How has the COVID-19 pandemic changed public & private healthcare? The case study of Thailand

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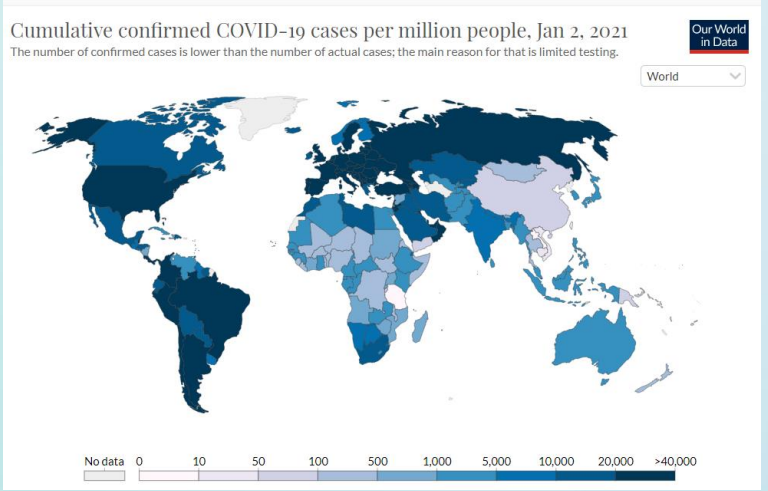
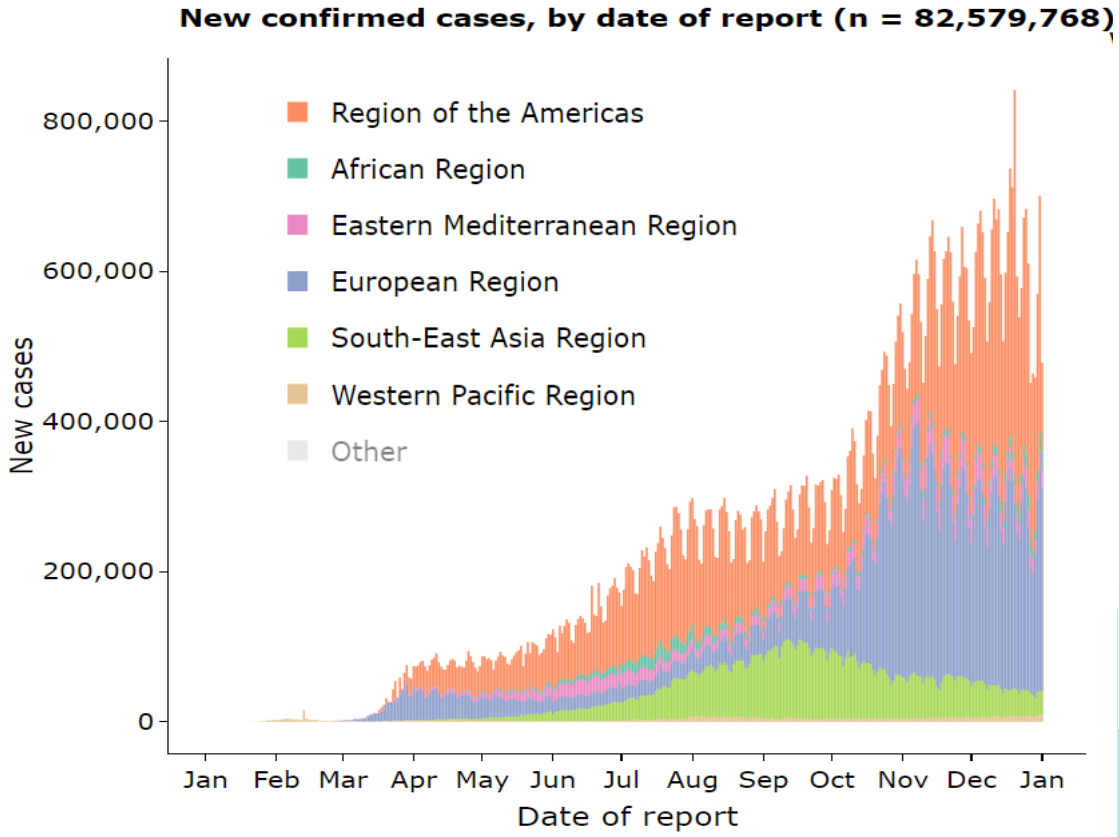
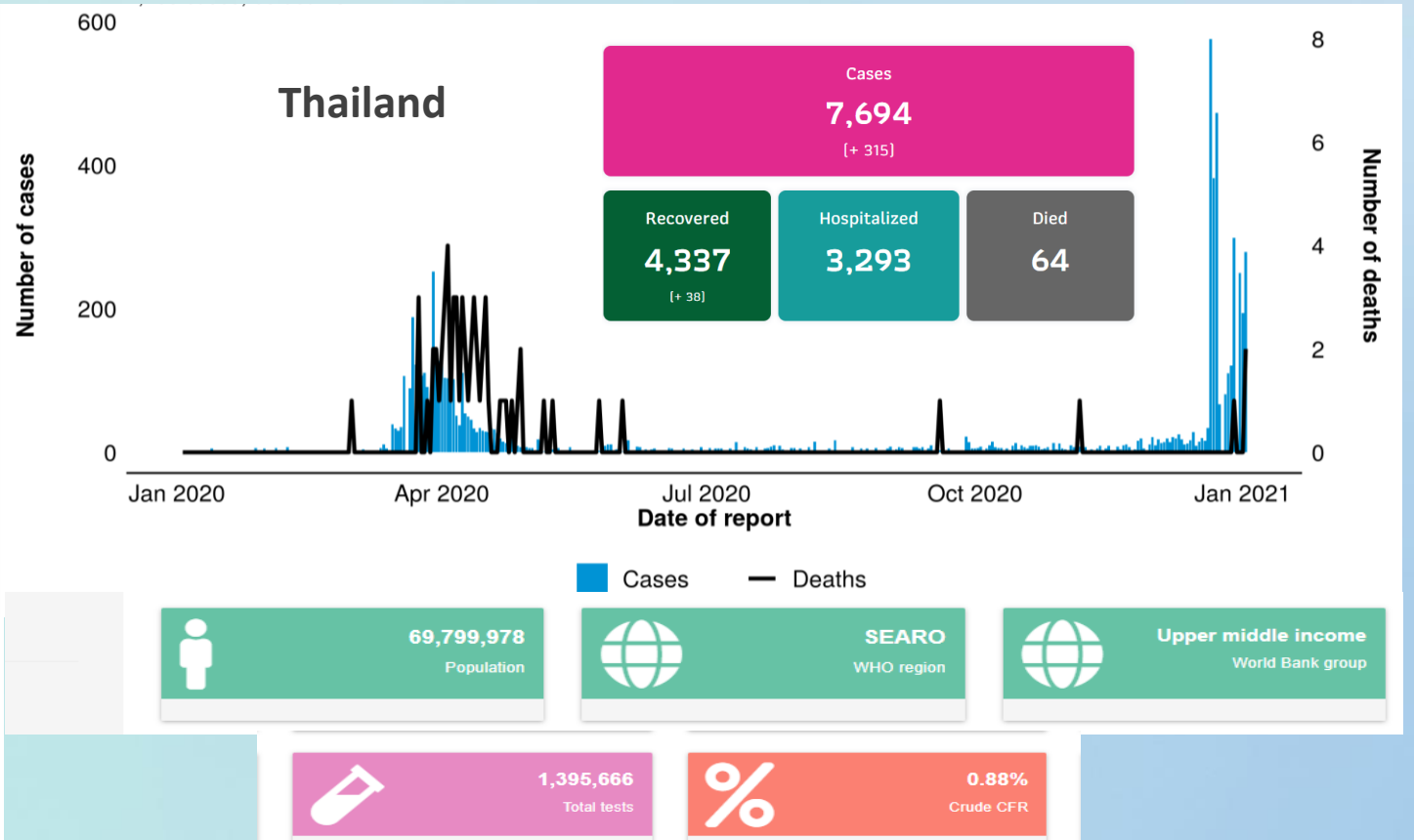


