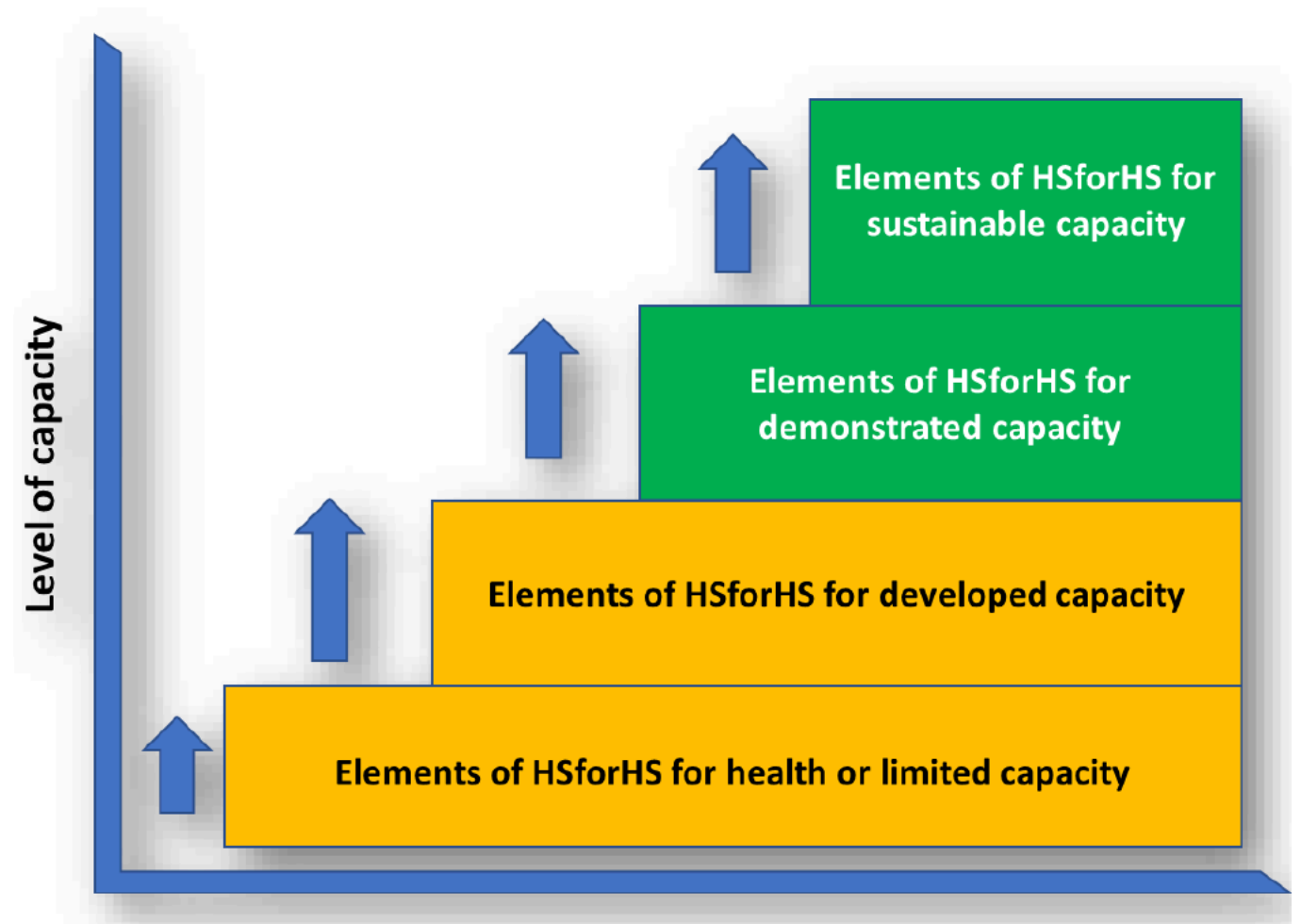
Linkages to health system pillars and other sectors supportive functions in the HSfrHS framework



Maturity model

Capacities are graded in five levels:

- No capacity,
- Limited,
- Developed,
- Demonstrated,
- Sustainable.

