



Case Report from Asia – Covid-19 pandemic and HTA in Taiwan

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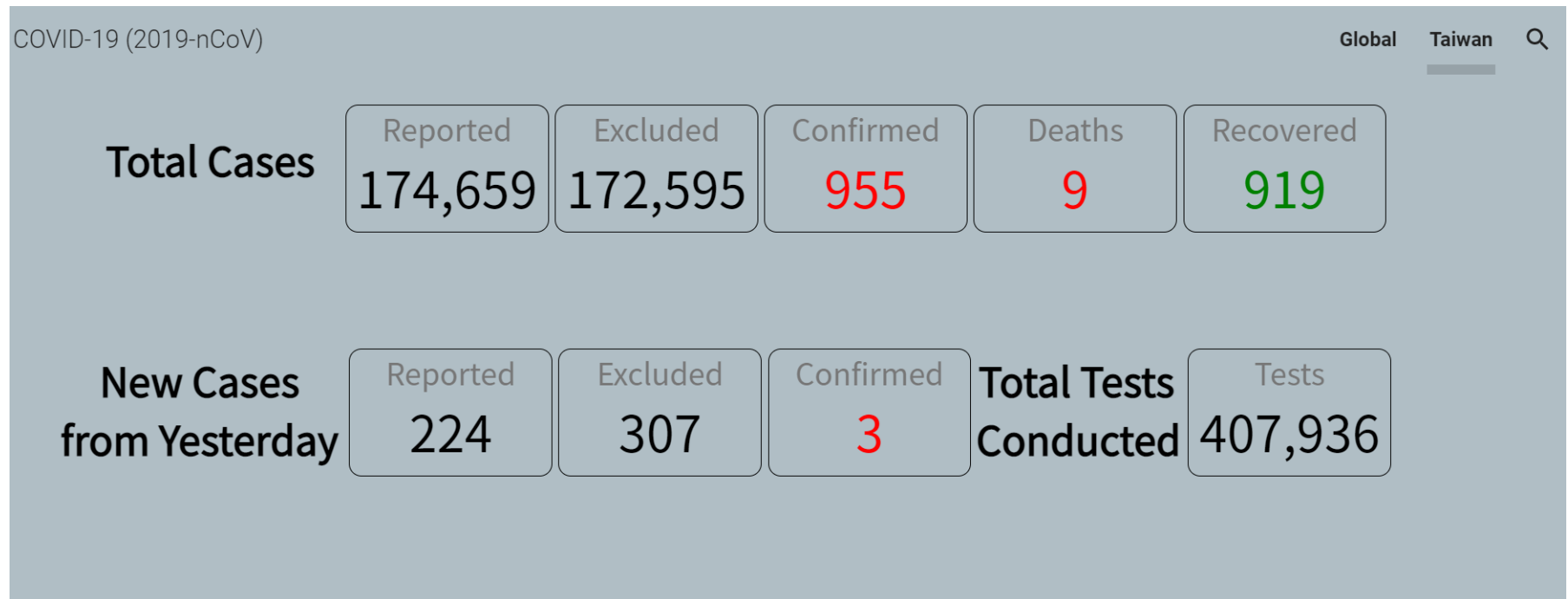
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Board of Director (2018-2021), ISPOR

