APACPH CCHP
Collaborating Centres for Health Promotion

APACPH EDUCATIONAL WEBINAR ON POST-COVID-19

11, September 2020 | 10:00am - 03:50pm (TST) | 11:00am – 04:50pm (KST)

"After COVID-19: Paradigm shift in public health education"

Copyright Statement

Disclaimer Statement

APACPH CCHP
Collaborating Centres for Health Promotion

Taiwan, Dr. Ying-Wei Wang

Towards a New Normal: Live a Healthier Life during the COVID-19 Pandemic in Taiwan

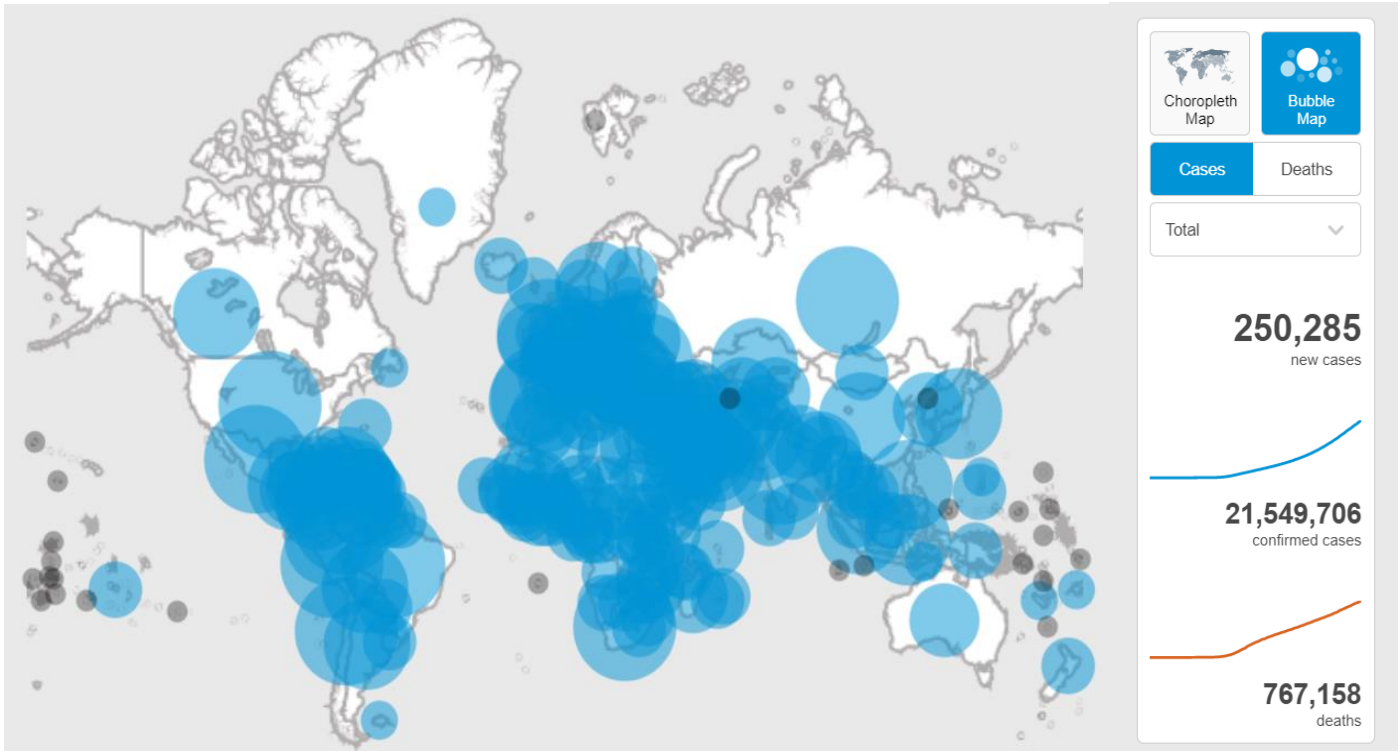
衛生福利部
國民健康署
Health Promotion Administration,
Ministry of Health and Welfare

Towards a New Normal: Live a Healthier Life during the COVID-19 Pandemic in Taiwan

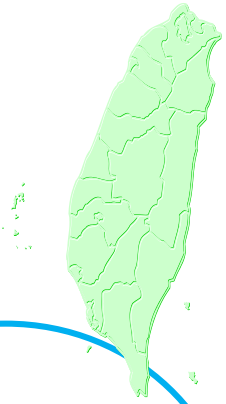
Ying-Wei Wang M.D., Dr. P.H.

Director-General
Health Promotion Administration,
Ministry of Health and Welfare

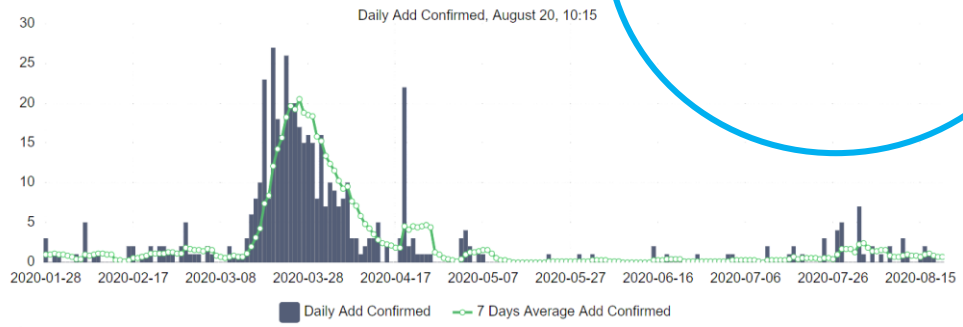
COVID-19 Pandemic



22,302,208
Cases Globally



486
Cases in Taiwan



Source: https://who.sprinklr.com/; https://covid-19.nchc.org.tw/?language=en

Taiwan's Quick Response to COVID-19 Threat

Jan 23 The Central Epidemic Command Center (CECC) begins to hold daily press conference.

Jan 30 Domestic face mask manufacturers are requisitioned, and the name-based mask rationing plan is launched in 7 days.

Taiwan Model

Dec 31 Atypical pneumonia had occurred in Wuhan, China

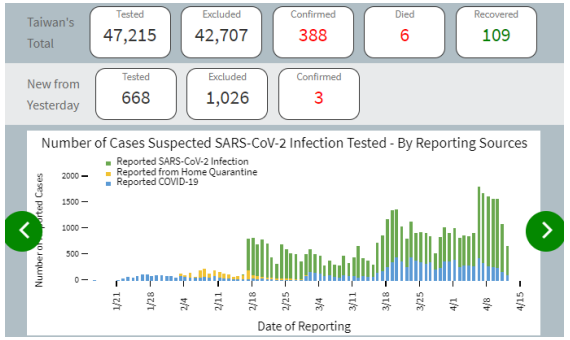
Jan 29 A digital fencing tracking system is built to keep track of the isolated/quarantined at all time.

Feb 16 The Quarantine System for Entry is officially launched.

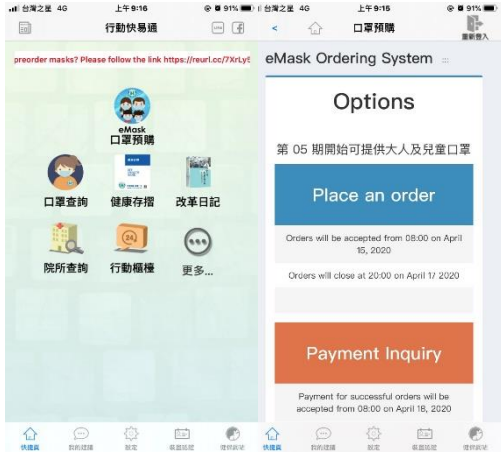
- Public Communication
- Material preparation
- Border/ Community epidemic prevention policy

Critical Success Factors in Taiwan

- Notified of pneumonia of unknown cause in Wuhan, China.
- Activated its Central Epidemic Command Center (CECC)
- Cases monitor



- Border Control, Case Identification, and Containment
- Resource Allocation: Logistics and Operations



- Reassure and Educate the Public, While Fighting Misinformation

3 Factors for successful COVID-19 prevention

Strong Risk Awareness + Open Government + Serious Attitude toward Work = Taiwan's **Gold Standard** Noticed Worldwide

How the COVID pandemic and the NCD epidemic have brought about a deadly interplay

World Health Organization

Underinvestment in the prevention, early diagnosis, screening, treatment and rehabilitation for NCDs: Health systems unable to meet the health-care needs of people living with and affected by NCDs

Disruption of services for the prevention and treatment of NCDs: **Long-term upsurge in deaths from NCDs likely**

The world is at a critical juncture. The execution of a forward-looking strategy inclusive of NCDs is required to **build back better** and reach SDG 3.4 on NCDs.

2010 — 2019 — 2020 (today) — 2030

SDG 3.4

The momentum of progress in curbing the NCD epidemic has **dwindled** since 2010

Since the outbreak, people with NCDs are more vulnerable to becoming severely ill or die from COVID-19

SDG 3.4

2019

2030

Since the COVID-19 outbreak, people living with NCDs are more vulnerable to becoming severely ill or dying from COVID-19

The world is at a critical juncture. The execution of a forward-looking strategy inclusive of NCDs is required to **build back better.**

SDG 3.4

Today:

- Italy: Among those dying of COVID-19 in hospitals, 68% had hypertension and 31% had type 2 diabetes.
- India: 30% fewer acute cardiac emergencies reached health facilities in rural areas in March 2020 compared to the previous year.
- Netherlands: The number of people newly diagnosed with cancer dropped by 25% as a result of the lockdown.
- Spain: Among patients with severe COVID-19 disease, 43% had existing cardiovascular diseases.

Build back better tomorrow:

- Build bridges between **national humanitarian emergency plans** and **NCDs responses**
- Address the historic underinvestment in NCDs, call for new international funding patterns, a reset of global initiatives, and build new partnerships for NCDs.
- Develop systematic approaches to **digital health care solutions** for NCDs

Source: https://www.who.int/teams/ncds/covid-19

New Normal: Life post COVID-19

"We cannot re-write the chapters of history already past, but we can learn from them, evolve and adapt. The new normal may even be a better normal, certainly a different normal"

A quote from Ian Davis, Managing Partner at McKinsey, in his article 'The New Normal'

Healthy At Home

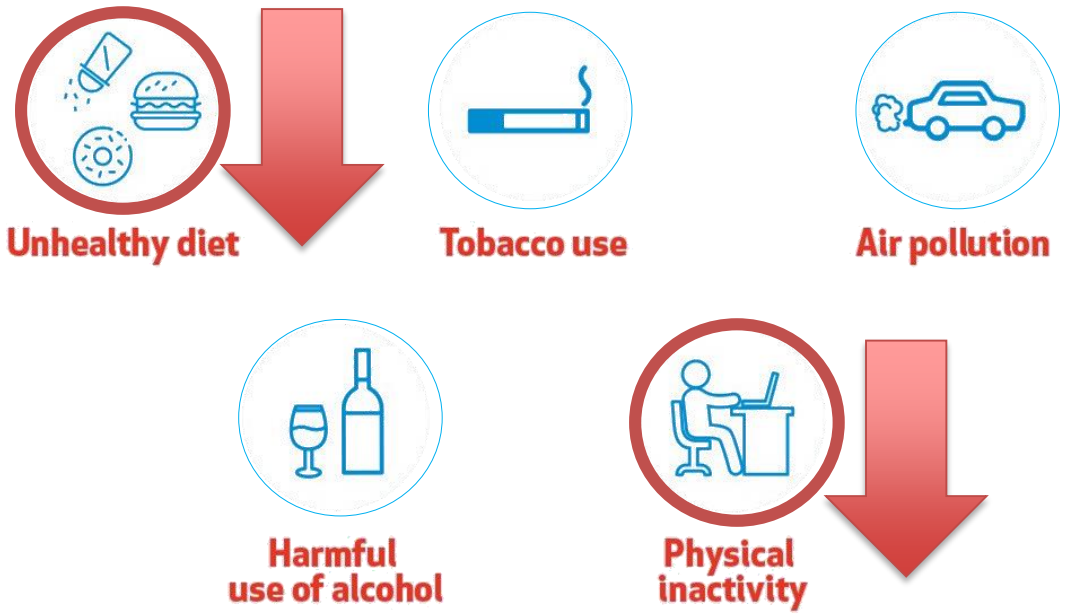
- Eating healthily
- Staying physically active

Digital Health Reforms

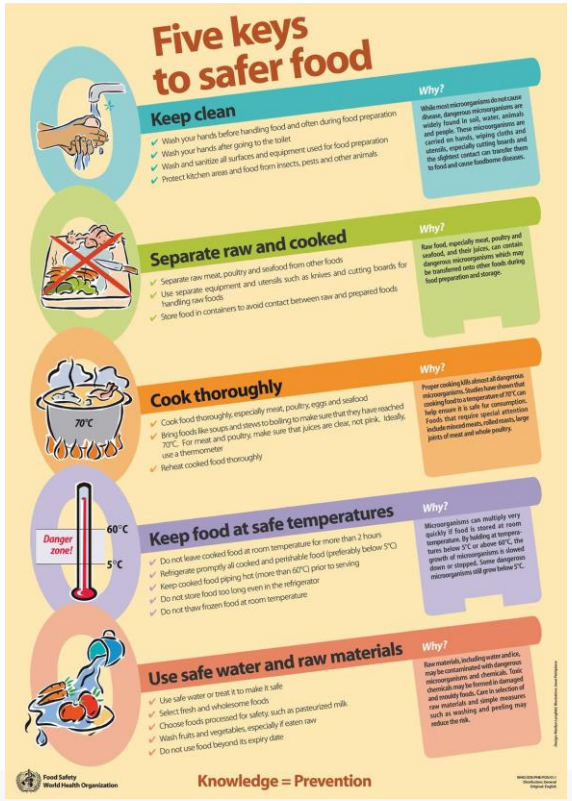
- Digital interactive technology platform
- Personal App for self-management

Healthy at Home

The COVID-19 pandemic means that many of us are **staying at home and doing less in terms of social interactions and exercise.** This can have a **negative effect** on your physical and mental health. Following WHO's advice below to help you and your family to stay healthy at home during this period of confinement.



Major risk factors for NCDs



Eating Healthily

Press releases, Facebook, LINE articles

國民健康署
3月3日 ·

🏫開學營養補充抗疫情 乳品聰明好選擇🐮

💪每天早晚一杯奶，提高小朋友們的自身抵抗力喔！

各級學校已開學，擔心學童受武漢肺炎疫情影響的家長們
可以多鼓勵小朋友多補充乳品喔！

適量的攝取乳品類~
➡豐富蛋白質
➡鈣質
➡維生素等

👉完整內文請看→https://omni.pse.is/PYCKF
👉影片連結→http://omni.piee.pw/NWU3F
👉和我們LINE在一起→http://goo.gl/yzx874

Consulting with Community nutritionist

How to Eat Health While Staying at Home.

Four nutrition tips to strengthen your resistance.

Home Fitness & Park Fitness

My Home is my Gym

- 3 videos introduce 4 At-Home Exercises.

Adults

Seated leg raise

Long Slow Distance Running

Elderly

shoulder stretch

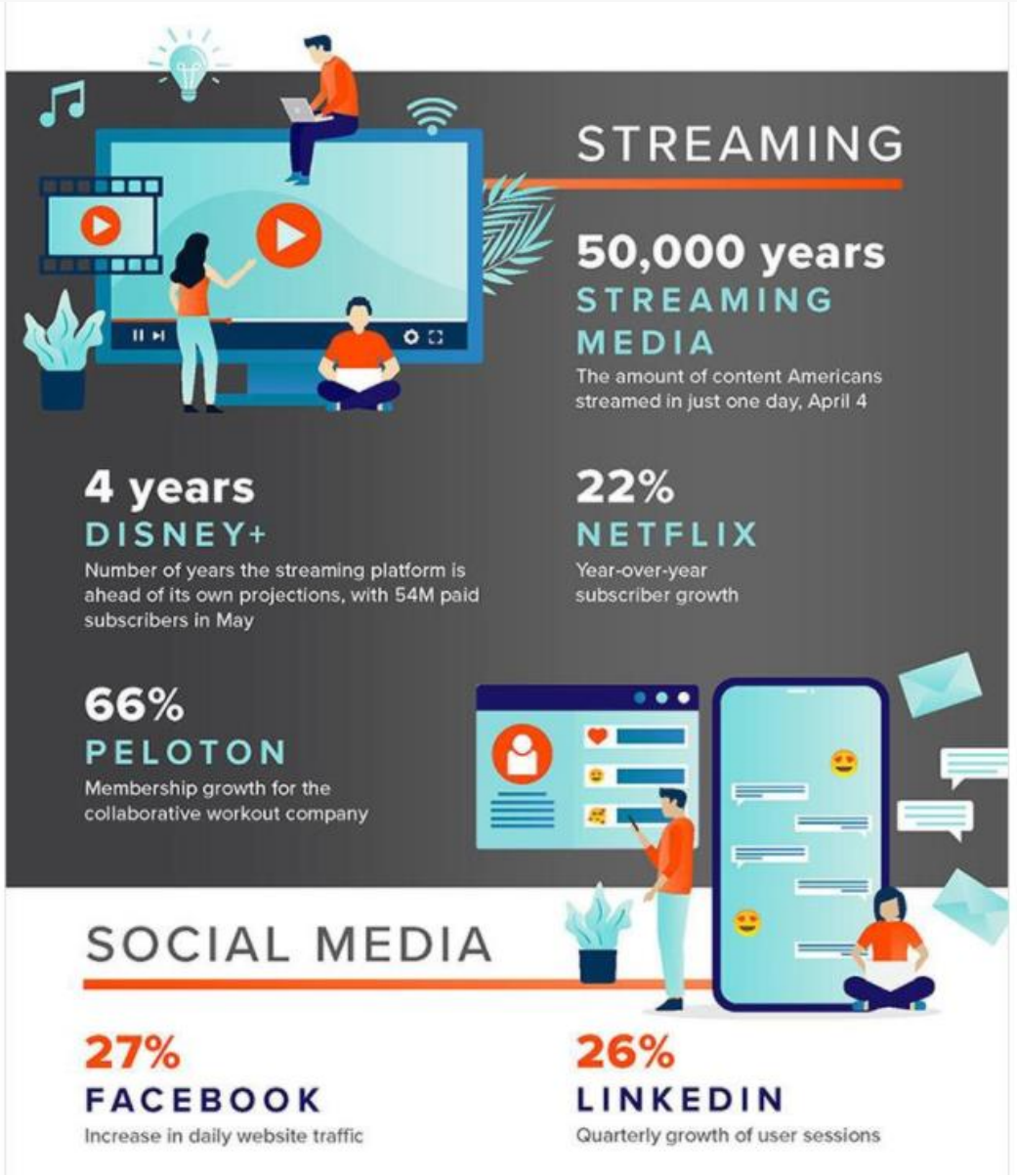
Sitting up

Park is my Gym

- Pilot study: establishing Park Workout lessons for elderly in three parks in Taiwan.
  - Recruitment and training of fitness instructors
  - Taught elderly how to use simple equipments in parks for exercising.
  - Unified teaching materials of park workout using equipment, trees, benches in parks

The Pandemic Make Digital the New Normal in our Life.

Overall internet usage surged in Q1 by 47%, largely due to the COVID-19 pandemic.