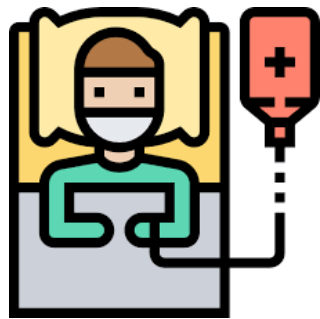


Sample HSfrHS benchmarks for IPC

CAPACITY LEVEL	WHO BENCHMARKS FOR IHR CAPACITIES	HEALTH SYSTEMS CAPACITIES	OTHER SECTORS CAPACITIES
LIMITED CAPACITY	<ul style="list-style-type: none"> Ad hoc mechanism for IPC Assessment/review for selected hospital 	<ul style="list-style-type: none"> IPC committee, guidelines Assessment/review for selected hospital 	<ul style="list-style-type: none"> Provision of safe water Ad hoc IPC for animal farm and supply chain
DEVELOPED CAPACITY	<ul style="list-style-type: none"> IPC committee and action plan implemented & monitored for IHR hazards at the national level 	<ul style="list-style-type: none"> Disseminate and implement guidelines at the national level Ensure IPC pillars in place at the national level and monitor them 	<ul style="list-style-type: none"> Access to WASH facilities at the national level hospitals/farms IPC at selected animal farm and supply chain
DEMONSTRATED CAPACITY	<ul style="list-style-type: none"> IPC committee and action plan implemented & monitored for IHR hazards at the sub-national levels 	<ul style="list-style-type: none"> Disseminate and implement IPC guideline at the sub-national levels Ensure IPC pillars in place at the subnational levels and monitor them 	<ul style="list-style-type: none"> Access to WASH facilities at all levels IPC at sub-national level for animal farm and supply chain
SUSTAINABLE CAPACITY	<ul style="list-style-type: none"> Demonstrate effectiveness of IPC measures during event 	<ul style="list-style-type: none"> Effective¹ IPC coverage nationwide 	<ul style="list-style-type: none"> Effective coverage of WASH nationwide Effective IPC coverage nationwide for animal farm and supply chain

Challenges to identify a novel disease in the first place

- Why is it so difficult to identify these potentially dangerous and novel diseases in the first place?
- Case: A single MERS patient led to the infection of 16 people, leading to an outbreak that affected 44 people in Riyadh, Saudi Arabia.