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Our latest statistics

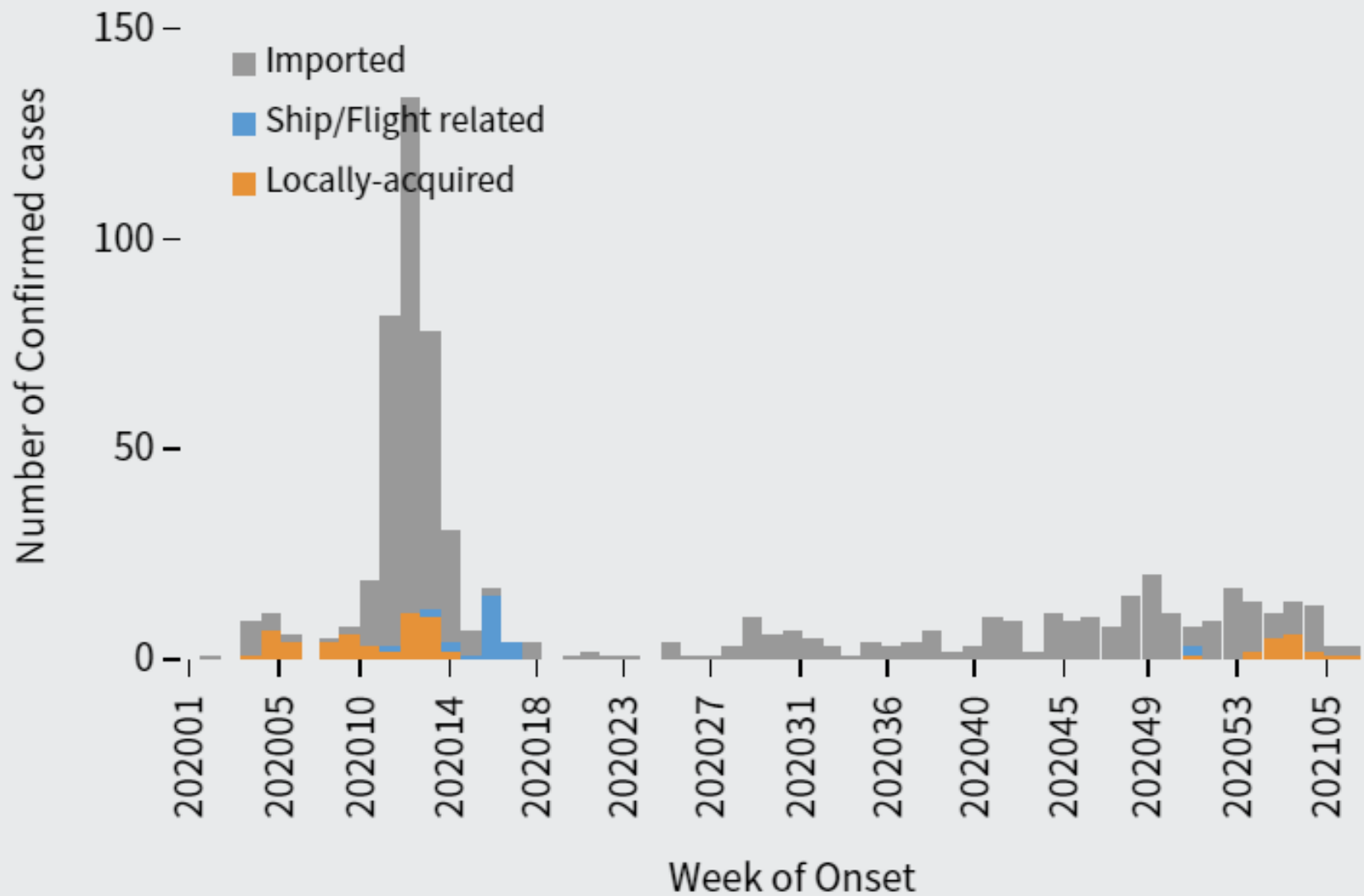
(Feb 28, 2021)



<https://sites.google.com/cdc.gov.tw/2019-ncov/taiwan>

- Confirmed case – 4 per 100,000 population
- Mortality – 0.04 per 100,000 population
- Case fatality rate – 0.97%

Number of Confirmed Cases of COVID-19 - By Week of Onset



*Asymptomatic cases are not shown.

Taiwan's experience in pandemic control: Drawing the right lessons from SARS outbreak

Lee, Wui-Chiang,* [Author Information](#) 

Journal of the Chinese Medical Association: July 2020 - Volume 83 - Issue 7 - p 622-623

doi: 10.1097/JCMA.0000000000000350

OPEN

 Metrics

Taiwan takes credit for its effective response to coronavirus disease 2019 (COVID-19). As of May 9th, the laboratory-confirmed cases were 440 in number, with low mortality rate (6 cases, 1.4%).¹ Nearly 80% of all cases were imported. The management of the pandemic crisis is widely believed to be a blueprint for many other countries. Taiwan's success did not come out of sheer luck. Instead, Taiwan has taken a series of actions after the 2003 severe acute respiratory syndrome (SARS) outbreak in governmental reorganization, medical care system preparedness, and public engagement.^{2,3}



Early communication about the coronavirus

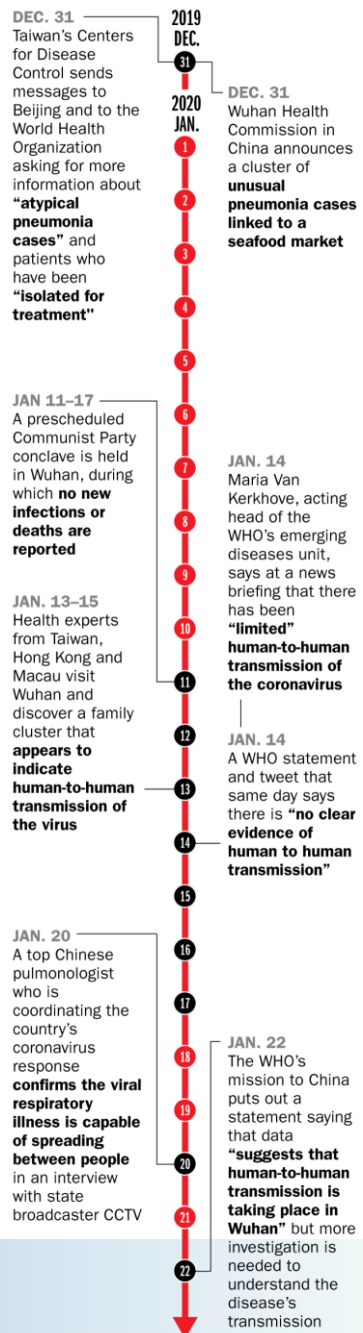
DEC. 31
 Taiwan's Centers for Disease Control sends messages to Beijing and to the World Health Organization asking for more information about **"atypical pneumonia cases"** and patients who have been **"isolated for treatment"**