Source: https://medium.com/pcmag-access/data-usage-has-increased-47-percent-during-covid-19-quarantine-5b56caac6235

HPA's proposal "Weather & Health" wins the top 5 in 2020 Presidential Hackathon

- Presidential Hackathon is an initiative designed for the Taiwanese government to demonstrate its **emphasis on open-source data, data utilization, and practice innovation** to address the needs of the country in social innovations.
- The event aims to facilitate exchanges among data owners, data scientists, and field experts to assemble the wisdom of crowds across government, industry, and private and public sectors.

vision

“Leaving no one behind”

No one death in heat waves

Public sector-private sector cooperation

內政部營建署 Construction and Planning Agency Ministry of the Interior

勞動部職業安全衛生署 Occupational safety and health administration

教育部體育署 MINISTRY OF EDUCATION

WaCare

7-ELEVEN

行政院農業委員會

消防署

衛生福利部國民健康署 Health Promotion Administration, Ministry of Health and Welfare

呼吸管家 慢性阻塞性肺病 iCOPD Self-care Application

In accordance with Sustainable Development Goal

Weather & Health~APP Design

➢ **Open the APP. It can tell the risks you face today.**

Obtain future forecasts and countermeasures

Develop alert levels through data analysis

Evidence-based Data Analysis

Statistical analysis

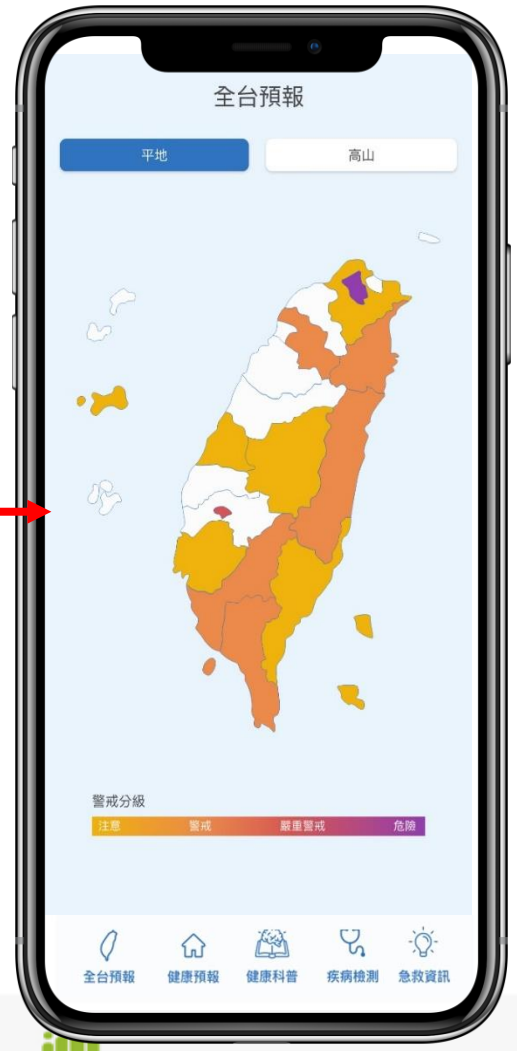
Danger

Severe alert

Alert

Watch out

Manage the health risks in Taiwan



Advantages of Cooperation with Cable TV

- 97.7% of the people in Taiwan have TV sets in their homes. (Note1)
- What elderlies do almost everyday for leisure and entertainment activities is watching TV, at 91.5% followed by walking at 44.4%. (Note 2)
- In the past, cable TV was a one-way communication, but as it's viewers were mainly middle-aged and senior citizens, transformation needed to happen and the strategy was to upgrade to the two-way interactive set-top box. It is in line with the policy of developing a TV platform which can be directly combined with the promotion of the current cable TV strategy.

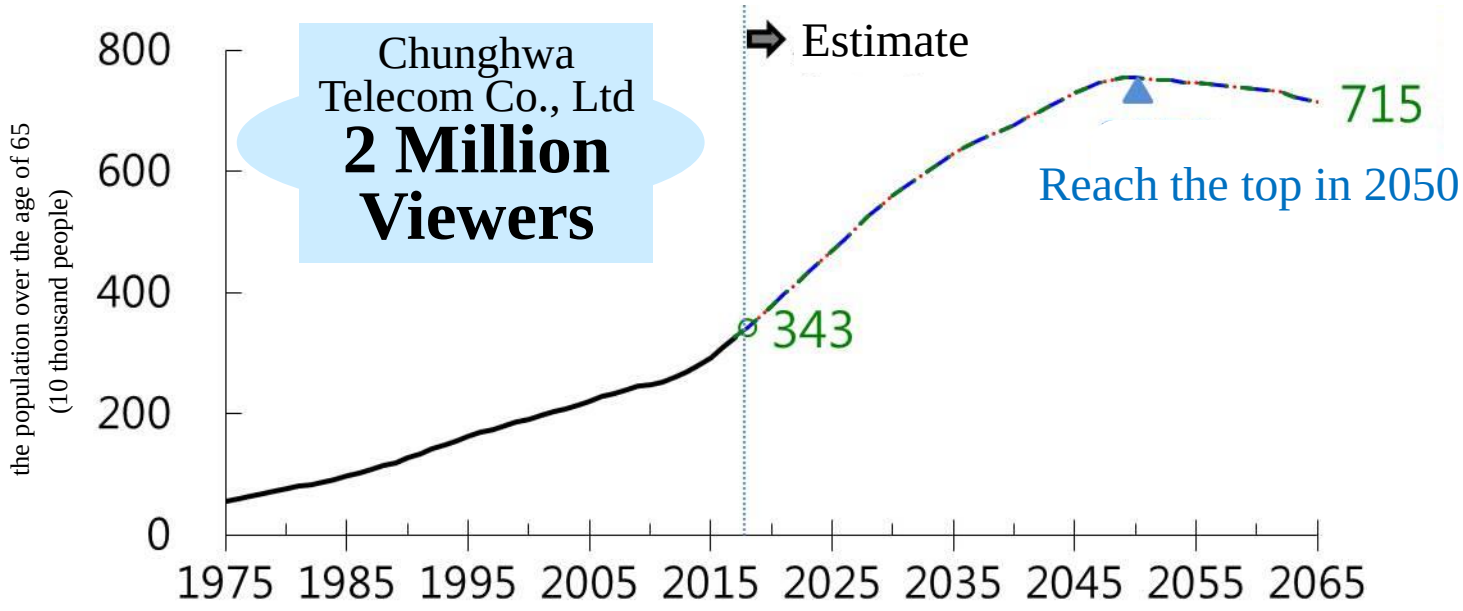
Note 1: "2016 TV Usage Behavior and Satisfaction Survey" from the National Communications Commission.
Note 2: "2011 Report on the Survey Results of the Long-Term Follow-up (seventh) Survey on the Physical and Mental Social Life of Middle-Aged and Elderly People in Taiwan" from the Health Promotion Administration of the MOHW.

Cable TV Viewers
5 Million

Ten Years Later Elderly Population
5.59 Million

TV Platform Application and Development
In line with **future population growth trends** and **cable TV development direction**

Can provide preventive services for thousands of elderlies at the same time.
Relieve the stress on the lack of manpower for long-term care in the future.



Information source：National Development Council's "Population Estimate Report (2018 – 2065) Press Release
https://www.ndc.gov.tw/News_Content.aspx?n=6FDC603ACC3D414D&sms=DF717169EA26F1A3&s=E1EC042108072B67

Features of Home TV Interactive Technology Platform

- **Overcome geographic limitation**
- **Can serve thousands of people simultaneously, exceeding the capacity of a single physical venue**

Elderlies can still practical and interesting health information at home during times of bad weather, inconvenient travel or difficulty in mobility.

- **Encourage going outdoors and social participation**
- **Needs are assisted and met locally**

Monthly updates of activities in the residential administrative area, automatic location positioning, display distance walked in kilometers, time walked, with simple registration by pressing the green button.

- **Can be easily operated by elderlies who are not good at using electronic products**
- **Promotes cross-generational connections**

Children who are busy can video call or send photos to the TV of the elderlies at home through the mobile APP, so that they can see each other anytime, anywhere!

About 90% of the elderlies in Taiwan stay at home and are less involved or utilize little community resources. (*Note)

Note:：Refer to the 2018 statistics on the number of services provided at the community care venues from the Social and Family Affairs Administration of the MOHW, home visited 105,586 people based on community resources, telephone consultation and referral services to 108,123 people, provided catering services to 228,945 people. The subtotal is 442,652 people. If the number of the people are all non-repeating, it is estimated that they account for 12.7% of the elderly population over 65 years (3,433,517 people).

Home TV Interactive Technology Platform

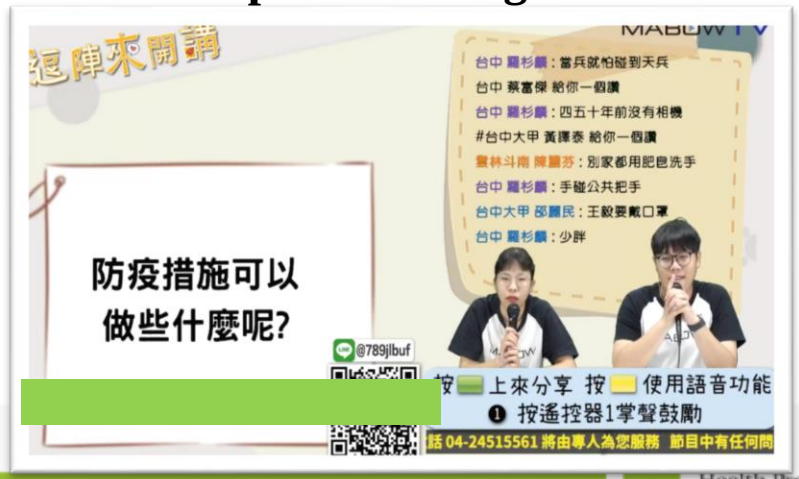
~New Functions and Health Promotion During the pandemic

Home Stretching Exercise

Remote Inquiry for NHI Contracted Pharmacies Number of Masks

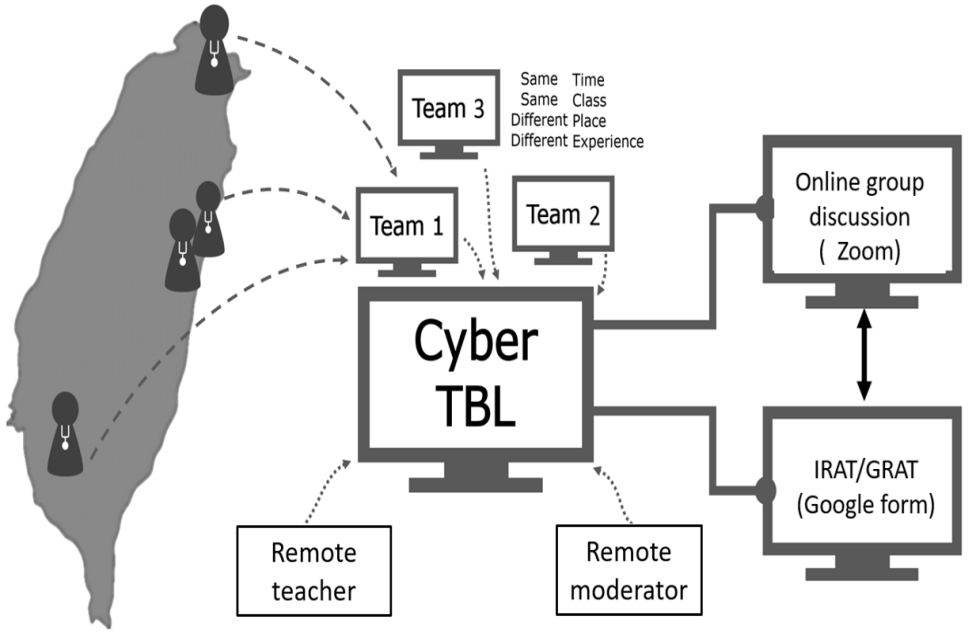
Health Promotion via Online Interactive

Participation through Audio

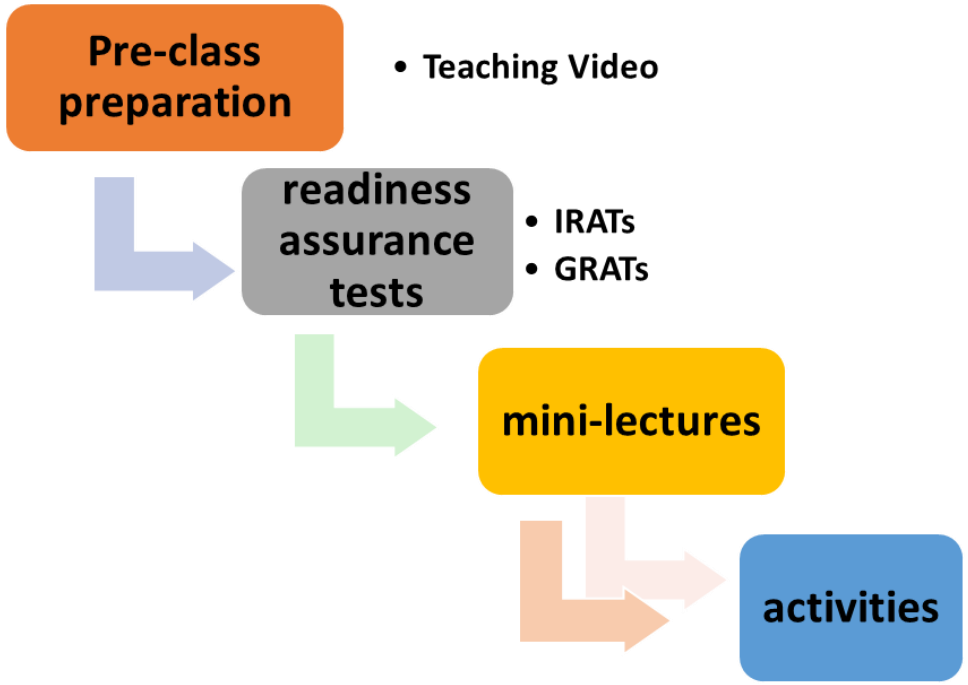


Online Synchronous Team-based Learning

~teaching health literacy for community health professionals



Schematic diagram of synchronous online TBL



Implementation steps

Provide Health Education and Health Promotion Activities for Elderlies
~Telehealth Platform

The local telehealth platform WaCare has been adopted in more than 66 community locations, providing online health education on COVID-19 and remote exercise courses. After the locations were closed in the prevention of COVID-19, the caregivers assisted the elderlies to use the online health promotion activities during the home visits.

Community

▲Social workers used WaCare to provide consultation for the elderlies in the Ju Cai Shan community of Puli.

▲ Health promotion courses at the Taitung Hot Spring Day Care.

Home

▲ Home courses, social works home visits are supported by health consultations with experts online.

Provide Health Education and Health Promotion Activities for Elderlies
~Telehealth Platform

Sharing Platform for Medical Professionals and the Public Reports on COVID19

▲ A series of health education videos by the experts to promote health awareness and education.

Heart-Warming Respite Plan by Pharmacists

▲ The website provides a list of recommended psychologists. Psychologist Yi-Shan Wu providing psychological counseling for pharmacist.

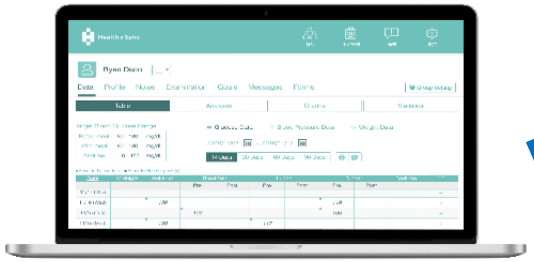
ICT based Smart Healthcare

Patient with diabetes

HCP

Outpatient self-management and healthy lifestyle education

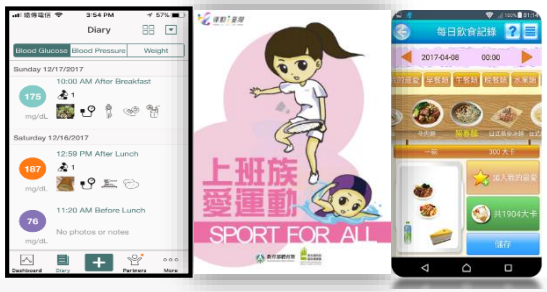
Digital Diabetes Care Solution (APP)



Integration of telecare data platform with hospital's information system

Management and online assistance by case manager

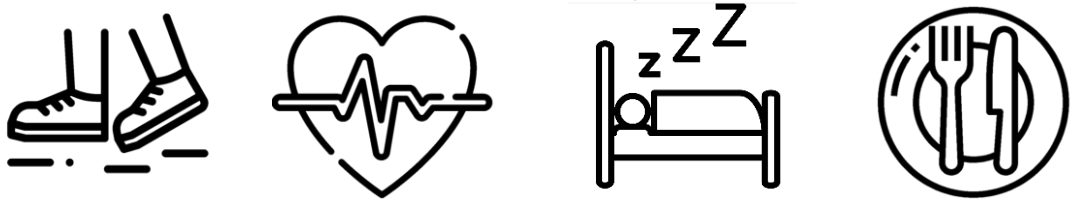
Self data upload

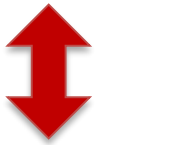


Self management

Personal App for Better Diabetes Self-management

Recording personal healthy number



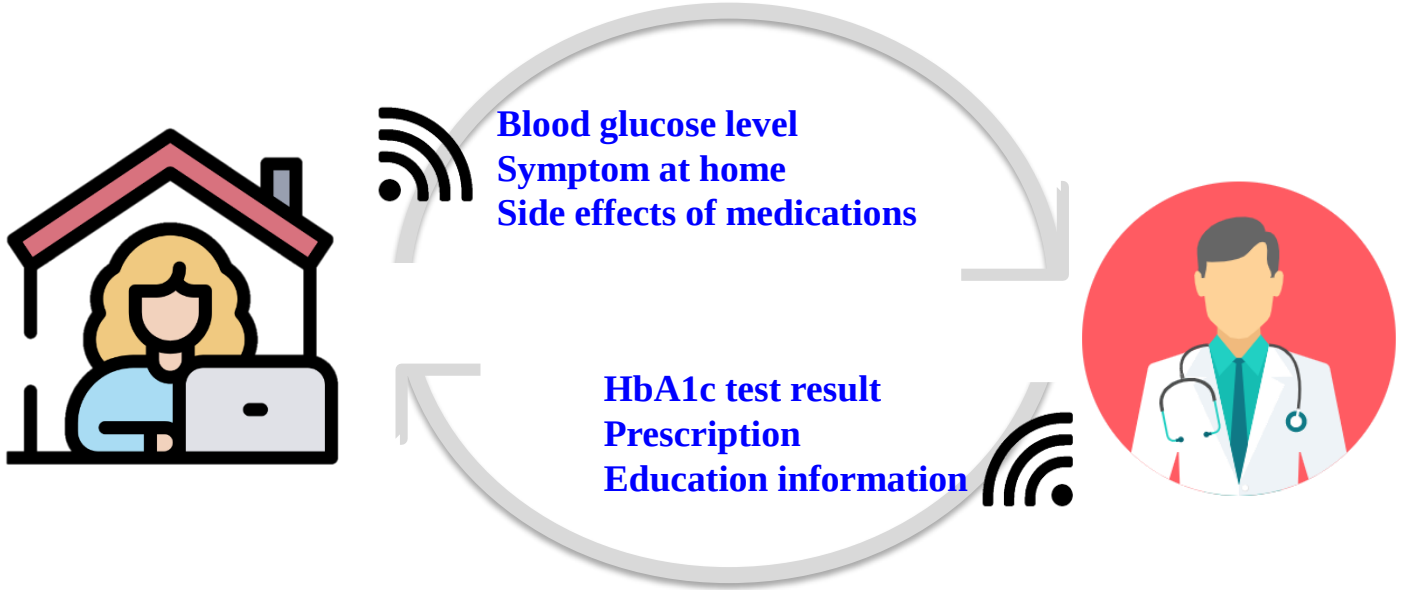


- human coaching
- education information

- ✓ **Develop healthy life style**
- ✓ **Manage and reduce the risk of type 2 diabetes**

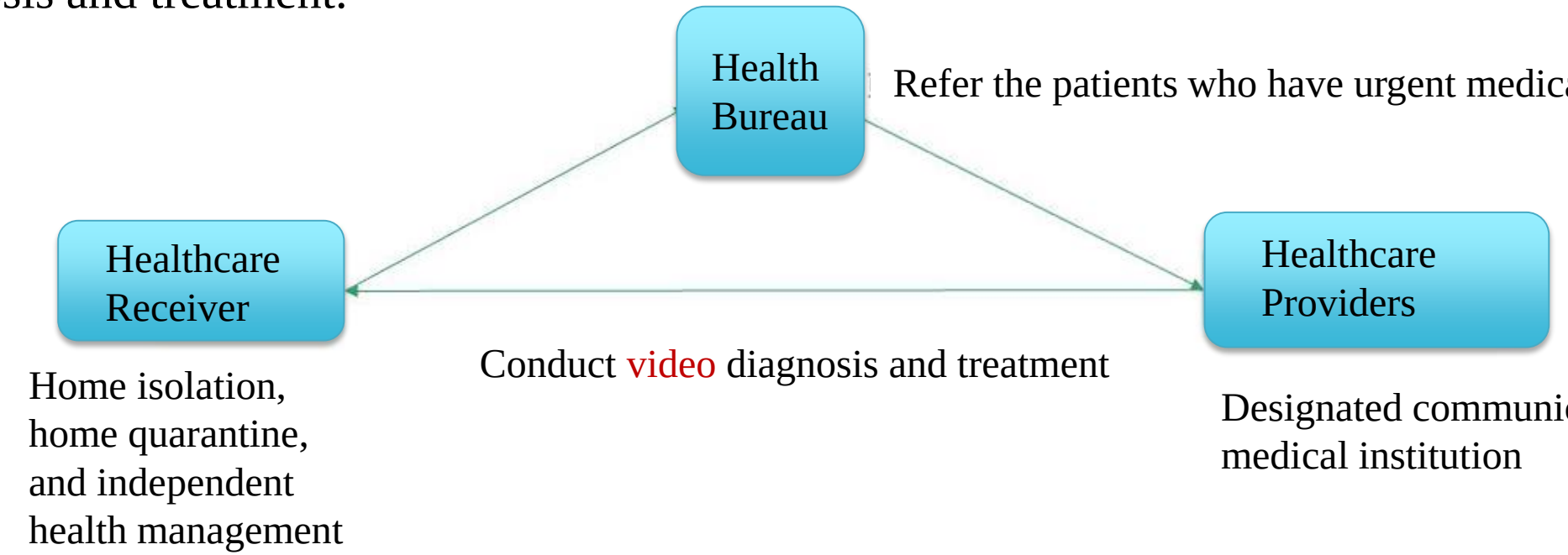
Diabetes Management during COVID-19 Pandemic

- More physicians provide care service for patients via diabetes management app and data platform.
- To avoid the risk of COVID-19, patients can take diabetes care service at home via online consultation in the future.