A 46- year-old man presented to the hospital emergency department

Diarrhea;
Coughing;
Shortness of
breath;
Kidney failure



Hemodialysis
in medical
ward



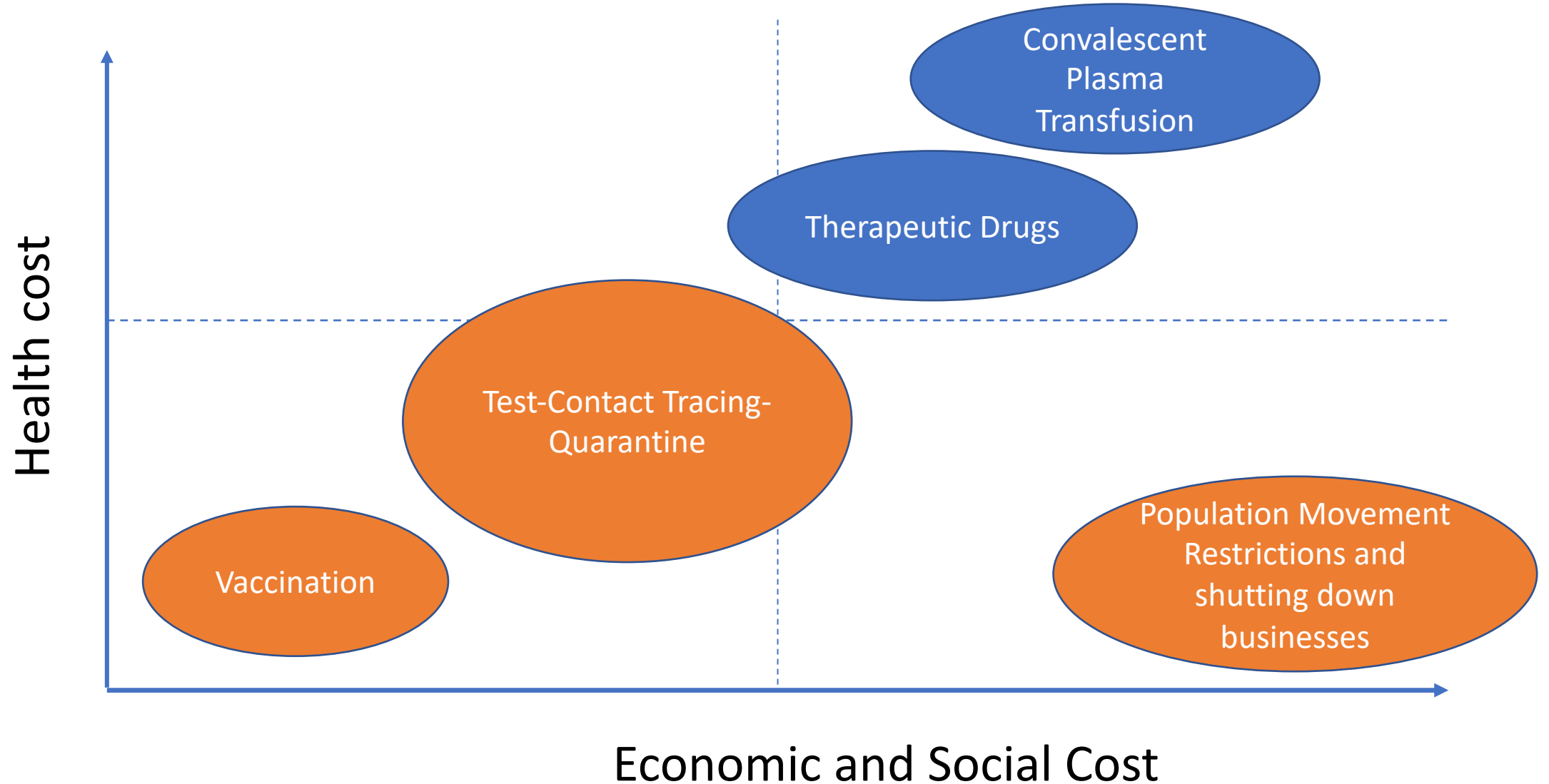
ICU



Referral
hospital for
MERS

It is often difficult to diagnose pneumonia, one of the key symptoms of the disease, in patients suffering renal and cardiac failures.

COVID Response Strategies and Policies



Dynamic Adjustment of Response Policies

- Decision between broad restrictions and a targeted approach with high-risk populations – not one approach fits all.
 - The Great Barrington Declaration petitioners claim lockdowns are unnecessary and champions the herd immunity approach.
 - Rebuttal from the John Snow Memorandum.
 - China and some other countries religiously enforced strict lockdown, then testing, contact tracing and quarantine measures, to successfully contain the outbreak.
- Effective implementation of policies and cooperation of citizens
- Whole-of-government approach and cross-sectoral collaboration



New Normal Medical Service Model Piloted in Pattani, Thailand

- Patients that do not need to visit the healthcare facility are supported by remote consultation (telemedicine) and drugs are delivered to them, often by village volunteers.
- Arrangements for patients that need to visit healthcare facilities are modified, taking into account the patient pathway and the need to maintain physical distancing.
- When more intensive care is required, services have been made safer for patients and health care providers – such as upgraded ventilation within facilities.

The silver linings

- All previous pandemics – the 1918 flu pandemic, SARS, Ebola – were eventually under control, and the experience will help us prepare for future major outbreaks.
- The most cost-effective approach to handle this type of crisis is *prevention*. Convincing case for greater investment in the global health security architecture and universal health coverage.
- Paradigm shifts in development, rethinking our relationship with the environment, with other species, and with other communities.



Thank you