DEC. 31
 Wuhan Health Commission in China announces a cluster of **unusual pneumonia cases linked to a seafood market**

<https://time.com/5826025/taiwan-who-trump-coronavirus-covid19/>

Early communication about the coronavirus



Taiwan's coronavirus timeline



Taiwan's battle against coronavirus began in late 2019

But medics insist island needs to keep its guard up to prevent second wave

<https://asia.nikkei.com/Spotlight/Coronavirus/Taiwan-s-battle-against-coronavirus-began-in-late-2019>

2019

December 31

Taiwan's Centers for Disease Control reach out to World Health Organization, warning of possible human-to-human transmission

2020

January 2

Opens emergency response center; hospitals and medical centers ask doctors to check patients' travel and contact histories

12

Epidemiologists dispatched to Wuhan

21

Reports first case of coronavirus

24

Taiwan suspends export of surgical masks

31

Begins collecting all surgical masks from suppliers for distribution to drugstores

February 6

Initiates rationing system for surgical masks using big data and health ID cards; bans entry of foreign nationals who have been in China, Hong Kong or Macao during previous 14 days

March 11

Issues first 1 million Taiwanese dollar (\$33,000) fine to man who violated 14-day quarantine regulations

18

Confirmed cases reach 100

19

Closes borders to all foreign nationals and requires all returning Taiwanese to undergo 14-day quarantine

April 3

Announces fines for all passengers who use public transportation without masks

CECC



Adapted from news press presentation MOHW, Feb 9, 2021

Some key control measures

Operational Structure

- Central Epidemic Command Center (CECC)