Remote Diagnosis and Treatment to Help Home Isolation and Home Quarantine

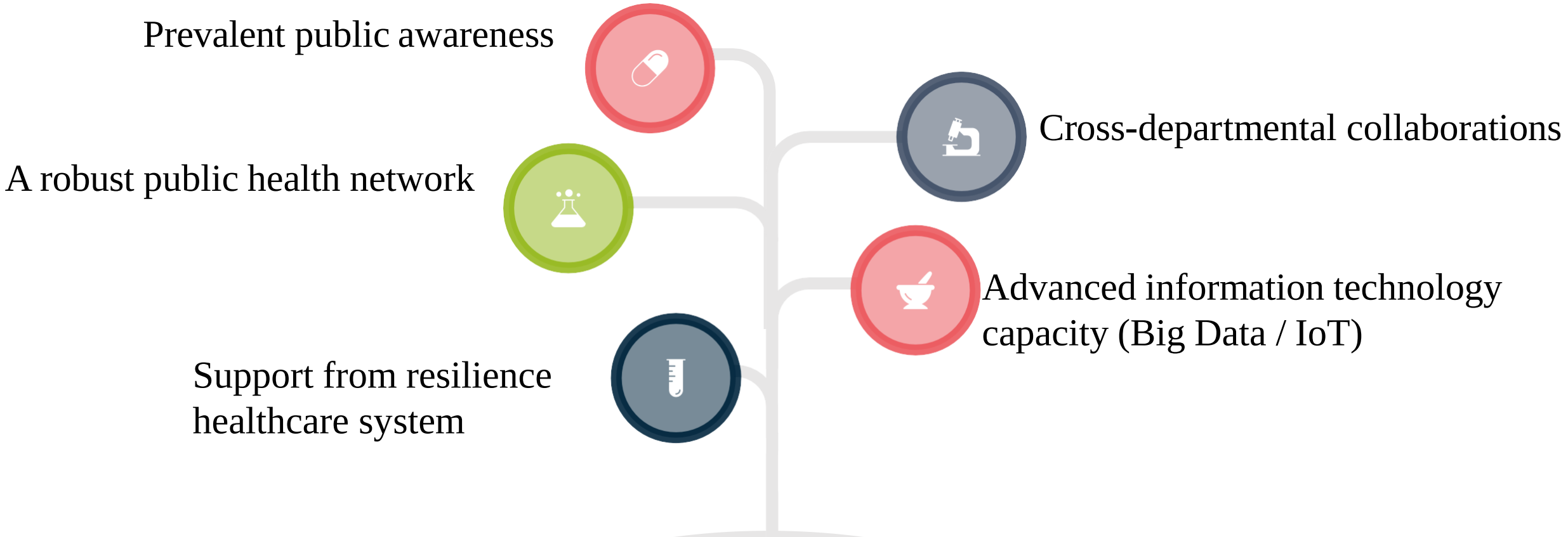
In response to the COVID-19 epidemic, residents of home isolation, home quarantine, and independent health management who have urgent medical needs and have no fever or respiratory symptoms should contact the local health bureau's epidemic prevention line and be referred by the health bureau to a designated communication medical institution. Arrange video diagnosis and treatment.



Source: https://covid19.mohw.gov.tw/ch/cp-4832-53631-205.html

Conclusion

Ensure healthy lives and promote well-being for all at all ages



- Resource: Policy Decisions and Use of Information Technology to Fight 2019 Novel Coronavirus Disease, Taiwan https://wwwnc.cdc.gov/eid/article/26/7/20-0574_article
- New Taipei City Government

One World, One Health

~Health For All Taiwan Can Help

Promotion.

Prevention.

Protection.

Participation.

Partnership!

HPA

Health Promotion Administration,
Ministry of Health and Welfare

Person-Centred Care

Person engagement

Person empowerment

Korea, Dr. So Yoon Kim

COVID-19 Response of Republic of Korea

Presentation slides are not authorized

APACPH CCHP
Collaborating Centres for Health Promotion

Singapore, Dr. Yik-Ying Teo

Returning to Public Health 101 for managing COVID-19: A case study from Singapore

NUS National University of Singapore | Saw Swee Hock School of Public Health

NUHS National University Health System

Returning to Public Health 101 for managing COVID-19: A case study from Singapore

YY Teo
Professor, Dean
Saw Swee Hock School of Public Health

Turning Discovery into Healthier Communities

Fundamentals of Public Health

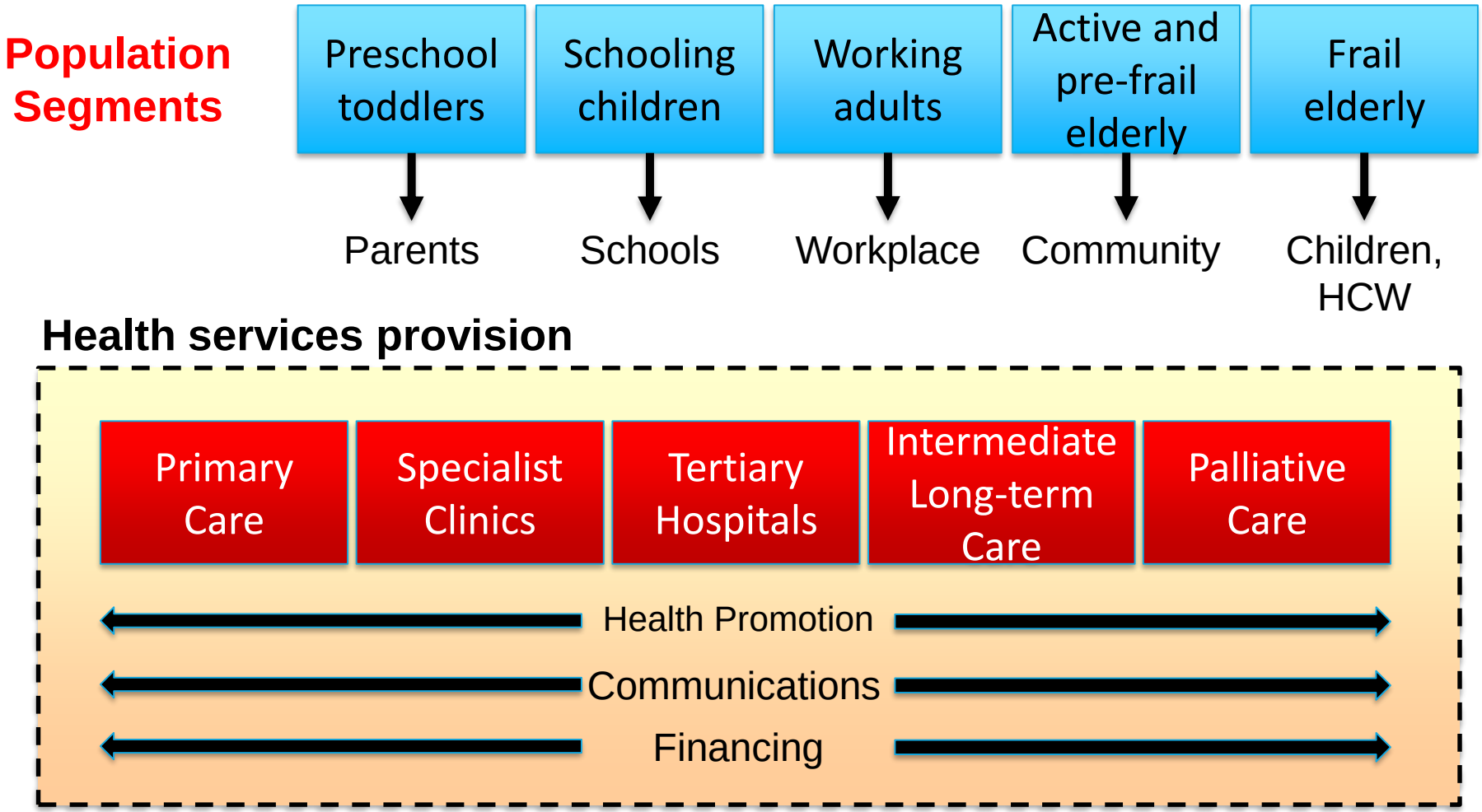
NUS National University of Singapore | Saw Swee Hock School of Public Health

1. Evidence-based public policies
2. Focused on **Prevention**, and of **Systems Thinking**
3. Focused on "**DIME**" and "**SAFE**"
   - **DIME** = Design, Implementation, Monitoring, Evaluation
   - **SAFE** = Sustainable, Adequate, Fair, Efficient
4. Cross-disciplinary, systems-level thinking, **outcomes driven**

Evidence generation and synthesis (data collection, meta-analyses, systematic reviews)	**Modeling and impact analysis of disease burden or interventional programmes**	**Monitoring and evaluation (including economic) of policies, and programmes**
Health communication, promotion and media engagement	**Health systems evaluation and healthcare priority setting**	

Managing Health at the Systems-level

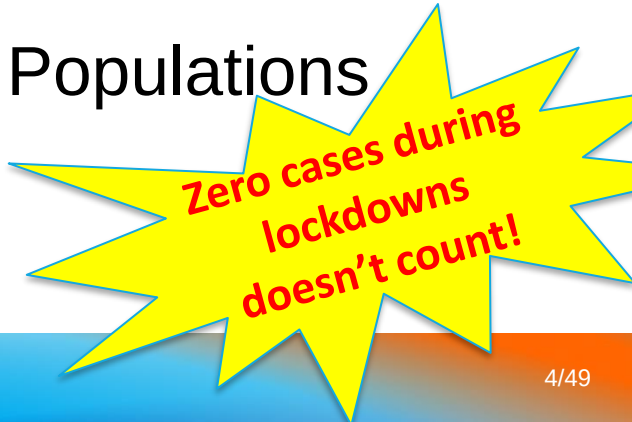
NUS National University of Singapore | Saw Swee Hock School of Public Health



COVID-19: What are the Outcomes that matter?

NUS National University of Singapore | Saw Swee Hock School of Public Health

1. Ability to Test, Track, Trace and Isolate
2. Minimizing Deaths and Complications
3. Protecting Healthcare Workers
4. Universal Health Coverage for COVID-19
5. Ensuring continuity of non-urgent medical services
6. Fiscal Support for Individuals and Businesses
7. Ensuring Resilience in Food and Medicine Supply Chains
8. Protecting Vulnerable and Neglected Populations



Benchmarking Global Health Security

GHS INDEX
GLOBAL HEALTH SECURITY INDEX

https://www.ghsindex.org/

The Global Health Security Index measures the state of health security around the world. The index is composed of **6** categories:

PREVENTION
Prevention of the emergence or release of pathogens

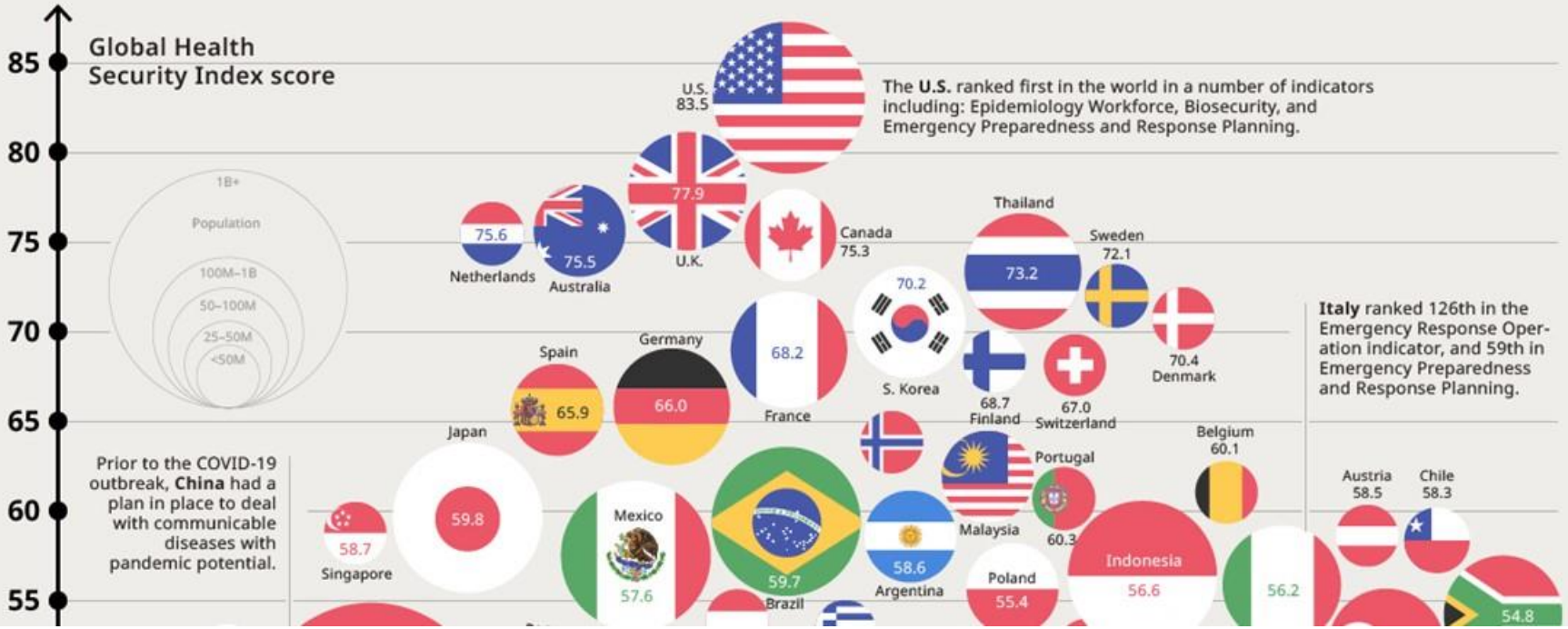
DETECTION AND REPORTING
Early detection and reporting for epidemics of potential international concern

RAPID RESPONSE
Rapid response to and mitigation of the spread of an epidemic

HEALTH SYSTEM
Robust health system to treat the sick and protect health workers

COMPLIANCE WITH GLOBAL NORMS
Commitments to improving national capacity, financing plans, and adhering to global norms

RISK ENVIRONMENT
Overall risk environment and country vulnerability to biological threats



Benchmarking Global Health Security

All | Europe | North America | Asia | South America | Africa | Oceania

#	Country, Other	Total Cases	New Cases	Total Deaths	New Deaths	Total Recovered	Active Cases	Serious, Critical	Tot Cases/ 1M pop	Deaths/ 1M pop	Total Tests	Tests/ 1M pop
	World	22,602,141	+32,942	791,402	+1,207	15,319,076	6,491,663	61,723	2,900	101.5		
1	USA	5,701,162	+231	176,342	+5	3,062,755	2,462,065	16,875	17,210	532	73,118,341	220,723
2	Brazil	3,460,413		111,189		2,615,254	733,970	8,318	16,264	523	13,729,872	64,531
3	India	2,841,400	+5,578	54,017	+23	2,097,766	689,617	8,944	2,056	39	32,661,252	23,636
4	Russia	942,106	+4,785	16,099	+110	755,513	170,494	2,300	6,455	110	33,500,000	229,541
5	South Africa	596,060		12,423		491,441	92,196	539	10,033	209	3,455,671	58,168
6	Peru	558,420		26,834		377,453	154,133	1,516	16,905	812	2,852,011	86,339
7	Mexico	537,031	+5,792	58,481	+707	367,537	111,013	3,480	4,159	453	1,211,552	9,384
8	Colombia	502,178		15,979		326,298	159,901	1,493	9,855	314	2,337,241	45,868
9	Chile	390,037		10,578		364,285	15,174	1,120	20,380	553	2,087,354	109,067
10	Spain	387,985		28,797		N/A	N/A	617	8,298	616	7,955,615	170,147
11	Iran	350,279		20,125		302,528	27,626	3,868	4,163	239	2,939,840	34,942
12	UK	321,098		41,397		N/A	N/A	73	4,727	609	14,988,134	220,626
13	Argentina	312,659		6,330		228,725	77,604	1,795	6,909	140	1,012,979	22,385