The situation of COVID-19 pandemic at the global level and in Thailand as of January 3rd, 2021





Impact of COVID-19 pandemic on the Thai healthcare systems

Public sector

- Shift of government health budget and human resources for health, and clinical staff in responses to COVID-19,
- Reduction in government health budget resulting in negative impact of health care services for other health priorities,
- Decrease in in-patient volume due to cancellation of elective care, and the government policy in reducing the number of inpatients for other diseases,
- Decrease in outpatient volume due to patients not presenting, closure of some outpatient disease specific consultation clinics e.g. rehabilitation, palliative care, etc.
- Prolonged the follow-up period for chronic NCDs patients,
- Government or public transport lockdowns hindering access to the health facilities for patients,
- Clinical staff deployed to provide COVID-19 relief,
- In some areas, insufficient Personal Protective Equipment (PPE) available for health care providers to provide services.

Private sector

- Almost zero of foreigner's patients in top-five private hospitals in Thailand relying on medical tourism and medical hub policies,
- However, the private sector has played more active roles in COVID-19 screening and testing, and curative care,
- Serve as part of the alternative state quarantine and hospital quarantine for foreigners,

Public health system

- Strengthening disease surveillance system, primary health care, VHVs, and community health system,
- Accelerate the progress and advancement of telemedicine, digital health, and clinical trials for vaccine development in Thailand,

Global development of COVID-19 Vaccines and current situation in Thailand

How some of the Covid-19 vaccines compare

Company	Type	Doses	How effective*	Storage	Cost per dose
Oxford Uni-AstraZeneca	Viral vector (genetically modified virus)	x2	62-90%	Regular fridge temperature	£3 ($4)
Moderna	RNA (part of virus genetic code)	x2	95%	-20C up to 6 months	£25 ($33)
Pfizer-BioNTech	RNA	x2	95%	-70C	£15 ($20)
Gamaleya (Sputnik V)	Viral vector	x2	92%	Regular fridge temperature (in dry form)	£7.50 ($10)

*preliminary phase three results, not yet peer-reviewed

Source: Respective companies, WHO

BBC

COVID-19 Vaccine Pipeline

Candidate	Sponsor	Trial Phase	Institution	Funding
Inactivated vaccine	Wuhan Institute; Sinopharm	Phase 3	Henan Provincial CDC	Ministry of Science and Technology, China
CoronaVac	Sinovac	Phase 3	Sinovac Research and Development Co.	Sinovac Research and Development Co.
mRNA-1273	Moderna	Phase 3	Kaiser Permanente Washington Health Research Institute	Operation Warp Speed; NIAID, BARDA ($483 million)
BCG live-attenuated vaccine	U Melbourne and Murdoch; Radboud University Med Ctr; Mass Gen Hosp	Phase 2/3	Same as Sponsor	Murdoch Children's Research Institute; UMC Utrecht
AZD1222	The University of Oxford; AstraZeneca; IQVIA	Phase 2/3	The Univ of Oxford, the Jenner Institute	Operation Warp Speed; UK Ministry of Health; The University of Oxford; BARDA
BNT162	Pfizer, BioNTech	Phase 2/3	Multiple study sites in Europe & N Amer	Pfizer; BioNTech
Ad5-nCoV	CanSino Biologics	Phase 2	Tongji Hospital; Wuhan, China	CanSino Biologics
Adjuvant recombinant vaccine	Anhui Zhifei, Institute of Microbiology of the Chinese Academy of Sciences	Phase 2		
BBIBP-CorV	Beijing Institute of Biological Products; Sinopharm	Phase 1/2	Henan Provincial Center for Disease Control and Prevention	Ministry of Science and Technology, China
GX-19	Genexine	Phase 1/2		GenexineGenexine
Gam-COVID-Vac	Gamaleya Research Institute, Acellena Contract Drug Research and Development	Phase 1/2	Various	Gamaleya Research Institute, Health Ministry of the Russian Federation
Self-amplifying RNA vaccine	Imperial College London	Phase 1/2	Imperial College London	UK Secretary of State for Health
LUNAR-COV19	Arcturus Therapeutics and Duke-NUS Medical School	Phase 1/2	Duke-NUS Medical School, Singapore	Arcturus
ZyCoV-D	Zydus Cadila	Phase 1/2	Zydus Cadila	

Source: WHO, https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines, accessed 18 Aug 2020.

Platform		Candidate vaccines (no. and %)	
PS	Protein subunit	18	30%
VVnr	Viral Vector (non-replicating)	9	15%
DNA	DNA	8	13%
IV	Inactivated Virus	8	13%
RNA	RNA	7	12%
VVr	Viral Vector (replicating)	4	7%
VLP	Virus Like Particle	2	3%
VVr + APC	VVr + Antigen Presenting Cell	2	3%
LAV	Live Attenuated Virus	1	2%
VVnr + APC	VVnr + Antigen Presenting Cell	1	2%

Lessons learned from key contributing factors to the success of Thailand Health System in controlling the 1st wave of the COVID-19 pandemic

- Strong health care system, especially at the primary care level,
- Long-term investment in health infrastructure and human resources for health (HRH) development by the government,
- High quality of health services, disease surveillance and disease control at the community and national levels,
- Unity and strong collaboration between government and private sector, with good cooperation from Thais and other sectors,
- Leadership and prompt responses by the Thai government.