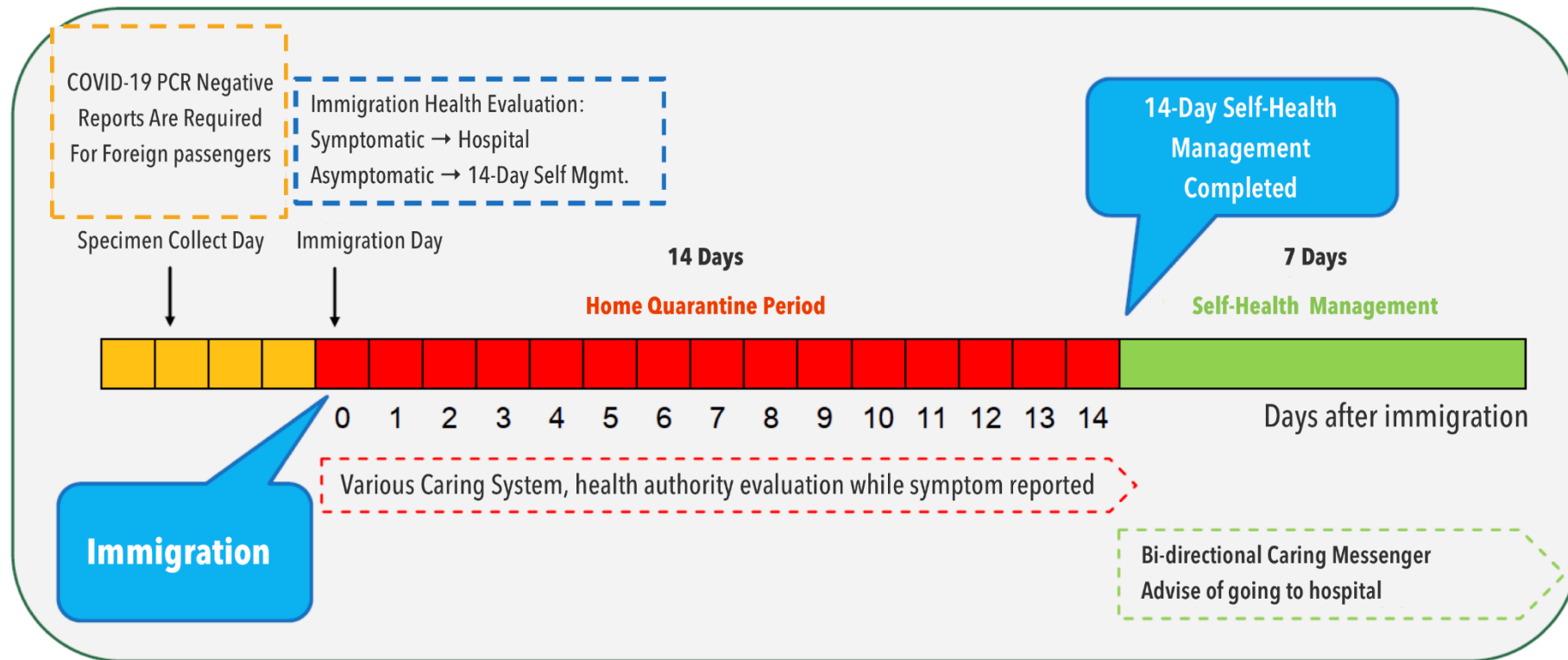
Legislation

- Communicable Disease Control Act

Prevention Strategies

- surveillance and laboratory diagnosis
- border control
- control of community transmission
- medical system response and preparedness
- stockpile and allocation of Personal Protective Equipment (PPE) and other medical supplies
- health education and disinformation management

Current Immigration Border Control and Community Management Scheme



Communicating with science



HEHO

中央流行疫情指揮中心
衛生福利部
Ministry of Health and Welfare

入境普篩迷思解析

2020/08/22

我國1月至今入境人數約250,000人，假設以盛行率0.2%來推測，預計有500人受到感染，若入境者全部於入境時進行篩檢(試劑敏感性90%、特異性95%)，篩檢結果如下：

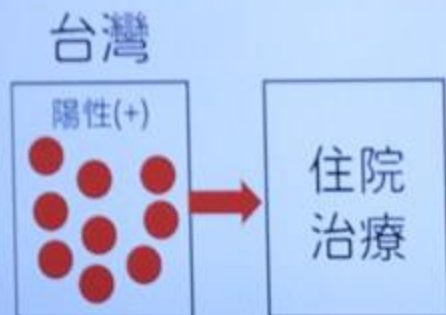
		COVID-19(武漢肺炎)		
		+	-	
入境普篩	+	450 陽性個案	12,475 偽陽性	12,925
	-	50 偽陰性	237,025 真正陰性	237,075
		500	249,500	250,000 (單位：人)