Worldometer statistics as of 20/08/20

Our understanding of COVID-19 evolves over time, and so does our PH policies

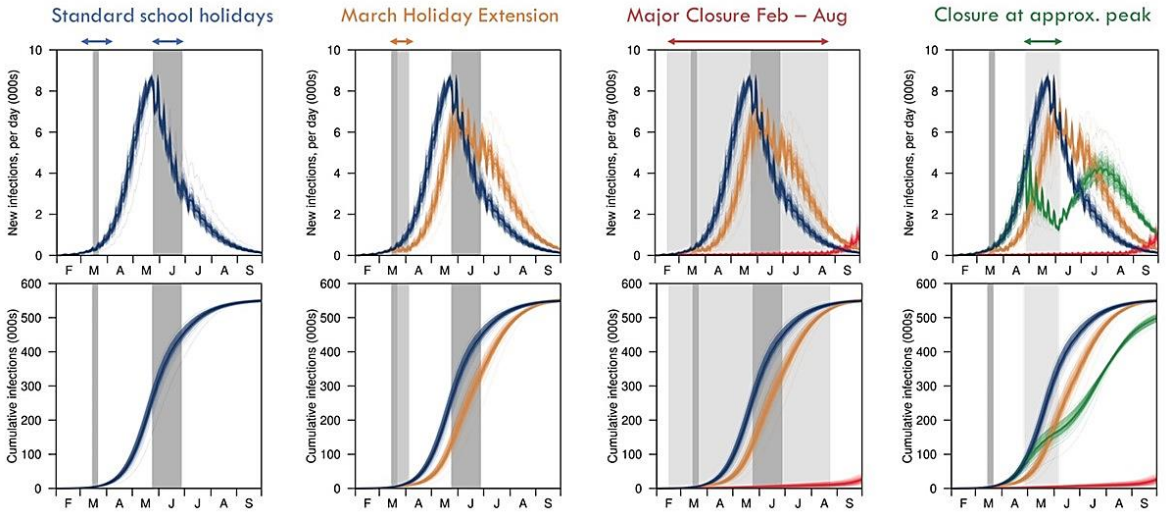
Evidence generation and synthesis (data collection, meta-analyses, systematic reviews)

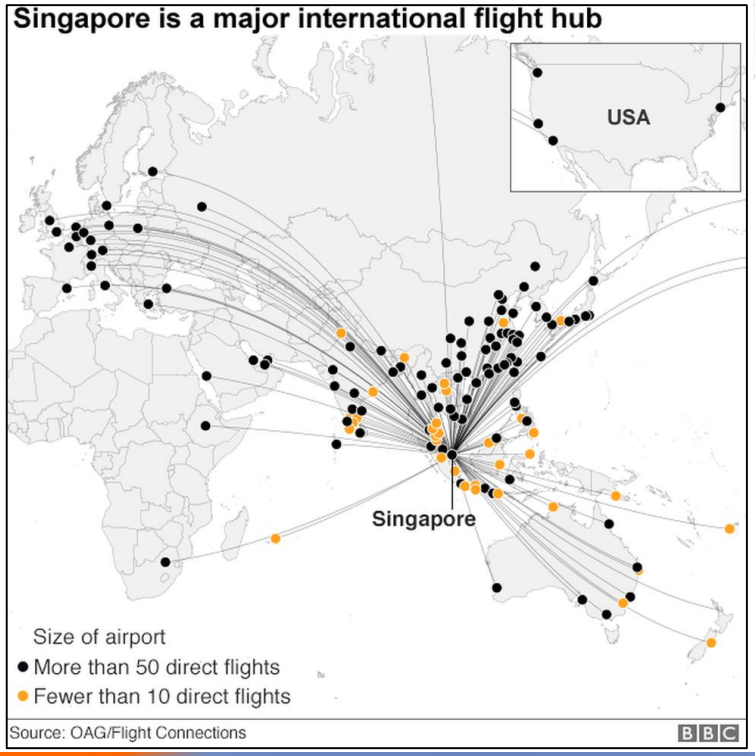
Evidence areas	Initial	Current	Implication/s
Human-to-human transmission	Animal-to-Human transmission only	Human-to-Human transmission	Safe-distancing measures
Transmissibility	Low transmissibility between humans	COVID-19 highly transmissible	Compulsory mask wearing, safe-distancing measures, SHN, QOs, hand-hygiene
Asymptomatic spread	Asymptomatic patients are not infectious	Asymptomatic patients are infectious	Compulsory mask wearing
Transmissibility to pets & livestock	No human-to-animal transmission	COVID-19 possibly transmissible from human-to animal	None currently
Aerosolization / Airborne	May be transmissible through aerosol but not transmissible through airborne		Compulsory mask wearing
Mutation of COVID-19	Virus has the potential to mutate to become more or less virulent		More virulent = higher chance of increased hospitalization
Transmission dynamics	Transmission through close contact with infected individuals	COVID-19 may be transmitted through food or packaging or equipment	None currently
Schools	School-going children (<12) low risk of infection/complications		Schools reopening

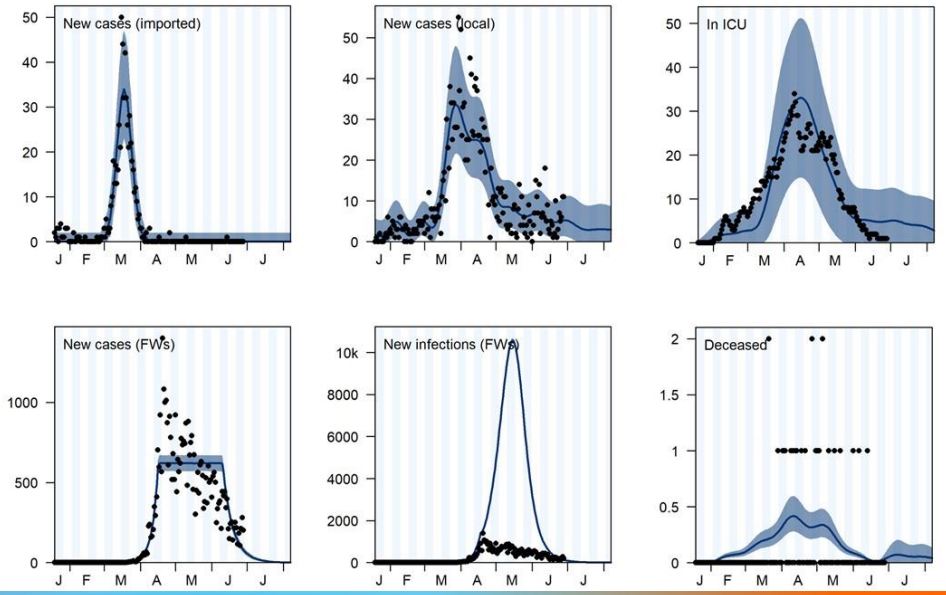
Understanding burden and impact of interventions

NUS National University of Singapore | Saw Swee Hock School of Public Health

Modeling and impact analysis of disease burden or interventional programmes



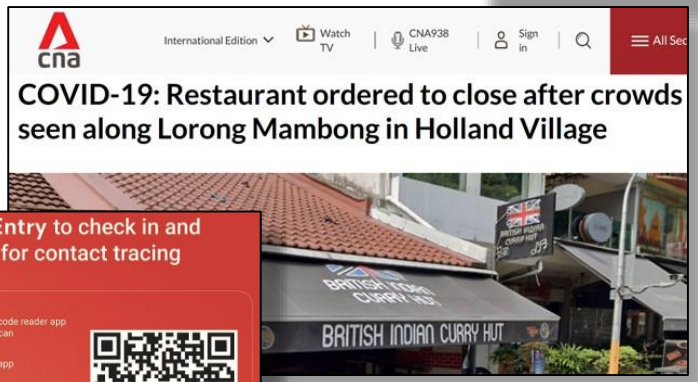




Emphasis on Monitoring, Enforcement and Penalties

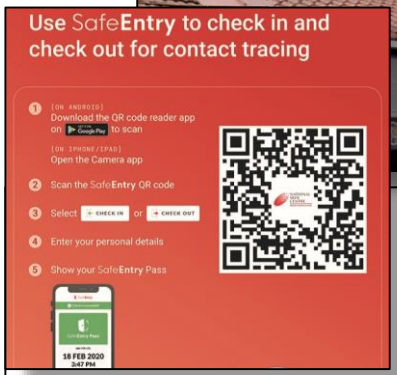
NUS National University of Singapore | Saw Swee Hock School of Public Health

Monitoring and evaluation (including economic) of policies, and programmes



Coronavirus: Access to popular parks, beaches will be closed if too crowded; 2 bars suspended for violating safe distancing rules

PUBLISHED JUL 24, 2020, 6:59 PM SGT | UPDATED JUL 24, 2020, 8:23 PM



Singapore

7 people fined over social gatherings at Robertson Quay during COVID-19 circuit breaker

25 Jun 2020 01:07PM
(Updated: 25 Jun 2020 01:34PM)

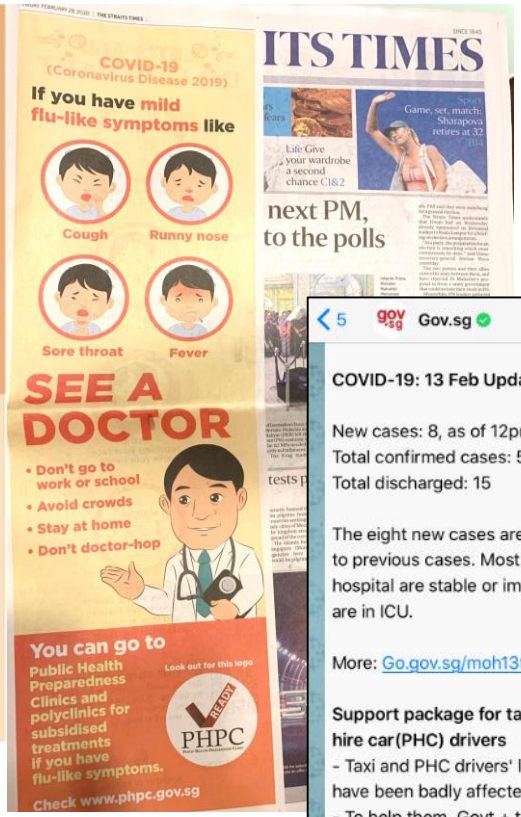
Communications to Public, Employers, and Policy Makers

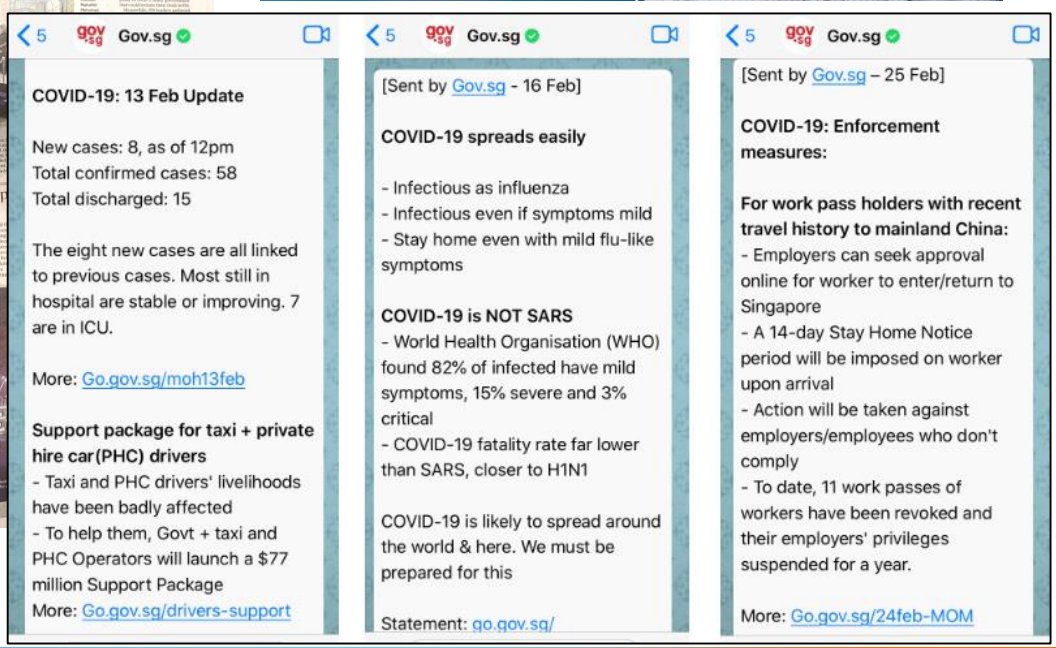
NUS National University of Singapore | Saw Swee Hock School of Public Health

Health communication, promotion and media engagement

Exclusive: How Singapore sends daily Whatsapp updates on coronavirus

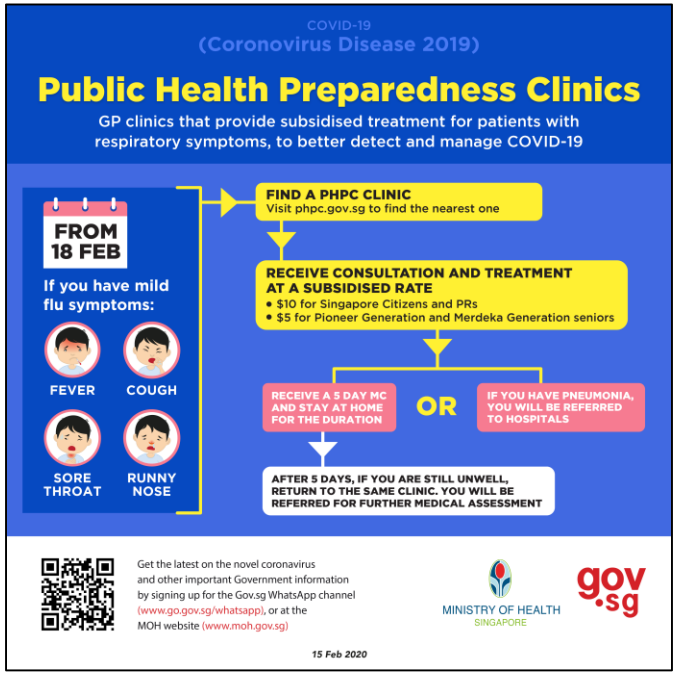
How a GovTech unit built #CovTech to coordinate Singapore's response to the COVID-19 outbreak.



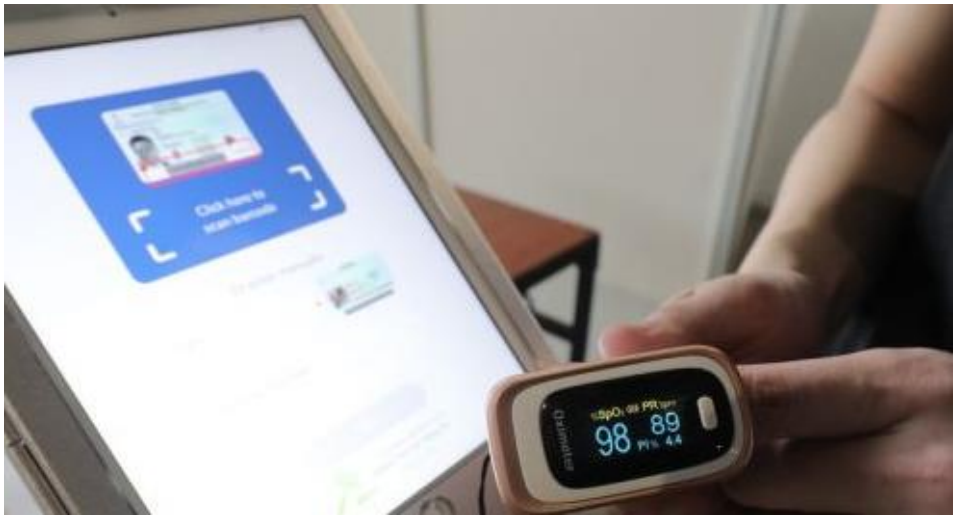


Systems-level Considerations

NUS National University of Singapore | Saw Swee Hock School of Public Health




Coronavirus: CID roped in to help find links between cases, trace contacts



Health systems evaluation and healthcare priority setting

Healthcare Financing

NUS National University of Singapore | Saw Swee Hock School of Public Health

THE STRAITS TIMES

SINGAPORE

Coronavirus: Singapore Government to foot bills of infected patients at public hospitals, except outpatient expenses

PUBLISHED FEB 12, 2020, 8:53 PM SGT | UPDATED FEB 13, 2020, 6:36 AM

- **Assurance of financial coverage for all, including migrant workers**
- **Singapore insurance associations issue joint statement to provide coverage for medical expenses related to COVID-19**

Bangkok Post THAILAND WORLD BUSINESS OPINION AUTO

THAILAND › GENERAL

Virus covered by universal health care

Official: Mask shortages due to lack of raw materials

PUBLISHED : 2 MAR 2020 AT 19:39

WORLD NEWS MARCH 10, 2020 / 12:35 PM / 13 DAYS AGO

REUTERS

Singapore charges visitors for coronavirus treatment after imported Indonesian cases

Aradhana Aravindan, John Geddie

3 MIN READ

Health bills may hurt coronavirus fight in US

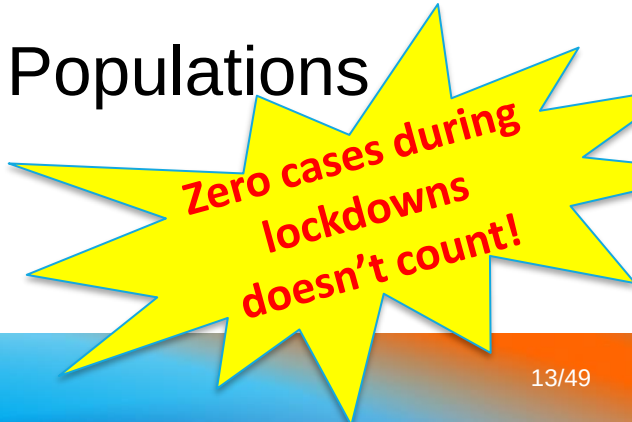
THE STRAITS TIMES, PUBLISHED 1 MAR 2020

High costs could deter potential patients from being tested and seeking medical help: Experts

COVID-19: What are the Outcomes that matter?

NUS National University of Singapore | Saw Swee Hock School of Public Health

1. Ability to Test, Track, Trace and Isolate
2. Minimizing Deaths and Complications
3. Protecting Healthcare Workers
4. Universal Health Coverage for COVID-19
5. Ensuring continuity of non-urgent medical services
6. Fiscal Support for Individuals and Businesses
7. Ensuring Resilience in Food and Medicine Supply Chains
8. Protecting Vulnerable and Neglected Populations



For Discussion

NUS National University of Singapore | Saw Swee Hock School of Public Health

- Ability or inability to respond during a public health crisis is a function of decision taken in a country in the past

- Global Public Health cannot be left to chance, **Academic-Governmental partnerships during peace time must be a norm**

- Outcomes during crisis matters, not series of peace-time indicators

NUS National University of Singapore
Saw Swee Hock School of Public Health

Thank you!

ephtyy@nus.edu.sg

APACPH CCHP
Collaborating Centres for Health Promotion

Malaysia, Dr. Noran Naqiah

Working together through the challenges of Covid-19

Presentation slides are not authorized

APACPH CCHP
Collaborating Centres for Health Promotion

Korea, Dr. Sunjoo Kang

Yonsei Master's Degree Program in Global Health security and ICUH

SEVERANCE

Master's Degree Program in Global Health Security Capacity Building

Sunjoo Kang, Yuri Lee

Master's Degree Program in Global Health

KOICA Scholarship Program

Master's Degree Program in Global Health Security Capacity Building (2017-2021)

Master's Degree Program in Health Policy and Financing Capacity Building (2020-2024)

Program Title	Department	Division	No. of Students	Degree	Period
Master's Degree Program in Global Health	Department of Global Health Security	Division of Global Health Security Prevention Program	20	Master of Public Health	2017.09. ~ 2019.02.
		Division of Global Health Security Detection Program	20		2018.09. ~ 2020.02.
		Division of Global Health Security Response Program	20		2019.09. ~ 2021.02.
		Division of Global Health Security	00		**2020.09.01~**
	Department of Global Health Policy and Financing	Division of Global Health Policy and Financing)	20		2020.09. ~ 2022.02.
			20		2021.09. ~ 2023.02.
			20		2022.09. ~ 2024.02.

I. Program Overview

- **Program Title:** KOICA-Yonsei Master's Degree Program in Global Health Security Capacity Building
- **Duration:** 17 months study in Korea

Prevention (Course 1)	Detection (Course 2)	Response (Course 3)
Aug, 2017-Jan, 2019	Aug, 2018-Jan, 2020	Aug, 2019-Jan, 2021

- **Degree:** Master of Public Health, Global Health Security Response Program
- **Number of Participants:** 20 Government Officials from health sectors
- **Language:** English fluency that requires no interpretation
- **Study Areas:** Public Health, Infectious Diseases Control, Leadership, Management of Infectious Diseases, Research Skills

- **Curriculum & Credits**

Mandatory

Introduction of Public Health(2), Biostatistics (2)
Epidemiology for control of communicable diseases (2)
Case studies in GHSA/EID (1), Case studies in Global health (1)
Introduction to GHSA (1), Global Health Seminar (1)
Thesis of Global Health Security (GHS) I (2), Thesis of GHS II (4)

Credit		Prevention	Detection	Response
Elective subject	2	Tuberculosis in Korea	Tuberculosis in Korea	**COVID-19 response in Korea** International Disaster Response
	1	Introduction of Infectious Diseases	Vaccine Preventable Diseases	Hospital Infection Control
	2	Antimicrobial Resistance of Bacteria	Managing Service Delivery for UHC	Managing Service Delivery for UHC
	1	Back to the Basics of Infectious Diseases	GHSA, Health Law and Ethics	Health Law and Ethics
	2	**Vaccinology**	Vaccinology	Vaccinology
	1	Bioterrorism preparedness and response	**Medical and Humanitarian Emergencies**	Medical and Humanitarian Emergencies

Vaccinology

Credit : 2

Topics to be covered by lecture

- History of vaccine
- Vaccine against Zika virus
- Animal studies in Vaccine development
- Vaccination schedules
- Transmission modeling
- Ethical issues in conducting clinical trials
- Regulatory assessment of vaccines
- Vaccine preparedness and response to EID
- Assessing vaccine effectiveness
- Post-registration safety monitoring
- Practice of epidemiologic curve

Student participation

- Discussion

Hospital Infection Control

Credit : 1

Topics to be covered by lecture

- Introduction of infection management
- Outbreak investigation and discussion
- Surveillance bundle approach for infection control
- Laboratory test for infection control
- Molecular epidemiology
- Standard precaution, and PPE
- Emerging infectious disease management
- Management of multi-drug resistance organism
- JCI Hospital infection prevention and control

Student participation

- Case simulation and presentation

Medical and Humanitarian Emergencies Course

Credit : 2

Topics to be covered by lecture

- Disaster definition
- Disaster planning
- Epidemiology and surveillance
- War and public health
- Ethics and humanitarian principles
- Food security and livelihood
- Metal health
- Disease management in emergencies
- Sexual and reproductive health
- Discussion exercise : Disaster assessment, establishing health services, disease outbreaks

Group discussion

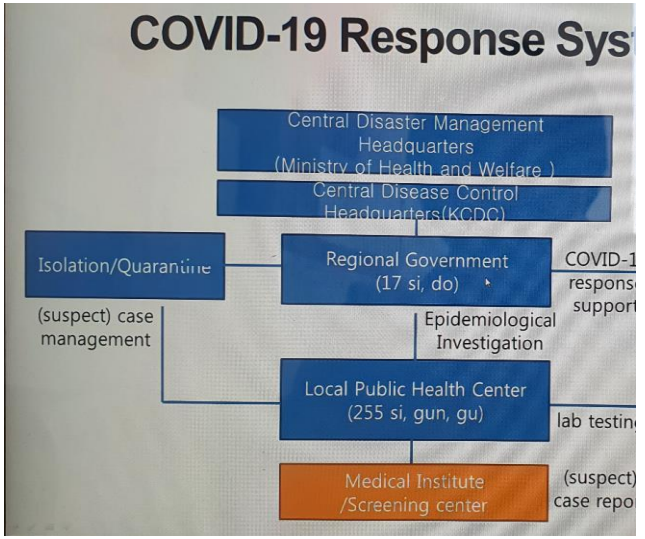
- Case studies and presentation daily

COVID-19 Response in South Korea

Credit : 1

Topics to be covered by lecture

- Governance
- Border control
- Testing
- Contact tracing and Isolation
- Treatment
- Practice of epidemiologic curve mapping
- Telemedicine
- Social distancing
- Risk communication



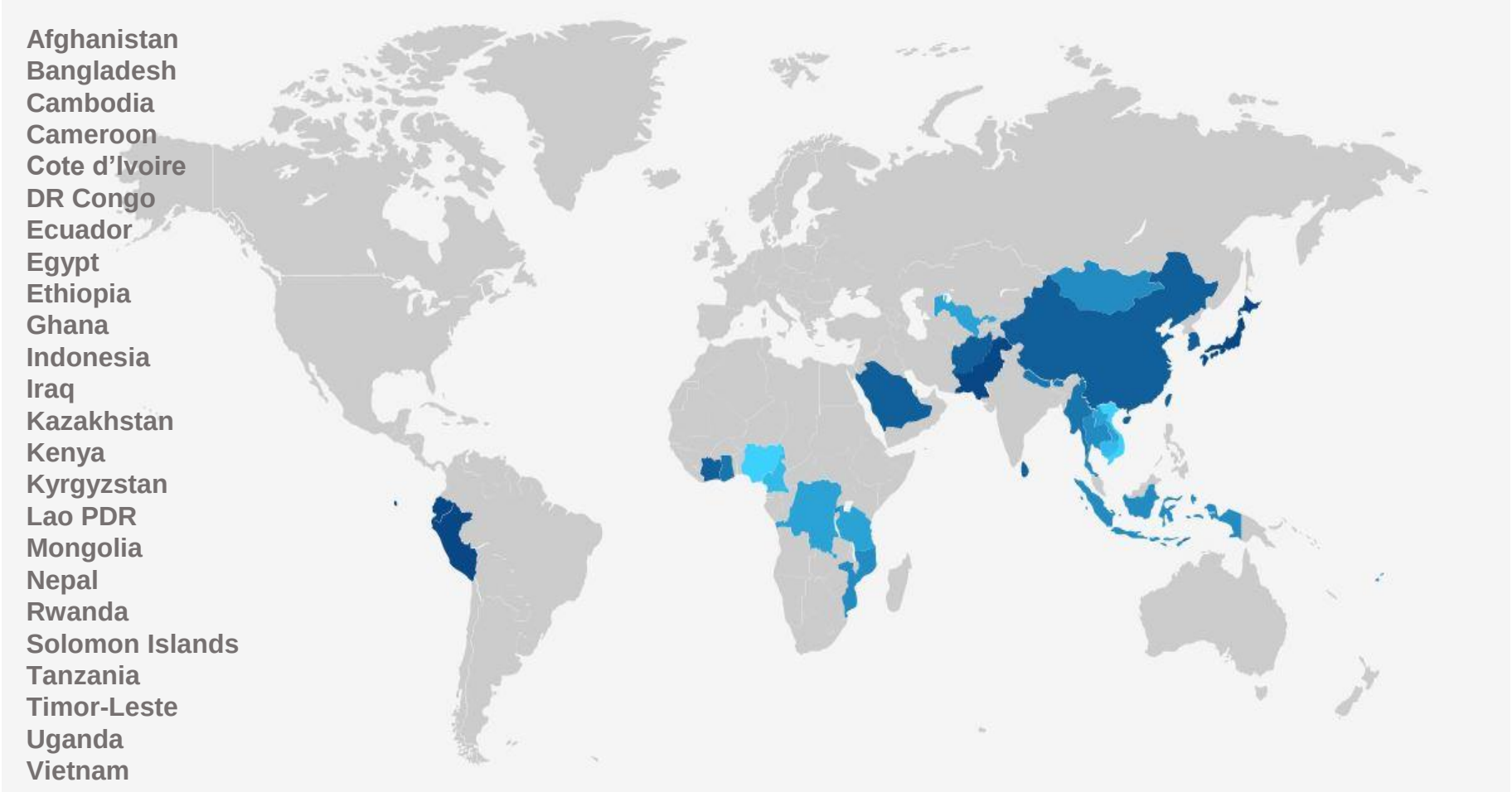
Students participation

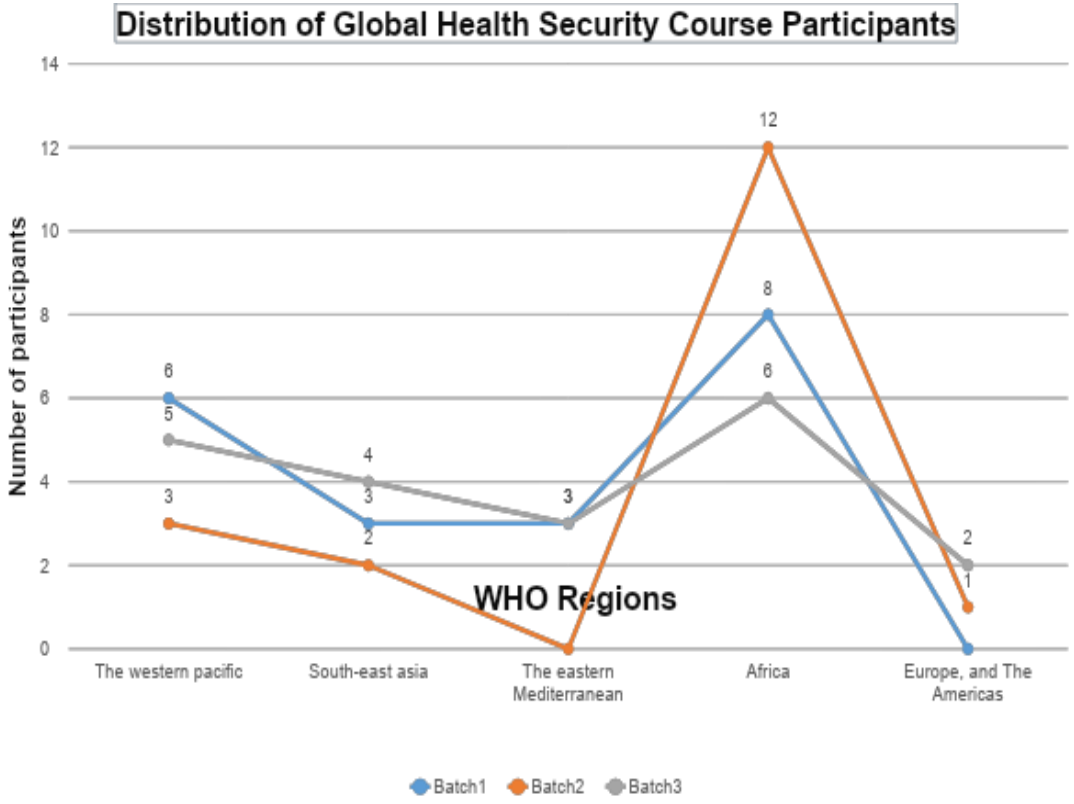
- Summary presentation of their country's response

III. Global Fellow Accomplishment

Nationalities of Global Health Security Program Students :

59 students from 24 countries





WHO Six Region	Country Name	Batch 1	Batch 2	Batch 3	m	
Western Pacific Region	Vietnam	3	2	1	6	14
	Solomon Islands	1			1	
	Mongolia	2	1	1	4	
	Cambodia			1	1	
	Lao PDR			2	2	
South-East Asia Region	Nepal	3		2	5	9
	Timor-Leste		1	1	2	
	Indonesia		1		1	
	Bangladesh			1	1	
Eastern Mediterranean Region	Egypt	1		2	3	6
	Afghanistan	2			2	
	Iraq			1	1	
African Region	Ghana	1		2	3	26
	Ethiopia	2	1	1	4	
	Kenya	2	1	1	4	
	DR Congo	2	2		4	
	Rwanda	1	3		4	
	Cameroon		2		2	
	Tanzania		2		2	
	Cote d'Ivoire		1		1	
	Uganda			2	2	
European Region	Kyrgyzstan			1	1	4
	Kazakhstan		1		1	
Region for the America	Ecuador		1	1	2	
TOTAL		20	18	20	59	59

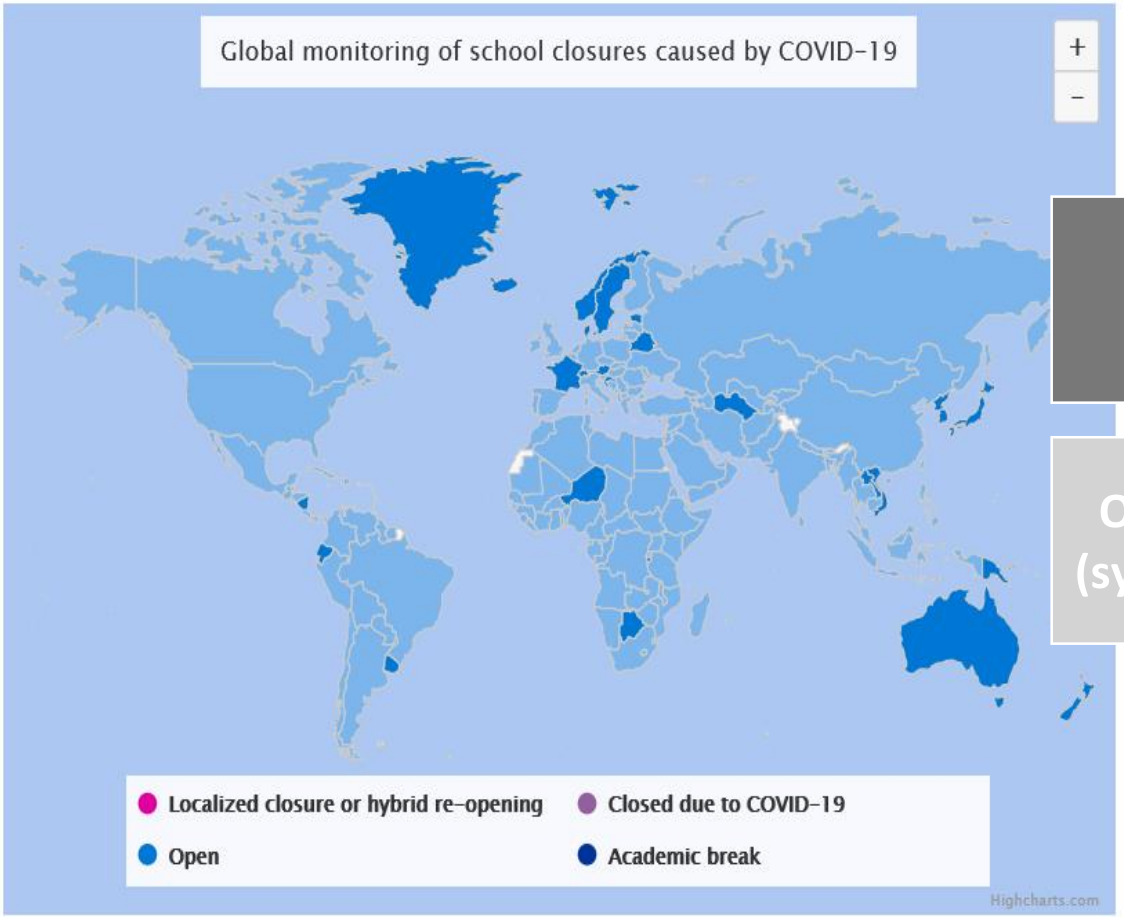
- **Number of Mater Theses : 39 (100.0%)**
- **Number of SCIE Journal publication : 6 (15.4%)**
- **Number of Reviewing after Submission : 11 (28.2%)**
- **Number of Promotion to Higher Position : 15 (38.5%)**
- **Number of Working in COVID 19 Sector : 14 (35.9%) / Batch 1 (10, 50%), Batch 2 (4, 22.2%)**

Name of Affiliation of COVID 19 Response	
B1	Multi-sector Committee for Coronavirus pandemic Control, **DR Congo** Senior Investigator (developing a multiplex serological test for COVID19, DR Congo National Multisectoral Commitee for the Control of COVID-19**, Ghana** Bhudhanilkantha Municipality health facilities, Contact Tracing Officer, **Nepal** Chief of provincial health office, Infection control officer in surveillance department, Nepal Supply chain management, Task force advisor at Rwinkwavu district hospital, Nepal Infectious Disease Control (Training PPE, preventive measure to all provinces) in **Solomon Islands**
B2	CDC Official at CDC Department, **East Timor** Team leader- COVID-19 country emergency response team, **Kenya**

A new era of ICUH

Challenges and opportunities

COVID-19 Impact on Education



No class

Online class (asynchronous)

Online class (synchronous)

Online class (hybrid)

Reference: UNESCO website
https://en.unesco.org/covid19/educationresponse

Change in Education System

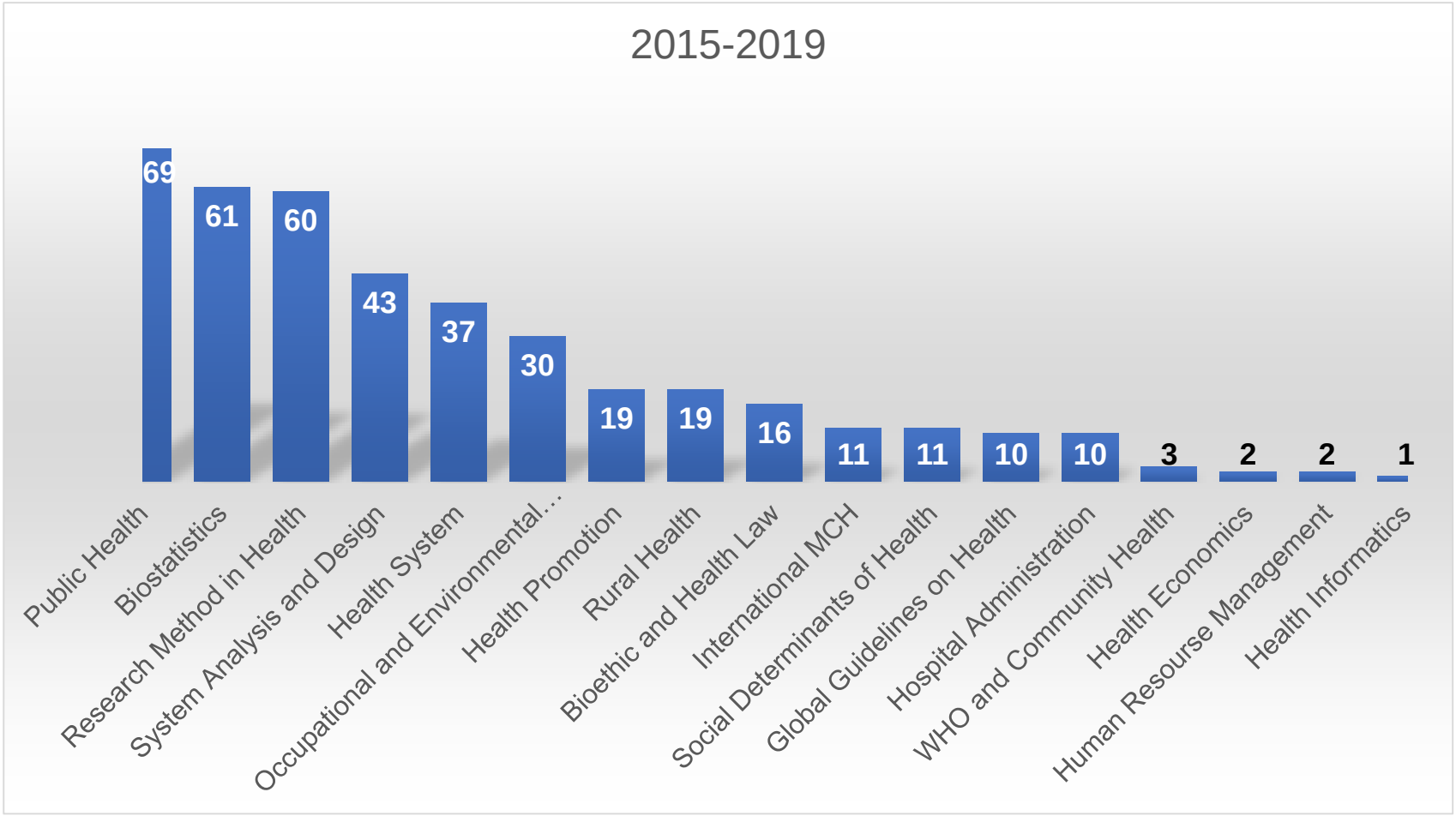
	Education 1.0	Education 2.0	Education 3.0
Meaning is	Dictated	Socially constructed	Socially constructed and contextually reinvented
Teaching is done	Confiscated at the classroom door	Teacher to student and student to student	Teacher to student, student to student, student to teach, people-technology-people
Schools are located	In a building	In a building or online	Everywhere (through infused into society; cafes, bowling alleys, bars, workplaces, etc.)
Teachers are	Licensed professionals	Licensed professionals	Everybody, everywhere

Education 4.0 era By COVID-19?