中央流行疫情指揮中心
陳時中 指揮官

台灣不普篩有科學依據

國外(韓國、義大利)疫情狀況嚴重，僅能透過封城、大量篩檢，進行個案分流治療；待疫情獲得控制後，仍要採取逐案疫調方式。

台灣個案數少，透過醫師評估症狀，準確通報採檢，並由衛生單位精準疫調，及早掌握密切接觸者，有效控制疫情。



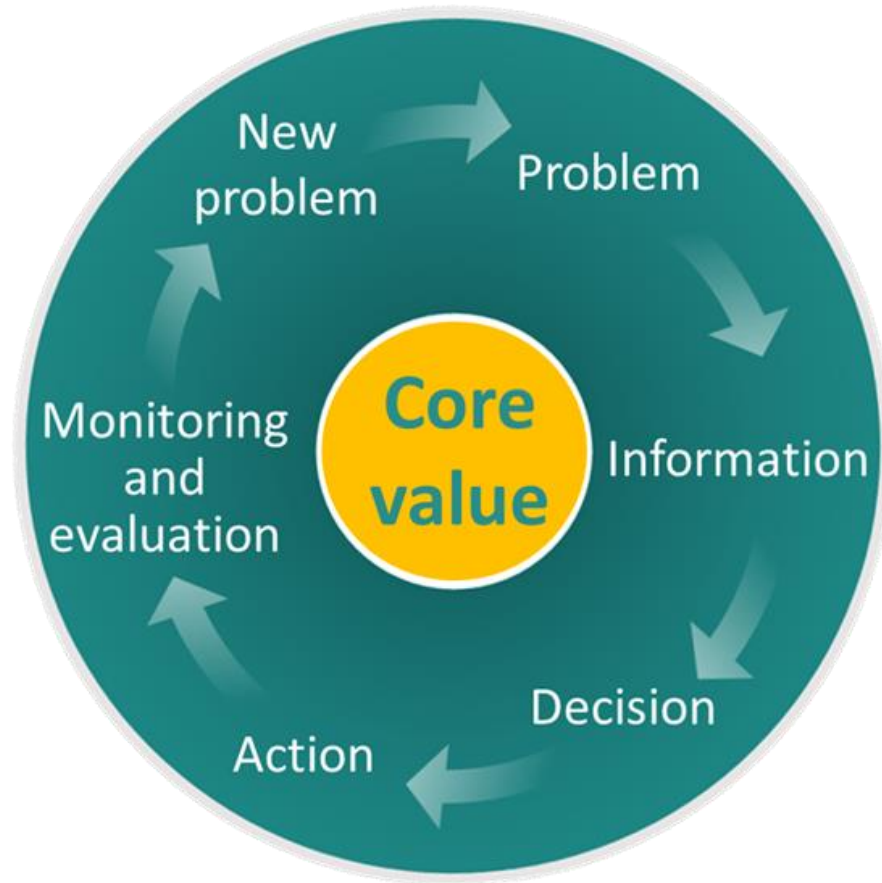
韓國及歐洲國家



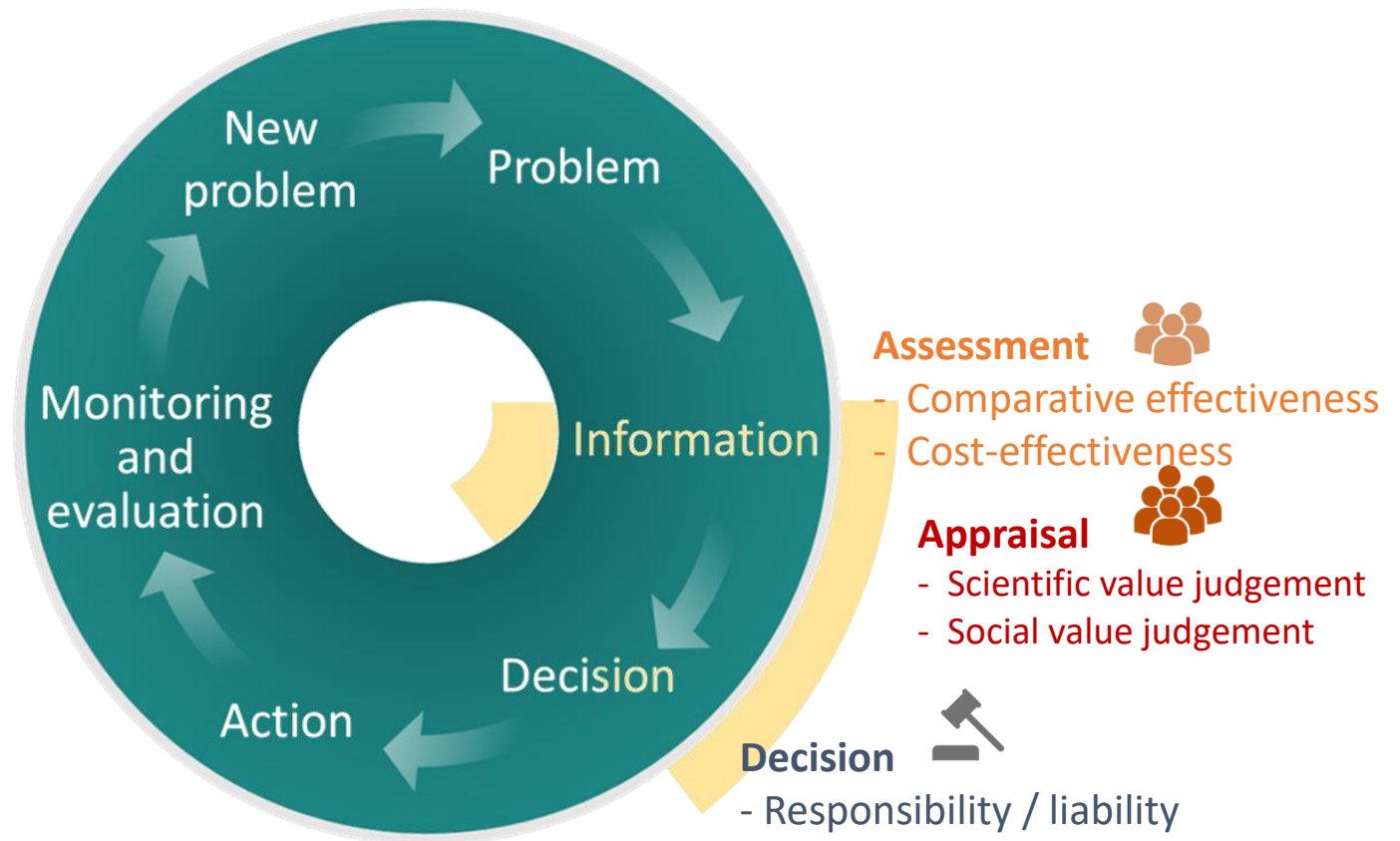
HTA



Cycle of decision making



HTA and management



Definition (May 2020)

Health Technology Assessment (HTA) is defined as:

Health technology assessment is a **multidisciplinary process** that uses **explicit methods** to determine the **value** of a health technology at different points in its **lifecycle**. The purpose is to **inform** decision-making in order to **promote an equitable, efficient, and high-quality health**.