Reference: New paradigm model – Education 1.0 – 3.0 spectrum as presented by John Moravec in "Moving beyond 2.0" (Education features, 2008)

CONTENTS

Course Taken Numbers by Subject



2015 ~ 2019

	Course Name	Lecture Professor	Total number of course taken
1	Public Health	Jae-Hoon Roh, Jong Wook Won, So yoon Kim	69
2	Biostatistics	Young Moon Chae, So hee Kim, Sohee Park	61
3	Research Method in Health	Young Moon Chae, Colin Binns	60
4	System Analysis and Design	Young Moon Chae	43
5	Health System	Yuri Lee	37
6	Introduction to Occupational and Environmental Health	Purevdorj Baljinnyam	30
7	Health Promotion	Hee Jin Kim	19
8	Rural Health	Osman Ali, Tomiko Hokama	19
9	Bioethics and Health Law	So Yoon Kim	16
10	Int'l Maternal and Child Health	Tomiko Hokama, SooJin Yoon	11
11	Social Determinants of Health	Saroj Jayasinghe	11
12	Global Guidelines on Health	Laura Hawken	10
13	Hospital Administration	Tae-Hyun Kim	10
14	WHO and Community Health	Laura Hawken	3
15	Health Economics	In Kyu Kim	2
16	Human Resource Management	In-Soon Kim	2

Courses from Global Public Health Master Degree, GSPH Yonsei University

- Global Health Security Course
- Global Health Policy and Finance Course
- Korea’s COVID-19 Response Course
- Medical and Humanitarian Emergencies Course (cooperated by SPH Jonhs Hopkins University)

Collaboration with Industry-Academic-Research Institutions, GSPH Yonsei University

- NECA
  - Systematic Review
  - Economic Evaluation
  - Health Technology Assessment
- Right Fund
  - Diagnosis and Treatment of Emerging Infectious Diseases
- APACPH Members

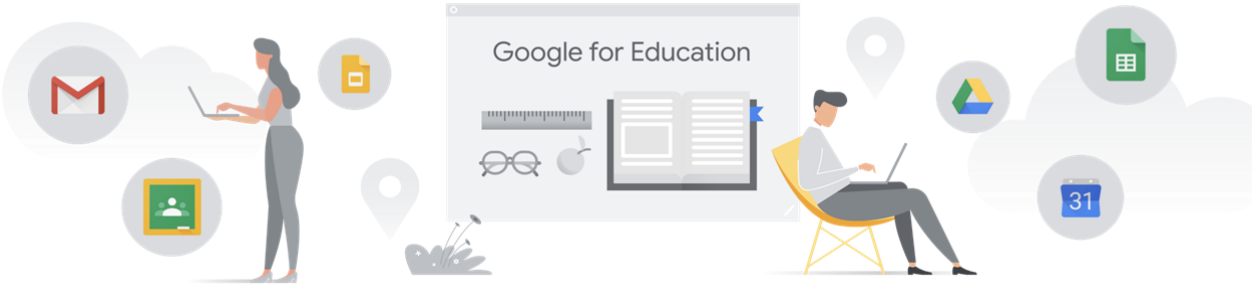
PLATFORM

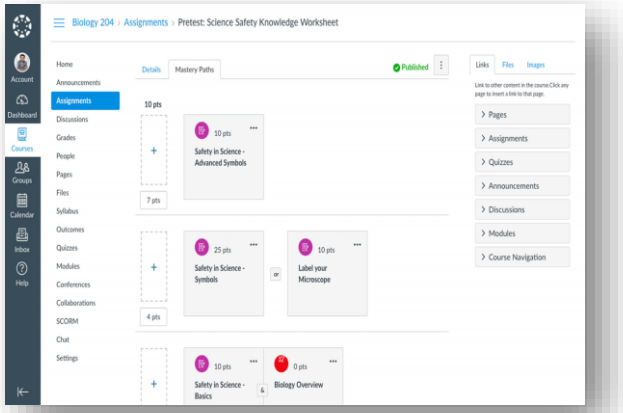
Google class

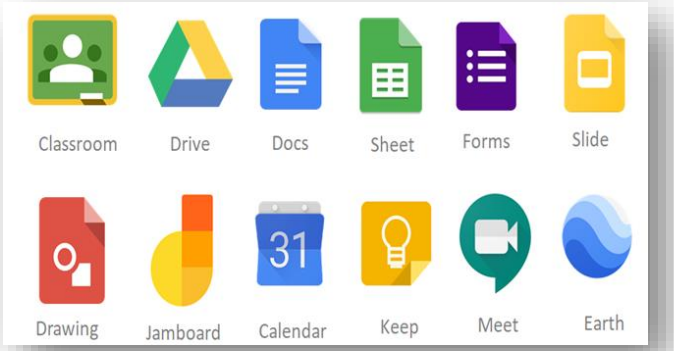
Moodle

Zoom

Canvas





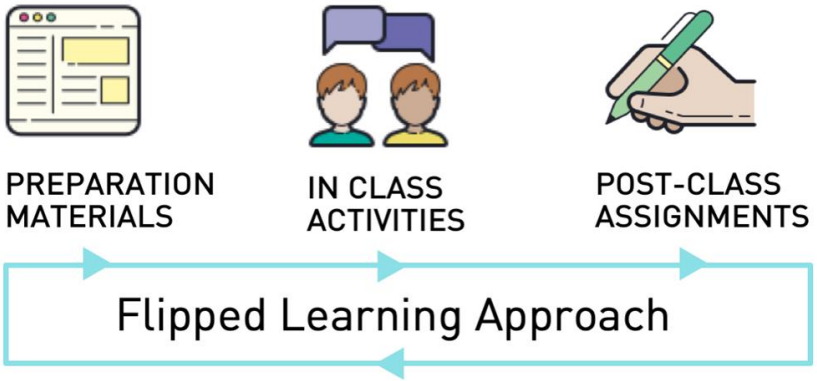


Real-time Online Interactive Class

Cisco Webex

zoom

Learner-centered Teaching Methods



References

- UNESCO website
  https://en.unesco.org/covid19/educationresponse

- New paradigm model – Education 1.0 – 3.0 spectrum as presented by John Moravec in "Moving beyond 2.0" (Education features, 2008)

YONSEI UNIVERSITY
HEALTH SYSTEM

Thank you.

APACPH CCHP
Collaborating Centres for Health Promotion

YONSEI UNIVERSITY
1885

Taiwan, Dr. Pau-Chung Chen

Public Health Specialists Act in the post-COVID-19 environment

Public Health Specialists Act in the Post-COVID-19 Environment

Pau-Chung Chen, MD, PhD
Taiwan Public Health Association
September 11, 2020

台灣公共衛生學會
由陳保中發佈 [?] · 1月21日 ·

DAILYMAIL.CO.UK | 作者：DAILY MAIL

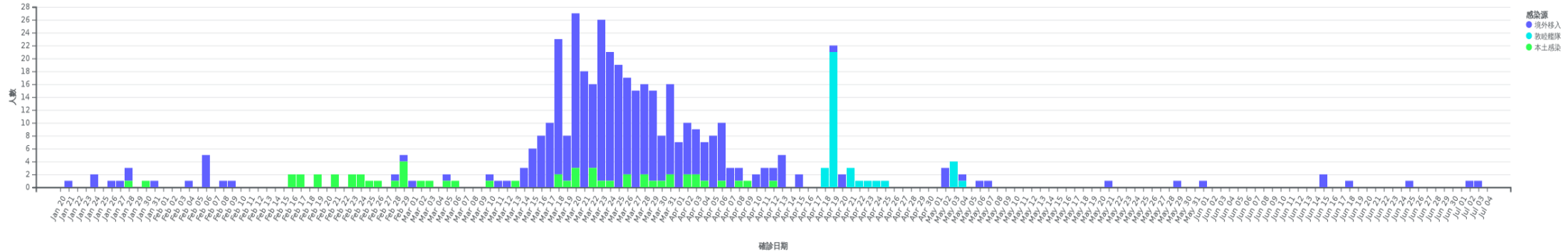
Human-to-human transmission confirmed in China coronavirus

台灣公共衛生學會
由陳保中發佈 [?] · 1月21日 ·

衛生福利部疾病管制署
Taiwan Centers for Disease Control

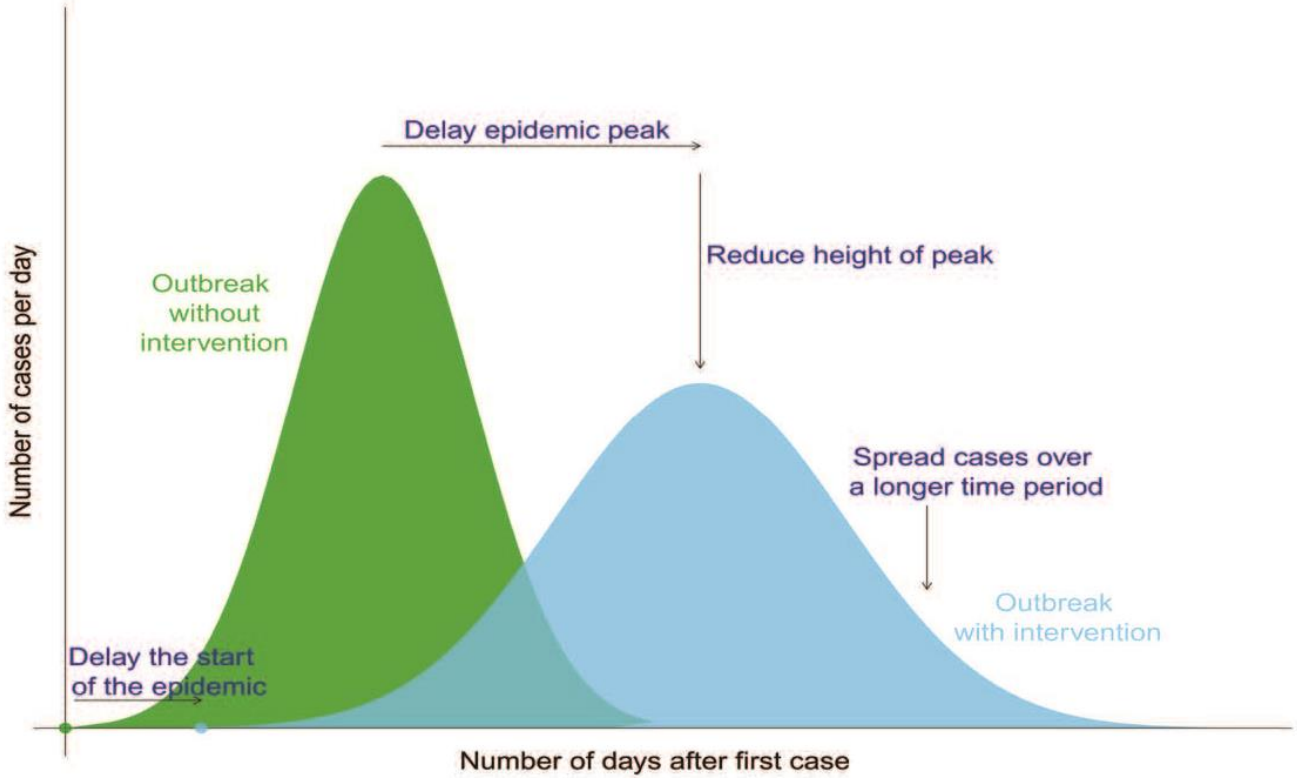
CDC.GOV.TW

我國藉由登機檢疫即時發現首例中國大陸武漢移人之嚴重特殊傳染性肺炎個案，指揮中心提升中國大陸武漢之旅遊疫情建...



https://zh.wikipedia.org/wiki/2019冠狀病毒病臺灣疫情

Fig. 1. Intended impact of NPIs on an influenza epidemic or pandemic by reducing person-to-person transmission.



NPI: non-pharmaceutical intervention.
Sources: US Centers for Disease Control and Prevention and European Centre for Disease Prevention and Control guidelines (29, 30).

Public Health Specialists During the COVID-19 Pandemic

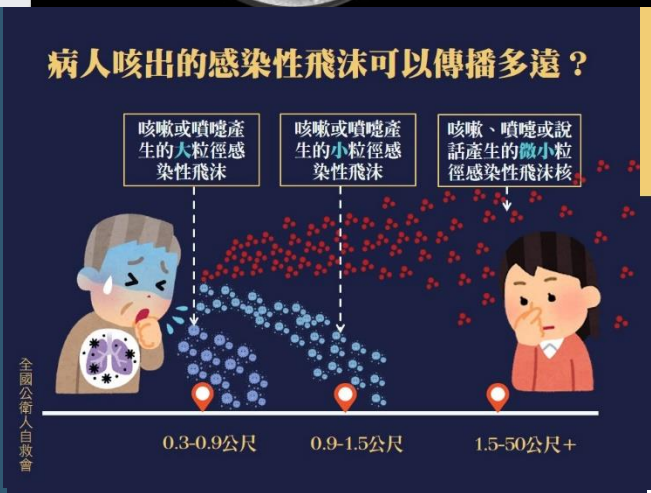
Core competencies	Prevention and control measures
Biostatistics	• Outbreak investigations to prevent further spreading • Communicable disease surveillance and prediction for targeting precision preventive policies and measures
Epidemiology	
Health policy & management	• Integration and coordination of prevention and control policies and management • Strategic preparedness and response plan in national and local health authorities, and health care facilities
Environmental health sciences	• Environmental sanitation: indoor ventilation, sewage management, household waste, etc. • Personal protective equipment • Employee health surveillance and protection
Social & behavioral sciences	• Health education to enhance health literacy of preventive measures • Risk communication for public health emergencies to avoid public panic response

COVID-19 Prevention and Control Measures in Communities, Schools, and Workplaces

Date: February 22, 2020, Place: National Taiwan University College of Public Health

Time	Topic	Speaker
09:00 - 09:15 am	Opening ceremony	Pau-Chung Chen
09:15 - 09:45 am	COVID-19 and global health governance	Chang-Chuan Chan
09:50 - 10:40 am	Current epidemiological features of COVID-19	Chi-Tai Fang
11:00 - 11:50 am	Transmission dynamics of COVID-19	Hsien-Ho Lin
12:00 - 12:50 pm	COVID-19 outbreak investigations	Meng-Yu Chen
02:00 - 02:50 pm	Personal and environmental protective measures for COVID-19	Ching-Wen Chang
03:00 - 03:50 pm	Public preventive behaviors against COVID-19	Jiun-Hau Huang
04:00 - 04:50 pm	Preparedness and contingency planning in response to COVID-19	Kuo-Piao Chung
05:00 – 05:30 pm	Discussion	Pau-Chung Chen

全國公衛人自救會2020/2/13



台灣公共衛生學會
1月22日 ·

TALK.LTN.COM.TW
自由廣場》防武漢肺炎 獨漏公衛師 - 自由電子報 自由評論網
◎ 陳保中、林先和 二〇一九新型冠狀病毒（2019-nCoV）武漢肺炎確定人傳人，於中國大陸已釀多起死亡，並延燒至鄰近各國，台灣自武漢境外移...

台灣公共衛生學會
1月28日 ·

TW.APPLEDAILY.COM
陳保中、林亮瑜：因應開工，職場防疫對抗武漢肺炎

台灣公共衛生學會
2月7日 ·

UDN.COM
疫情發燒...盼速立公衛師法｜聯合新聞網：最懂你的新聞網站

台灣公共衛生學會
3月12日 ·

COMMONHEALTH.COM.TW | 作者：康健雜誌
陳保中：長期抗疫防社區破口　公衛師非常重要 - 康健雜誌

台灣公共衛生學會
3月23日 ·

TALK.LTN.COM.TW
自由廣場》盼公共衛生師法儘速通過 - 自由電子報 自由評論網
◎ 陳保中、林先和 新型冠狀病毒（COVID-19）在西方國家引爆遍地烽火，國與國之間未有地理障壁阻隔的歐陸國家陸續封城甚至祭出關閉邊界以...

台灣公共衛生學會
4月3日 ·

TW.APPLEDAILY.COM
【疫情顯微鏡】陳保中、林先和：「社交距離預警指標」找感染熱區

台灣公共衛生學會
4月12日 ·

TW.APPLEDAILY.COM
陳保中、林先和：台灣可以也願意加入全球戰疫
陳保中／台灣公共衛生學會理事長、林先和／台灣公共衛生學會祕...

台灣公共衛生學會
5月3日 ·

TW.APPLEDAILY.COM
陳保中、林先和：應考資格衝不定 公衛師法卡關？
陳保中／台灣公共衛生學會理事長、林先和／台灣公共衛生學會祕...

台灣公共衛生學會
5月6日 ·

TALK.LTN.COM.TW
自由廣場》建立職場防疫新常態 - 自由電子報 自由評論網
◎ 林亮瑜、陳保中 武漢肺炎疫情襲捲全球，台灣在此次大流行中，透過積極追蹤、檢疫接觸者，以及全民積極配合防疫，有效降低病毒在社區的...