INAHTA <http://htaglossary.net/health+technology+assessment>

Healthcare spending is subject to 'Distributive justice'

Theories of Justice

Retributive Justice – How should those who break the law be punished?

Distributive Justice – How should society distribute its resources? What role (if any) should government play in this distribution?



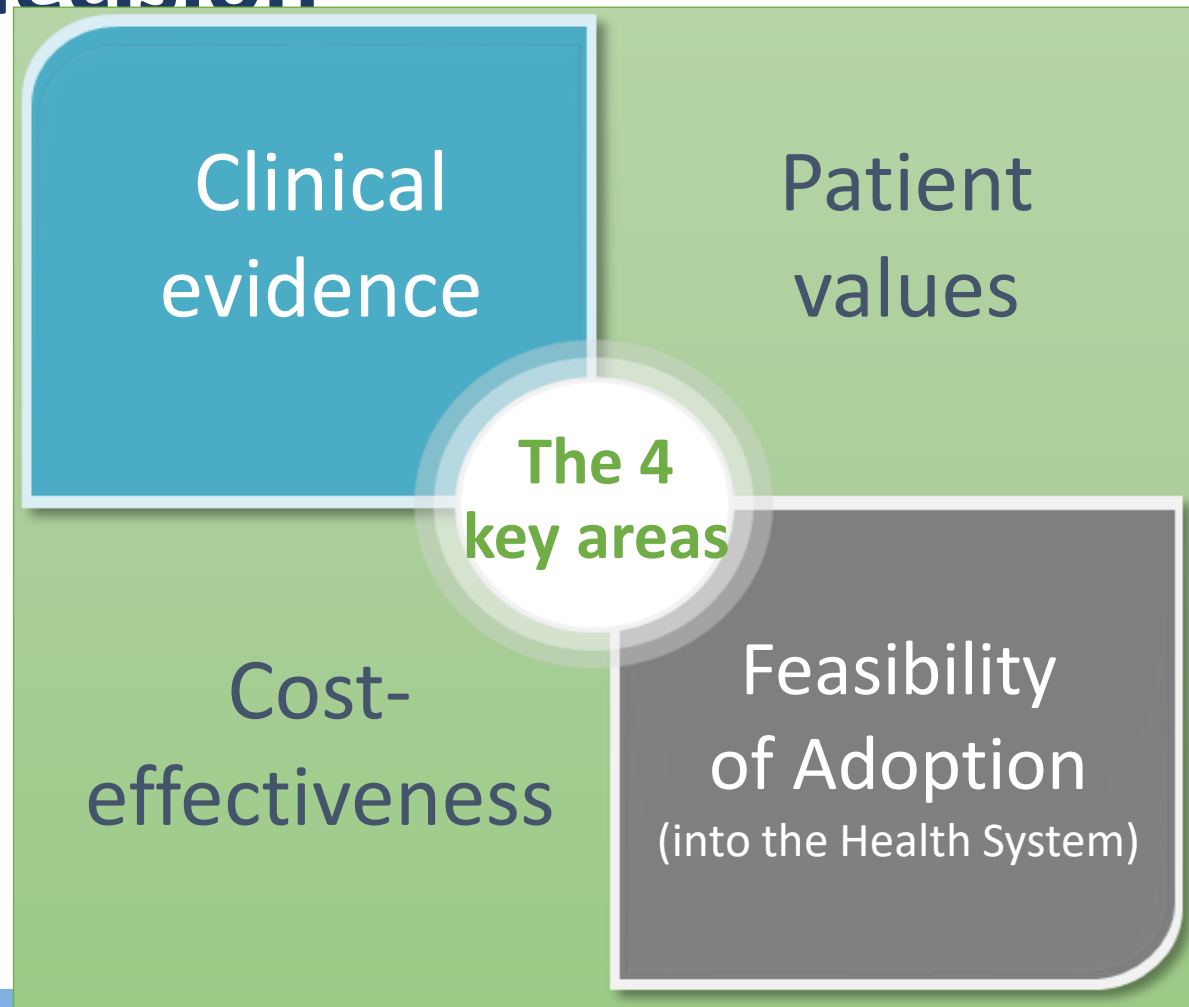
<https://slideplayer.com/slide/15201727/>

Procedural Justice

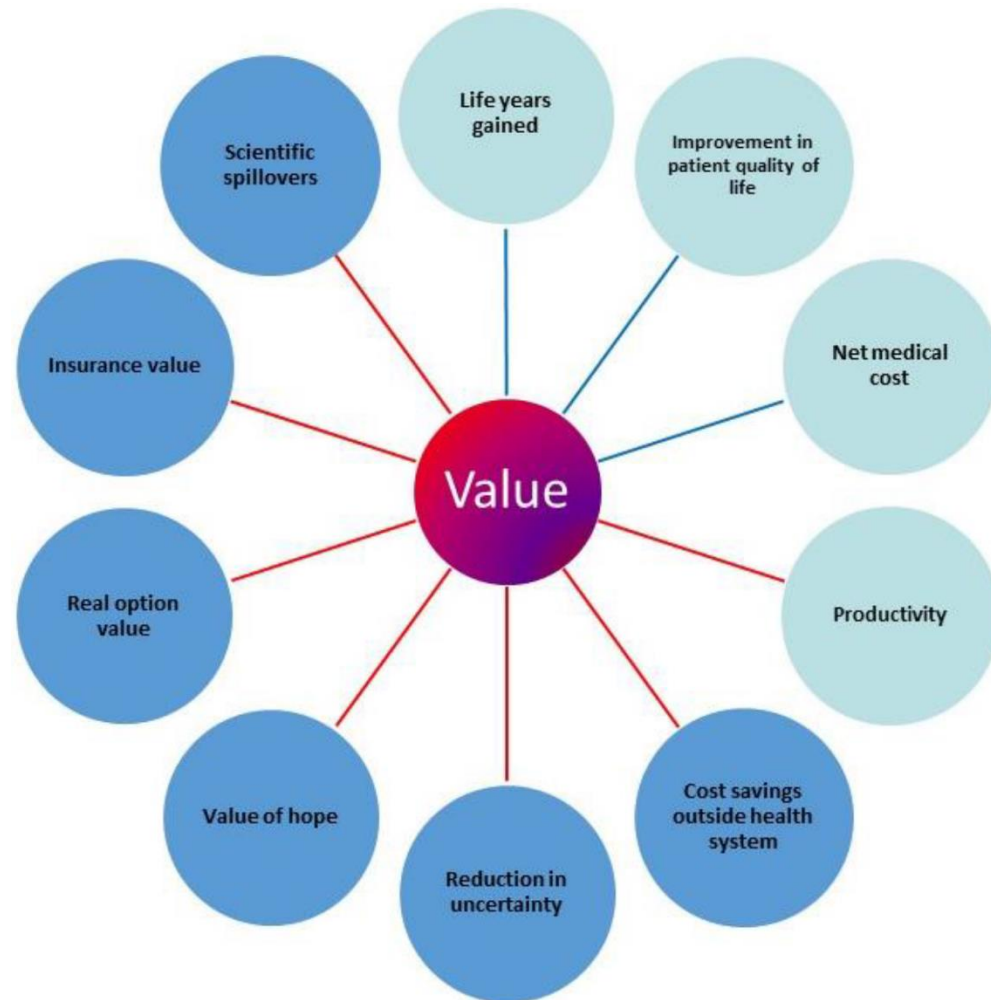
- Whatever we define ‘distributive justice’, we can always try to meet ‘procedural justice’ first.
- 「讓程序上符合參與式的民主，讓決策的資訊透明，讓利害關係人可以發聲，讓分配的標準與基礎可以得到充分的討論或修正，然後在審議的過程中形成共識，而此一有共識的決定本身，就是一個符合『正義』的決定」
 - Participation
 - Transparency
 - Voice of all stakeholders heard
 - Base/standard of distribution fully discussed
 - Consensus met through deliberative process