聯合聲明

台灣公共衛生學會
台灣胸腔暨重症加護醫學會
台灣感染症醫學會
聯合聲明

February 25, 2020

全國公衛人自救會2020/2/19

公衛須團結

團結真有力

—蔣渭水

公衛師做什麼

公共衛生(師)是什麼？跟我有關嗎？

了解公衛的學生學什麼吧

公共衛生五大專業領域

生物統計與流行病學	疾病調查與監控
環境衛生	危害風險評估
職業醫學與安全衛生	職場健康保護
衛生行政與醫院管理	衛生政策與管理
行為科學與健康促進	群眾健康管理

跟民眾健康有關的事，就是公衛的事！

公共衛生師可以為群眾健康提供什麼協助？

政府行政機關

公職公共衛生師

例如：衛生福利部、衛生局、衛生所或健康中心、勞動部、勞工局、教育部、教育局、環保署等，協助政策推動。

醫院及健康照護機構

傳染病管制方案規劃、推動及評估。

公共衛生師可以為群眾健康提供什麼協助？

大型事業單位

員工健康風險管理、健康促進方案規劃、推動及評估。

大型各級學校

學生健康風險管理、健康促進方案規劃、推動及評估。

社區環境

以科學、客觀、綜合之調查、預測、分析及評定進行規劃、推動並評估環境健康風險管理計畫。

NOW武漢肺炎疫情大流行！防疫工作龐大且繁複

第一線的醫護人員除了支應原有的診療服務，還需擔負防疫工作，**負荷太重**，對病人安全也無助益。

以武漢肺炎疫情為例，公共衛生師可以提供什麼協助？

生統流病

1. 疫情調查與預警，避免疫情擴散。
2. 疾病監測與預測，提供正確防疫政策制訂。

職業安全衛生

提供各式個人防護具正確使用，員工健康監測與保護。

環境衛生

室內通風及排水系統管理，室內外環境消毒及防護等，實施環境防護與評估效益。

以武漢肺炎疫情為例，公共衛生師可以提供什麼協助？

衛政醫管

1. 防疫相關行政體系協調整合，進行減害規劃。
2. 醫療照護體系緊急應變能力規劃，避免照護能量過載。

健康行為科學

1. 社區民眾衛生教育，提高社區疫病健康識能。
2. 社區民眾風險溝通，避免民眾恐慌。

除了新興傳染病，台灣也面臨食藥安全、職業安全、環境污染危害等公衛議題

政府受限於人力，應對現有問題已負荷過重。

科技進步所產生的健康危害也越來越多、複雜，政府的員額本就有限，應對上恐不夠周全。

公衛師立法，肯定公衛專業者並與其他專業人員合作。

公衛師可以協助讓醫事人員更能專注在臨床醫療工作上，提高健康照護服務品質。

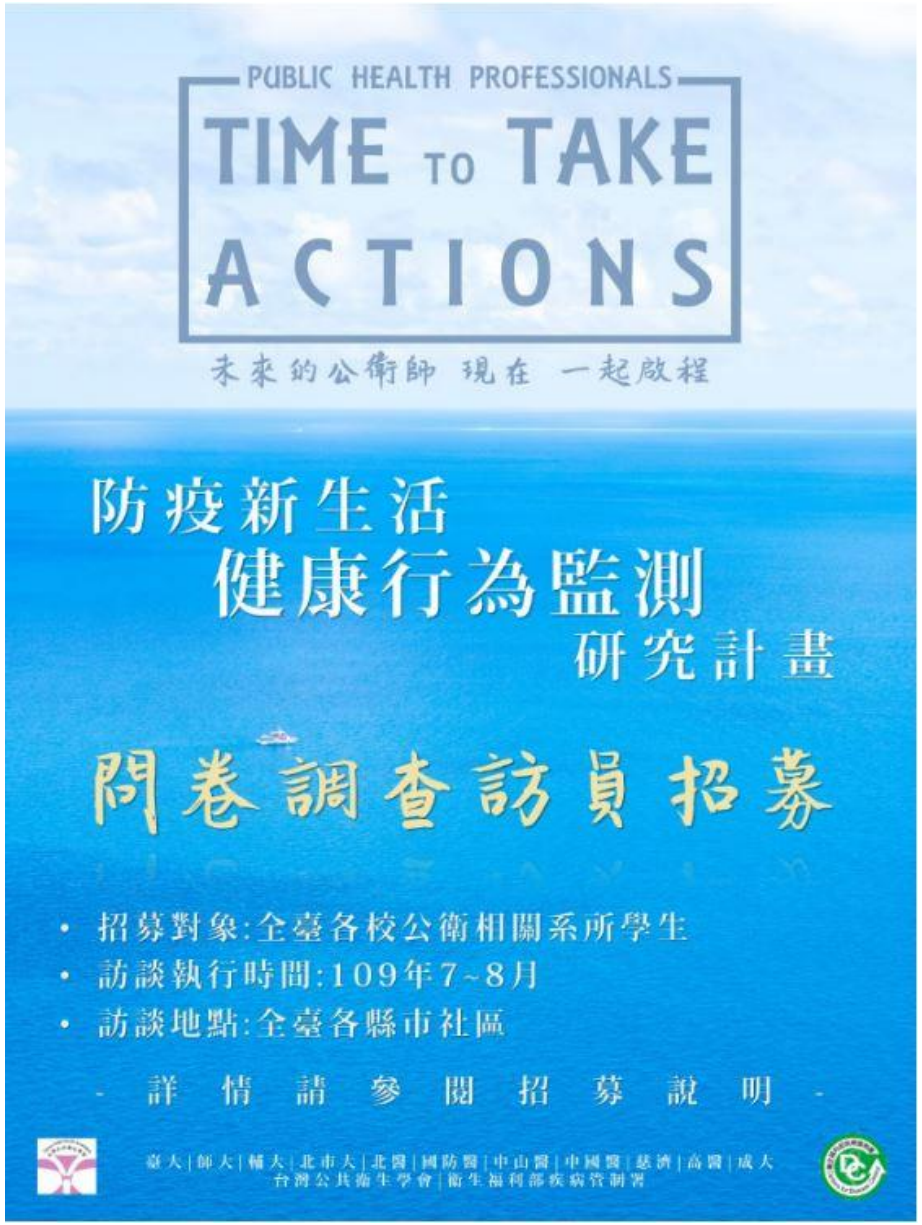
讓公共衛生師成為第一線醫療人員的堅實夥伴！

公衛師專師不專屬，與其他醫事專業人員工作採合作非競爭，期望以系統性的組織合作，共同組成守護台灣民眾健康的聯合安全防護網，達成群眾健康福祉的最大效益。

致防疫第一線醫療公衛人員，感謝您的付出！

First Step of Public Health Specialists

- **Health Behavior Monitoring of New Life Movement for COVID-19 Disease Prevention**
- Taiwan National Health Command Center
- Taiwan Centers for Disease Control
- Taiwan Public Health Association
- Public health departments, schools, colleges or programs in Taiwan



Health Behavior Monitoring of New Life Movement for COVID-19 Disease Prevention

July 4 (Taipei)/July 11 (Taichung), 2020

Time	Topic	Speaker
09:30-10:00	Opening ceremony	Shih-Chung Chen
10:00-10:40	Introduction of COVID-19 pandemic	Chang-Chuan Chan
11:00-11:40	Public Health Specialists Act – role in population health and disease prevention	Pau-Chung Chen
11:40-12:20	Epidemiological features of COVID-19	Hsien-Ho Lin
13:30-14:20	Public preventive behaviors against COVID-19	Jiun-Hau Huang/ Susan C Hu
14:30-15:10	Information analyses of health behavior monitoring	Tzu-Pin Lu
15:30-16:10	Questionnaire survey of health behavior monitoring	Shu-Sen Chang
16:20-17:00	Initial questionnaire interview practice	Project Office

July 5 (Taipei)/July 12 (Taichung), 2020

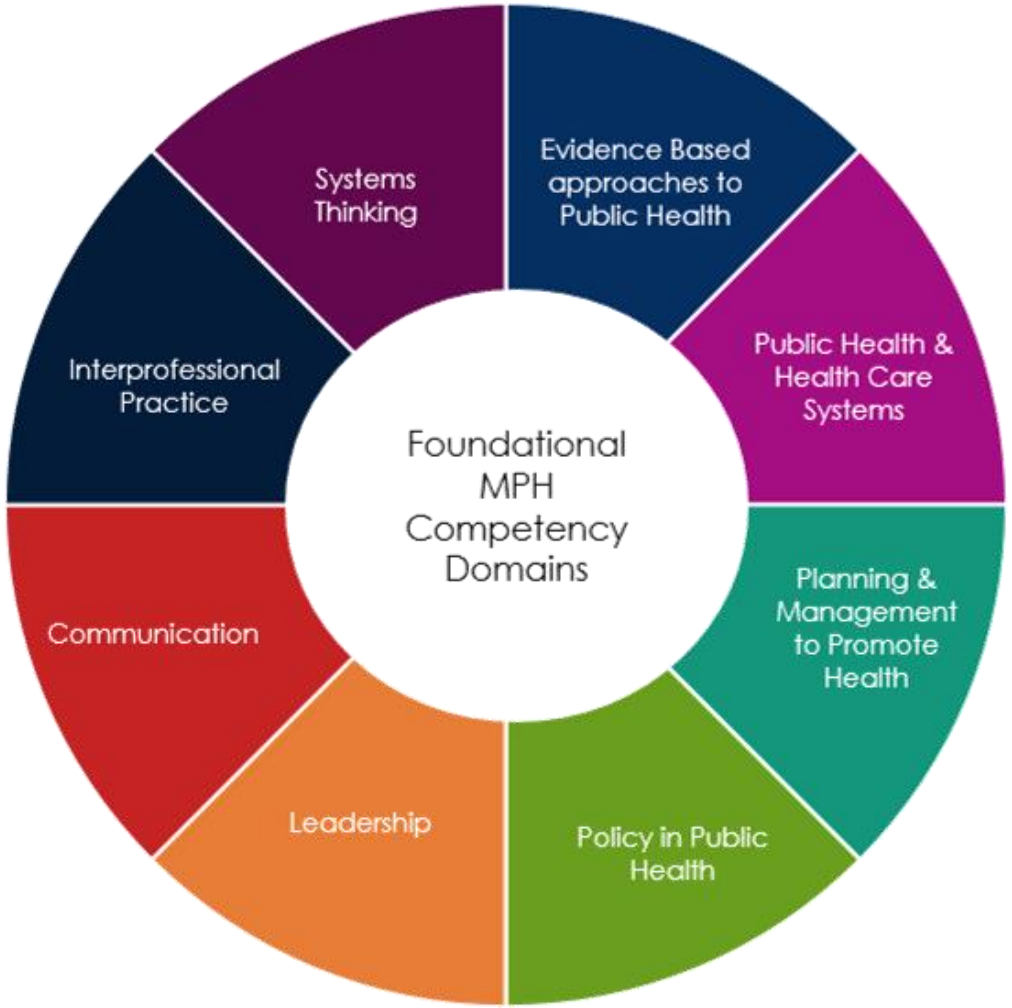
Time	Topic	Speaker
09:00-09:40	Notification and surveillance system of COVID-19	Chia-Lin Lee
09:40-10:20	COVID-19 outbreak investigations	Meng-Yu Chen/ Chia-Ping Su
10:20-10:40	Q&A	
11:00-12:00	Principles of questionnaire interview and effective communication skills	Ying-Lung Chou
13:10-14:30	Context and meaning of the survey questionnaire	Project Office
15:00-16:00	Questionnaire interview practice	Project Office
16:10-17:00	Discussion	Project Office
17:00-17:10	Final remarks	Project Office

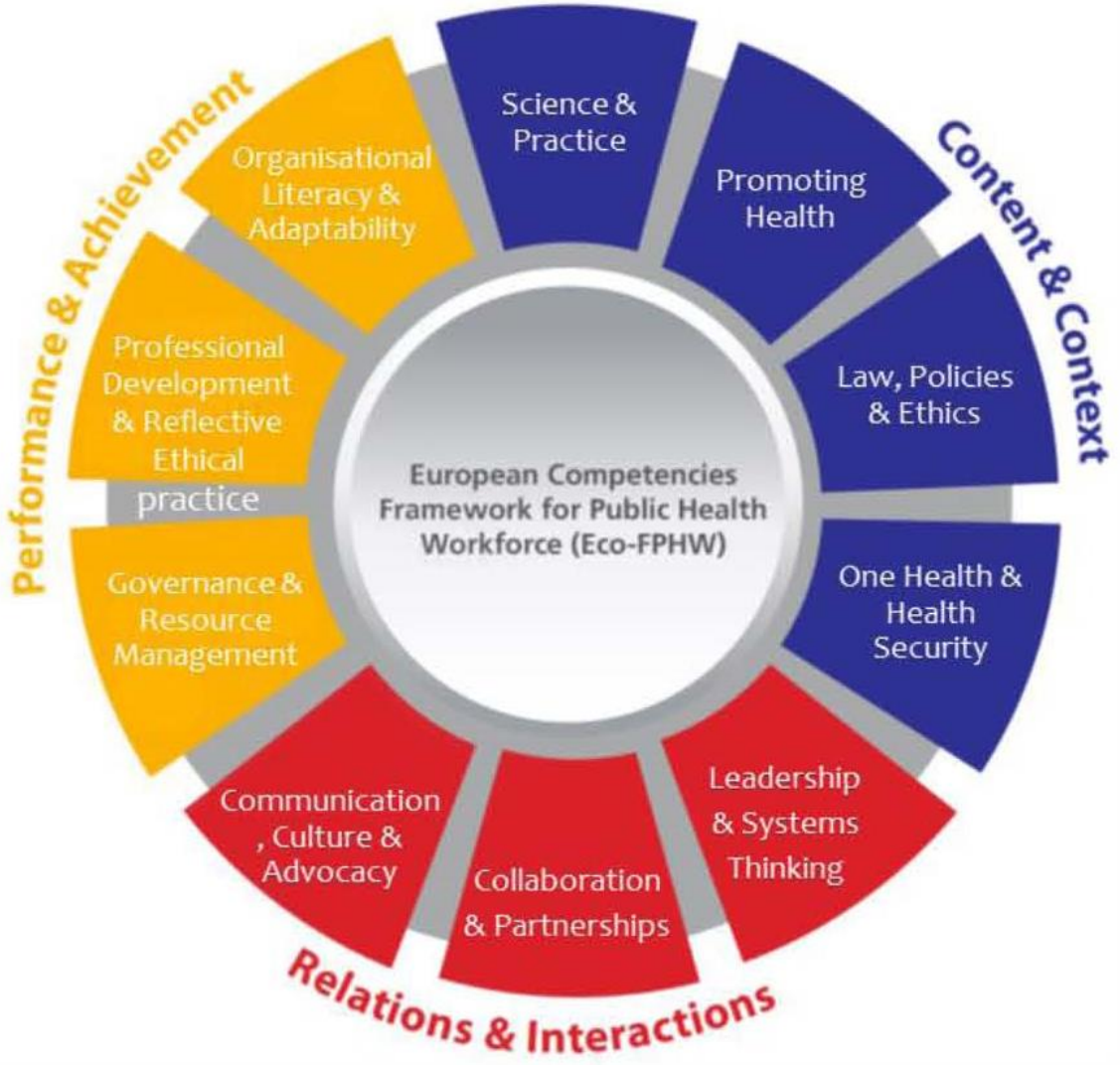
Public Health Specialists

Public Health	Medicine
Population	**Person**
Prevention	Diagnosis
Promotion	Treatment
Behavioral/environmental interventions	Medical care
Population health	Personalized health
Precision health	Precision medicine

Physicians
Dentists
Pharmacists
Nurses
Midwives
Medical Technologists
Dietitians
physical therapists
Clinical Psychologists
…

Public Health Specialists

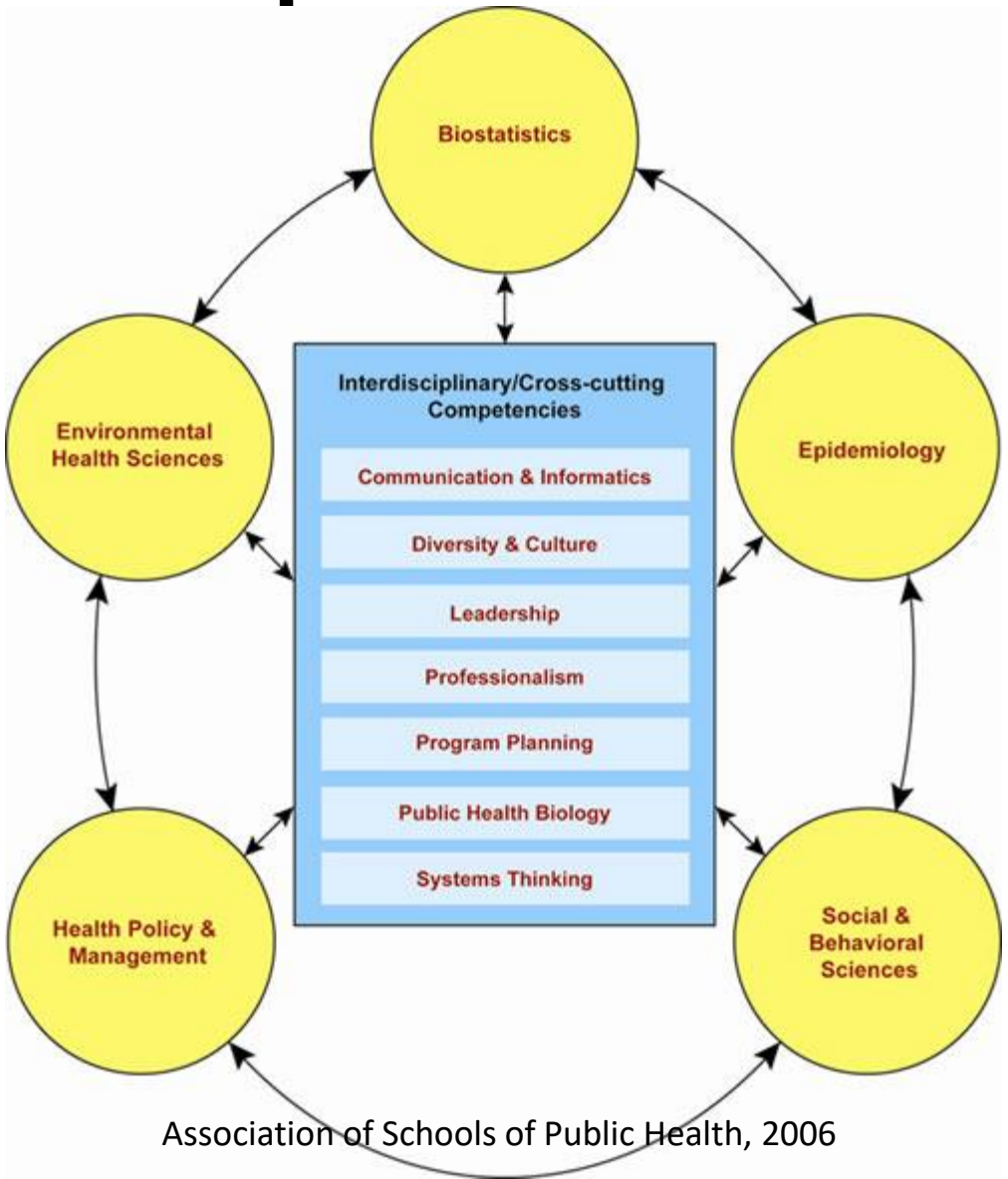




https://sph.unc.edu/resource-pages/master-of-public-health/gillings-mph-core/

https://eupha.org/repository/sections/hwr/3EUPHA_section_HWR_skills_building_seminar_2019_ASPHER_Czabanowska.pdf

Public Health Specialists



Association of Schools of Public Health, 2006

Public Health Specialists Act

Promulgation date: June 3, 2020

- Chapter 1. General Principles, Article 1-7
- Chapter 2. Practice, Article 8-19
- Chapter 3. Association, Article 20-28
- Chapter 4. Penalty, Article 29-37
- Chapter 5. Miscellaneous, Article 38-40

Public Health Specialists Act

Promulgation date: **June 3, 2020**

- **Article 4**. Any person meeting the following qualifications who is eligible to participate in a public health specialist examination:
  - 1. Graduate with the academic certificate from a public health department, school, college or program in a public or registered private university, independent college or overseas university or independent college recognized by the Ministry of Education.
  - 2. Graduate with the academic certificate from a medical or public health related department, school, college or program in a public or registered private university, independent college or overseas university or independent college recognized by the Ministry of Education and having acquired at least 18 credits with public health, thereby, supporting documents are required.
  - 3. Graduate with the academic certificate from a medical or public health related department, school, college or program in a public or registered private university, independent college or overseas university or independent college recognized by the Ministry of Education and having performed in public health related work for at least 3 years, thereby, supporting documents are required.
  - The scope and duration of the “public health credit” referred to in subparagraph 2, the “medical or public health related department, school, college or program” referred to in subparagraph 3 and the “public health related work” referred to in subparagraph 3 of the previous paragraph shall be determined by the central competent authority.

Public Health Specialists Act

Promulgation date: **June 3, 2020**

- **Article 8**. Public health specialists practice business shall base on one of the following manners, except for supporting between or among institutions and sites.
  - 1. Employed by a medical, healthcare or long-term care institution, public health specialist office or other institutions or sites approved by the competent authority.
  - 2. Employed by an institution (site) other than the previous subparagraph that should staff with a public health specialist in accordance with the law.
  - After accumulated practice for 2 years or longer in the locations prescribed under the previous paragraph, a public health specialist may file an application with the municipal or county (city) competent authority to establish a public health specialist office alone or together with other public health specialists. However, if the public health specialist has practiced public health businesses before the implementation of this Act, the actual service period may be combined with calculation of aforementioned period.
  - The responsible public health specialist of a public health specialist office shall be its applicant, responsible for the supervising the business activities of the office.
  - The use and change of names of public health specialists under the preceding second paragraph, the conditions and procedure for the approvals of establishment applications, issuance or cancellation of approvals, fee schedules, restrictions on advertising contents and other compliance matters shall be established by the central competent authority.