This is a ‘just’ decision

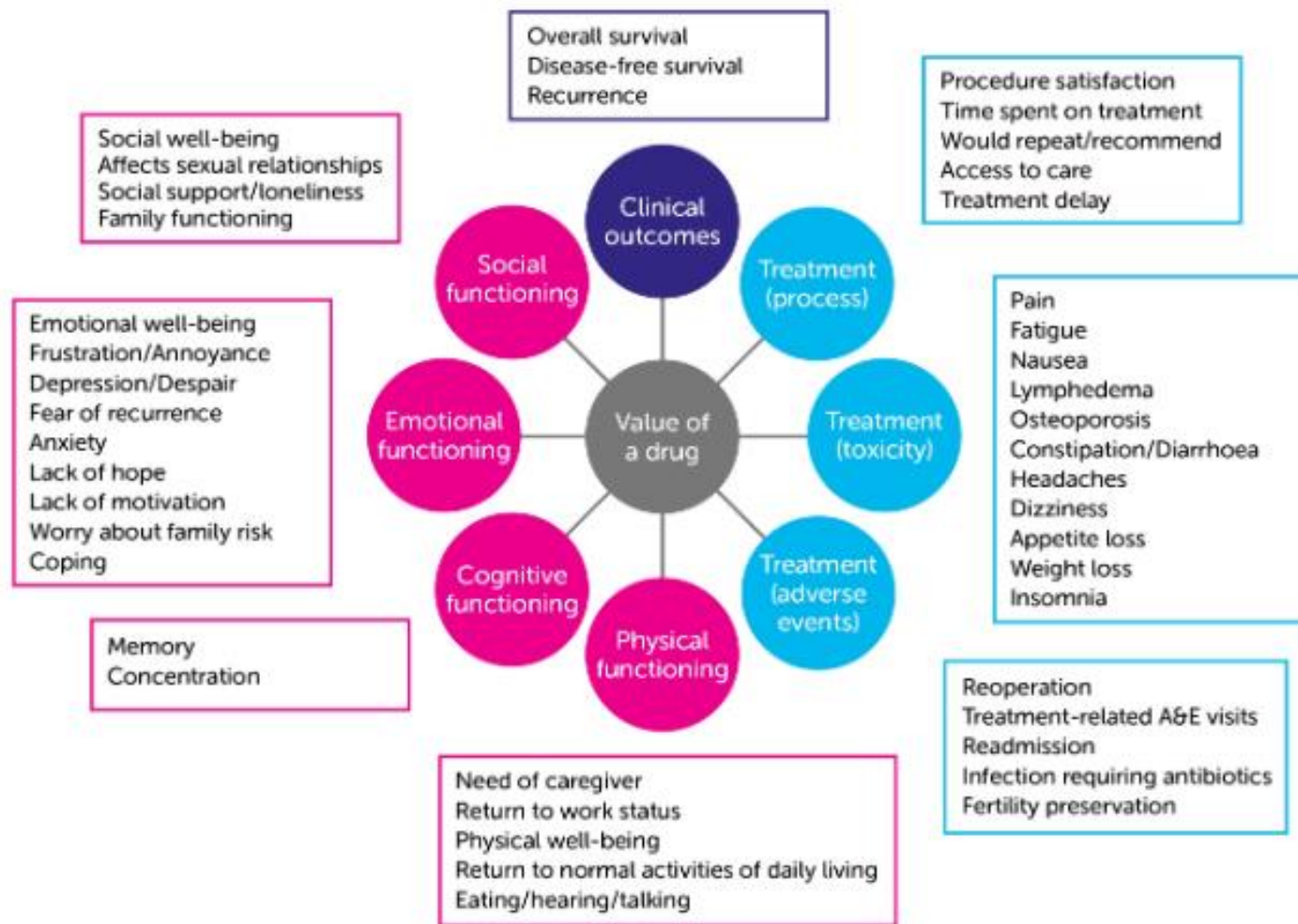
Canada pERC Deliberative Framework for oncology drugs decision



US: Proposed elements of value



Garrison, L.P.; Towse, A. Value-Based Pricing and Reimbursement in Personalised Healthcare: Introduction to the Basic Health Economics. *J. Pers. Med.* **2017**, *7*, 10. <http://www.mdpi.com/2075-4426/7/3/10>



Source: *Making Outcome-based payments a reality in the NHS* report

Recommendations for Making Outcome-based Payments a Reality in the NHS: An Application to Cancer Drugs – OHE



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Cite this as: *BMJ* 2020;371:m4491

<http://dx.doi.org/10.1136/bmj.m4491>

Published: 26 November 2020

COVID-19

Will covid-19 vaccines be cost effective—and does it matter?

The costs of other pandemic measures mean that covid-19 vaccines will probably turn out to be a good buy, says **John Appleby**, and the full calculations will raise questions about NICE methods

John Appleby *director of research and chief economist*

Pfizer and BioNTech have announced the early results of their covid-19 vaccine trial,¹ and immunisation for the novel coronavirus could be available in months. Of course hurdles remain, and more data need to be gathered about the efficacy and safety of the vaccines being trialled. One hurdle that new health technologies usually have to jump is cost effectiveness: is the value of the benefits worth the costs?

Although they have saved lives, the tactics used so far to try to get on top of the pandemic have had huge costs to people's livelihoods and, as the NHS reprioritised its work, to people's health (fig 1, fig 2). A rolling series of lockdowns and targeted isolation have been the only interventions available for restricting coronavirus transmission, but they are not the ultimate answer to tackling covid-19. It seems inconceivable that governments would dither over the value for money of an effective covid-19 vaccine.

By Peter Neumann, Joshua T. Cohen, David D. Kim, and Daniel A. Ollendorf

ANALYSIS

Consideration Of Value-Based Pricing For Treatments And Vaccines Is Important, Even In The COVID-19 Pandemic

DOI: 10.1377/hlthaff.2020.01548
HEALTH AFFAIRS 40,
NO. 1 (2021): –
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Foundation, Inc.

COVID-related policy decision

- Many kinds of decisions
 - School, border controls,....
- Public concerns
 - Request clear information
 - Professionals and laymen's critics
- Scientific, logic, reasoning is needed
- Data, interpretation, value judgement... very essential
- **HTA mindset, mechanism and methodology can help**

Thank you!

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