Public Health Specialists Act

Promulgation date: **June 3, 2020**

- **Article 13**. Public health specialists shall practice the following businesses:
  - 1. Planning, promotion or evaluation of environmental health risks and proposals for the community and site.
  - 2. Planning, promotion or evaluation of disease investigations and prevention proposals for the community and site.
  - 3. Planning, promotion or evaluation of public health status investigations and health promotion proposals for the community and site.
  - 4. Planning, promotion or evaluation of food safety risk investigations and quality management proposals in the community and site.
  - 5. Other public health affairs recognized by the central competent authority.

Public Health Specialists Act

Promulgation date: June 3, 2020

- Should any of the following events concerning the business activities under the previous paragraph occur, it shall **not** be subject to the restrictions of this Act:
- 1. Practice by medical staff or other professional and technical staff which is affiliated with their business activities.
- 2. Execution by government authorities (institutions) or mandated or subsidized by government authorities (institutions).
- 3. Execution by schools, institutions, corporations or organizations in accordance with research projects.
- 4. Execution by military authorities or affiliated medical institutions in consideration of national defense security affairs.
- Practicing businesses by public health specialists under the first paragraph shall not involve any medical act, except if the public health specialist is simultaneously qualified as medical staff.

Public Health Specialists Act

Promulgation date: June 3, 2020

- **Article 14**. In case of emergency or major public health incident, the competent authority may designate public health specialists to carry out the activities under the first paragraph of the previous Article. Public health specialists shall not refuse thereto without justification.
  - The costs or losses incurred by public health specialists in carrying out the designated activities under the previous paragraph shall be compensated by the competent authority. The rules about qualifications and procedure for seeking compensation, the approval of the scope of costs or losses, the manner of compensation and other relevant matters shall be determined by the central competent authority.

台灣公共衛生新里程碑
立法院三讀通過「公共衛生師法」

衛生福利部自 2003 年 SARS 過後，即著手推動公共衛生師立法工作，惟因其定位、業務範疇、專業排他性及應考資格等問題，始終未能順利於立法院進行審議。本次公衛師法草案歷經多方討論及公聽會後，終於本（109）年 4 月 23 日獲行政院審查通過送請立法院審議，立法院於今（15）日三讀通過「公共衛生師法」，為台灣公共衛生發展之重要里程碑。

完整新聞稿>>>>>>>

2020.05.15

亞洲第一！
公共衛生師法三讀通過！

感謝朝野黨團
健全台灣公衛體系
守護全體國人健康

蔡英文

APACPH CCHP
Collaborating Centres for Health Promotion

Singapore, Dr. Yik-Ying Teo

Is a New Normal needed for Public Health Education during and after COVID-19?

NUS National University of Singapore | Saw Swee Hock School of Public Health

NUHS National University Health System

Is a New Normal needed for Public Health Education during and after COVID-19?

YY Teo
Professor, Dean
Saw Swee Hock School of Public Health

Turning Discovery into Healthier Communities

What are the value propositions for a Public Health Education

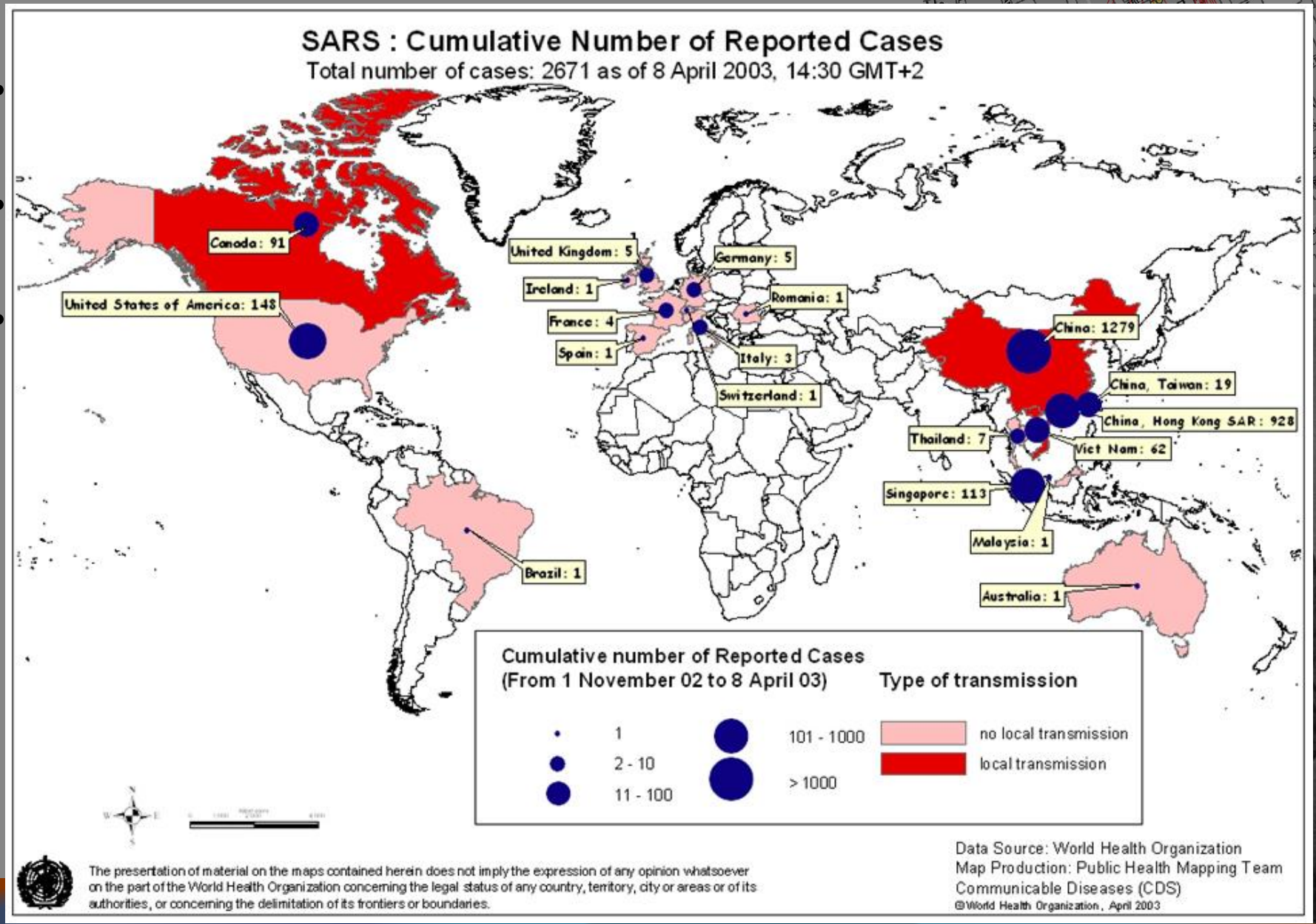
NUS National University of Singapore | Saw Swee Hock School of Public Health

- **Broad-based education in multiple disciplines**
  - Epidemiology, Biostatistics, Communication, Health Promotion, Health Economics and Priority Setting, Sociology, Ethics, Technology and Engineering, etc.
- To **network** (global, national, NGOs, civil societies, industry)
- **Learn about health policies and programmes**
  - Advocacy, policy setting
  - DIME (Design, Implementation, Monitoring, Evaluation)
  - SAFE (Sustainable, Adequate, Fair, Efficient)

Historical and Contemporary Perspectives

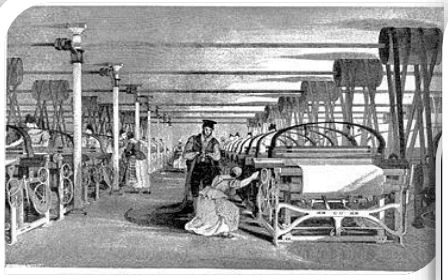
Learning from the past

-
-
-



Contemporary issues and impact on health

- Changing Technology



Hand production to steam-engine machines, mainly textile (Factory system)

1760s-1830s

Steel, chemical, petroleum, automotive mass production (telephone, light bulb, internal combustion engine)

1850s-1914

Digital technology (PC, internet, ICT)

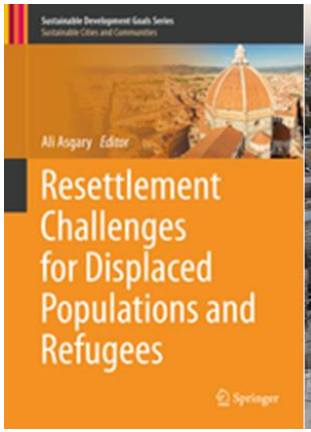
1980s-present

Integration of digital technologies in humans and society (robotics, AI, nanotech, IoT, autonomous vehicles)

Present-?

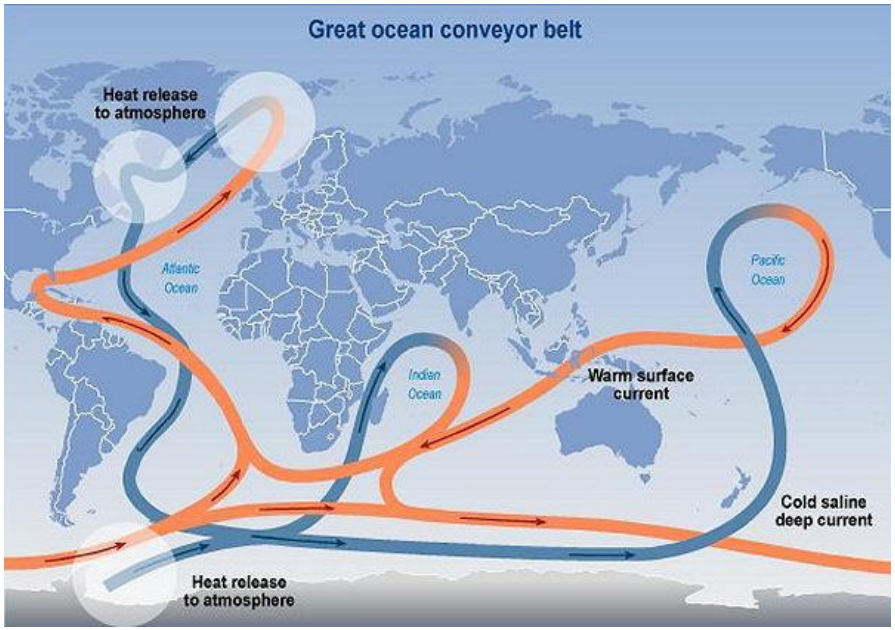
Contemporary issues and impact on health

- Changing Technology
- Geopolitical Shifts



Contemporary issues and impact on health

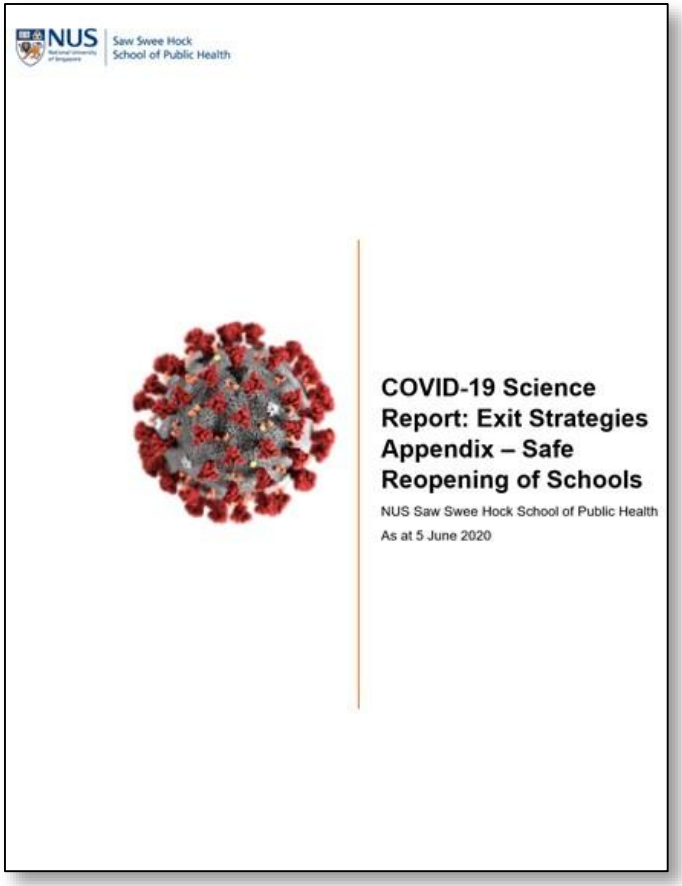
- Changing Technology
- Geopolitical Shifts
- Climate Change



Education during COVID-19

- Complete closures, (staggered) reopening, & hybrid
- Online and WiFi
- Surveillance with active testing
- Safe management measures: temperature screening, social distancing, face masks/shields
- Disinfection and cleaning protocols
- Limitation of activities

Resource rich versus resource poor!



Equity versus Equality

- **Equality: more of an input-driven concept**
- **Equity: more of an outcome-driven concept**

Vaccine programs

- Providing equal access

- Ensuring equitable uptake in safe and responsible manner

However, equity and equality in health goes beyond providing for citizens and residents

Global Health Context

NUS National University of Singapore | Saw Swee Hock School of Public Health

- Contextual differences in strategy implementation:
  - Historical (e.g. SARS, MERS, H1N1, etc.)
  - Social and cultural (e.g. trust, community-spirited)
  - Capacity and capability (testing, tracing, isolation, treatment)
  - Economic (e.g. fiscal measures to protect livelihoods)
  - Political (i.e. long-term outlook vs. short-term impact)

Understanding the context
is vital in
Public Health Education!

Case-Based Education in Public Health

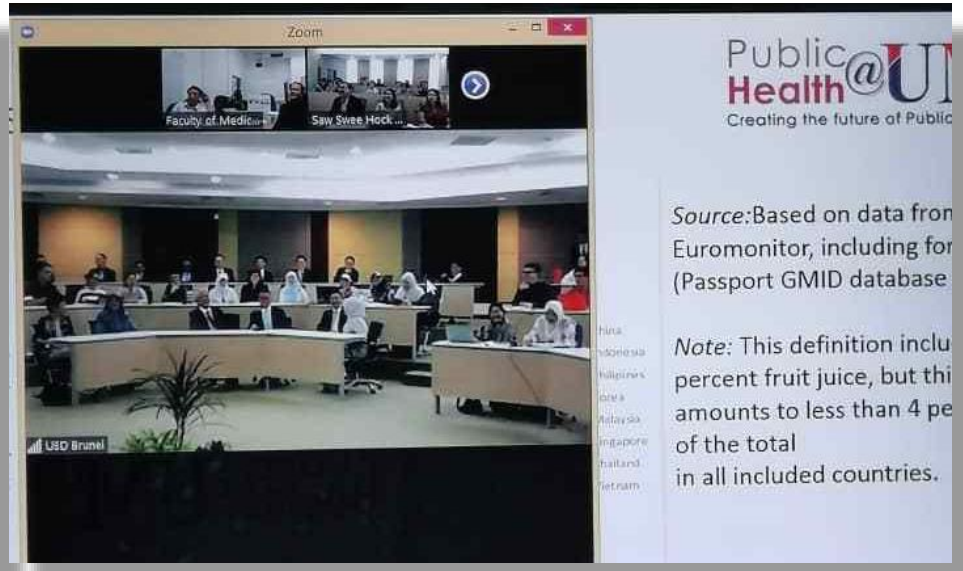
NUS National University of Singapore | Saw Swee Hock School of Public Health

- Public health policies about **design**, **advocacy** and **implementation** – education must go beyond theories

Global Classroom Education

NUS National University of Singapore | Saw Swee Hock School of Public Health

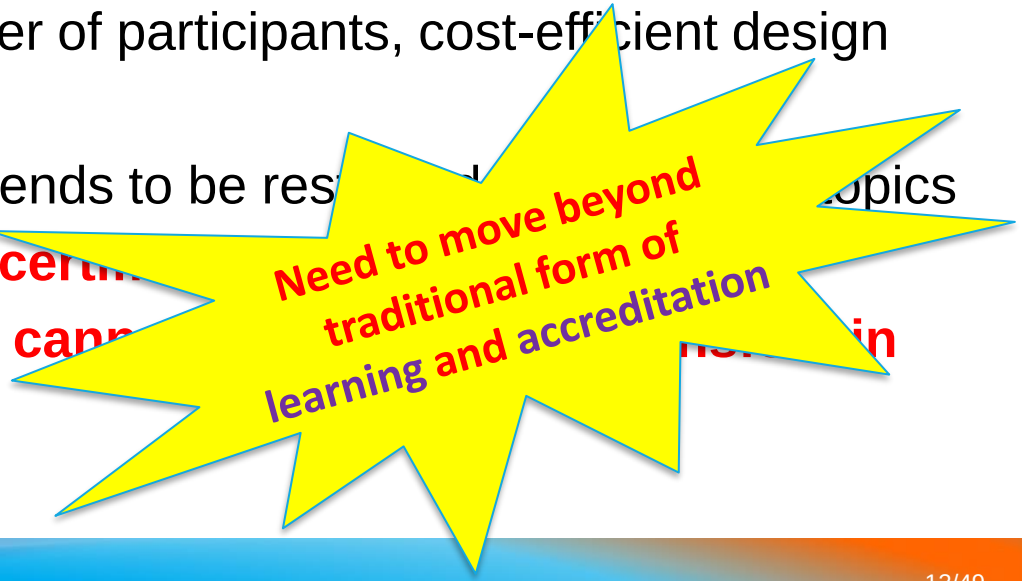
- Collaboration across multiple countries and institutions
- Leverage on video conferencing technology to connect participants from different sites
- Opportunity to learn what each country is doing around a public health topic (e.g. sugar or tobacco control)



Global Health Capacity Building: Some Realities

- **Overseas scholarships for outstanding candidates**
  - Deep knowledge transfer
  - Culminates in formal, accredited certification
  - Usually benefits small number of candidates
  - **Problem of brain drain, high rates of re-settlement post-tenure**

- **Local short- or Executive courses**
  - Usually benefits larger number of participants, cost-efficient design
  - Little risk of brain drain
  - Topical or disciplinary focus tends to be res… …opics
  - **No formal accreditation or certi…**
  - **Courses attended typically cann… …in University applications**



Fundamentals of Public Health

NUS National University of Singapore | Saw Swee Hock School of Public Health

1. Evidence-based public policies
2. Focused on **Prevention**, and of **Systems Thinking**
3. Focused on "**DIME**" and "**SAFE**"
   - **DIME** = Design, Implementation, Monitoring, Evaluation
   - **SAFE** = Sustainable, Adequate, Fair, Efficient
4. Cross-disciplinary, systems-level thinking, **outcomes driven**

Evidence generation and synthesis (data collection, meta-analyses, systematic reviews)	**Modeling and impact analysis of disease burden or interventional programmes**	**Monitoring and evaluation (including economic) of policies, and programmes**
Health communication, promotion and media engagement	**Health systems evaluation and healthcare priority setting**	

For Discussion

NUS National University of Singapore | Saw Swee Hock School of Public Health

- Global Public Health education always faced with inequality and implementation barriers, **how to reduce inequity**?

- Focus on DIME and SAFE means **cross-sectoral leaders & policy makers need training in Implementation Science**

- Moving to a new model of Public Health Education, focusing on **academic-governmental collaborations** and **case-based learning**

NUS National University of Singapore
Saw Swee Hock School of Public Health

Thank you!

ephtyy@nus.edu.sg