

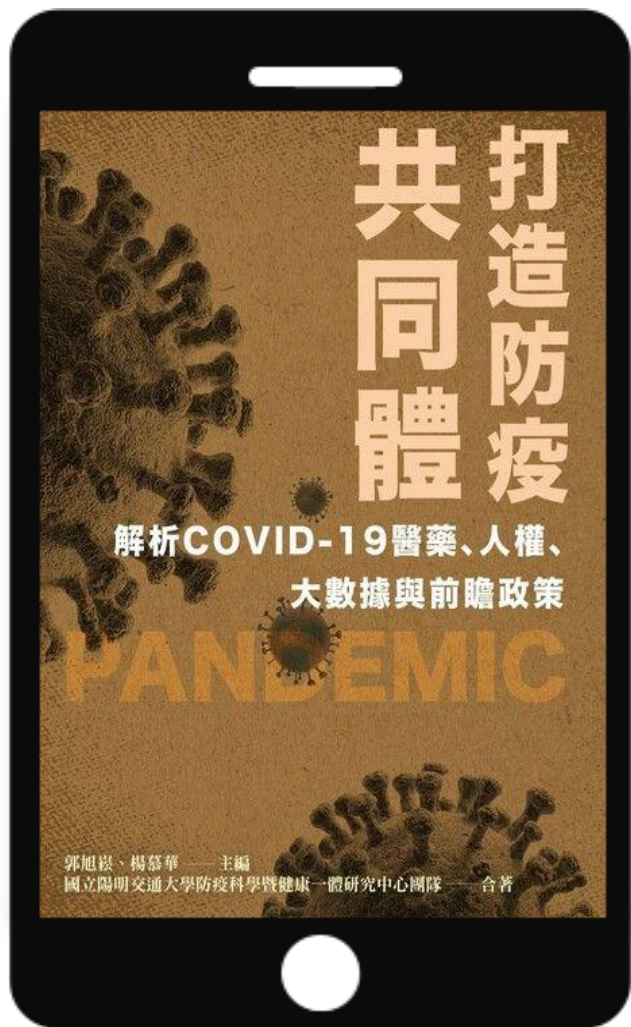


防疫智慧醫療 與 永續發展策略

郭旭崧

2022/10/20

大綱



- 01 解讀真實世界訊息的識能
- 02 大數據下的真實世界
- 03 人權、法治與防疫
- 04 打造防疫共同體的前瞻政策

解讀真實世界訊息的知能

DID YOU KNOW?

**Social media use drives false
COVID-19 beliefs**



36%

**of frequent social
media users held at
least one false belief
about COVID-19.**



Going Viral: How Social Media is Making the Spread of the Coronavirus Worse. The Reboot Foundation (2020)

[#DidYouKnow](#)

News
Literacy
Project

大數據下的真實世界-大數據分析協助 政策怎麼做

「新冠肺炎死亡率與檢測數及政府效能有關」

吳俊穎、梁立霖發表記者會

檢驗量的提升確實有助降低新冠肺炎死亡率，不過在與台灣同樣「政府效能好、病床數多、人口老化」的國家，增加檢驗量對於降低死亡率的效益可能不明顯。以上成果發表於《Nature》系列雜誌《Scientific Reports》。



2020年8月6日

跨國性研究解析新冠肺炎 (COVID-19) 死亡率



臺灣研究亮點

臺灣各大學研究重點與創新發展的報導



【NOW健康 陳敬哲 / 台北報導】許多防疫專家建議擴大篩檢，不過，陽明大學防疫科學研究中心研究發現，只有政府效能越差、人口結構越年輕、病床數目越少的國家，增加新冠肺炎檢測數目，才能有效降低新冠肺炎死亡率，至於其餘國家，如台灣，廣篩則不見得有用。

大數據下的真實世界-智慧數位醫療輔助案例

雲端隱形低血氧監測平台-楊智傑老師團隊

病患配戴醫療級血氧計，
登入App進行血氧量測，
回報病患自覺症狀

病房



隱形低血氧
監測平台

- 數值加密上傳
- AI回傳即時分析預測結果



DIGITAL MEDICINE CENTER
陽明交大
雲端AI分析

台北榮總新生兒專責病房/
陽交大附醫成人專責病房使用中



護理站



- 異常數值告警
- AI即時預測通知

BLUETOOTH

- 數值加密上傳
- 預測結果推播

5G NR

INTERNET

大數據下的真實世界-科技防檢疫輔助案例

口罩辨識暨人臉辨識實聯制系統



QRCode 掃描

國立陽明交通大學
NATIONAL YANG MING CHIAO TUNG UNIVERSITY



使用者:

登記時間: 2021/09/10 19:11:21

登記地點: 十三舍

近期造訪紀錄:

1. 2021/09/10 19:10:20-BOAI
2. 2021/09/09 10:18:21-BOAI
3. 2021/09/03 10:09:08-BOAI
4. 2021/09/02 11:29:38-BOAI

體溫:

35.6度

用戶資訊

陽明交大光復校區十三舍

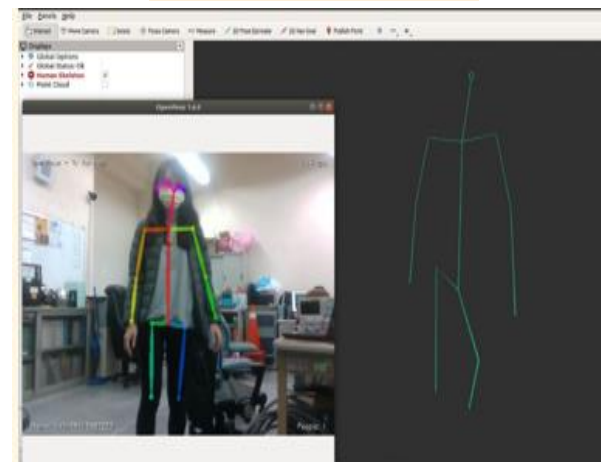
酒精消毒



體溫量測



人體姿態估計



機器送餐



人臉辨識

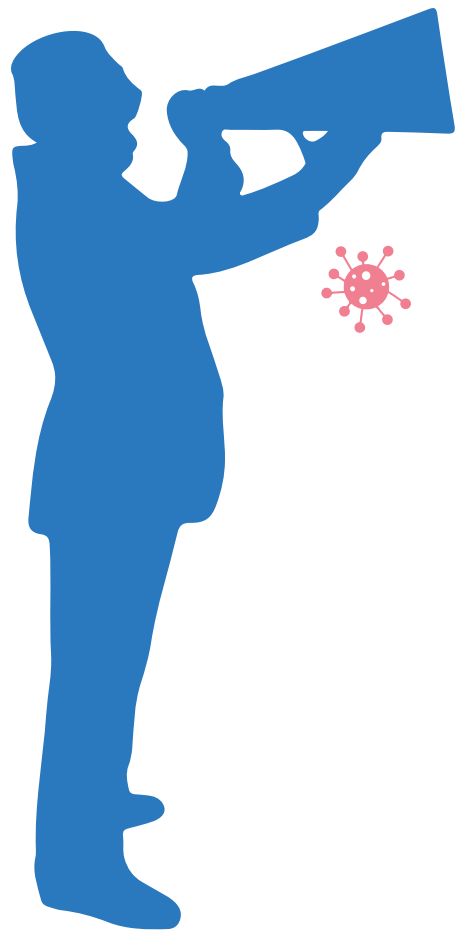


陽明交大光復校區研三舍餐廳

人權、 法治 與 防疫



科技始終來自於人性 我們需要對話



Human Rights Rule of Law & Epidemic Prevention

- 防疫與民主法治的憲法對話
- 校園民主防疫
- 防疫與國際人權-以弱勢群體權利保障為核心
- 科技防疫與人權-以國際人權規範為核心
- 防疫物資法治整備-法律如何促進防疫物資到位
- 疫苗的分配正義-怎麼分配才公平



科技防疫與人權

全國防疫因應措施

1. 休閒娛樂場所應關閉：歌廳、舞廳、夜總會、俱樂部、酒家、酒吧、酒店（廊）、錄影節目帶播映場所（MTV）、視聽歌唱場所（KTV）、美容院（觀光理髮、視聽美容）、指壓按摩場所、健身休閒中心（含提供指壓、三溫暖等設施之美容瘦身場所）、保齡球館、撞球場、健身中心（含國民運動中心）、室內螢幕式高爾夫練習場、遊藝場所、電子遊戲場、資訊休閒場所、休閒麻將館及其他類似場所。
2. 全國宗教祭祀場所活動部分，全面停止進香團與遶境相關活動，包括寺院、宮廟、教堂（教會）及其他類似場所之活動，應落實實聯制與社交距離，並加強消毒。
3. 全國中、小學校園停止對外開放。
4. 全國社團停止交接活動。

提升疫情警戒標準至第三級

- ◆ 外出時**全程佩戴口罩**
- ◆ 避免不必要移動、活動或集會
- ◆ 停止**室內5人、室外10人以上**家庭聚會(同住者不計)和社交聚會
- ◆ 民眾自我健康監測，有症狀應就醫
- ◆ 營業場所及洽公機關(構)落實**人流管制、戴口罩、保持社交距離**
- ◆ 職場及工作處所遵守**企業持續營運指引**之防疫規定，落實**個人及工作場所衛生管理**，啟動**企業持續營運因應措施**(如**異地或遠距辦公、彈性時間上班**)
- ◆ 餐飲場所遵守**實聯制、社交距離、設置隔板**等措施，無法落實則採**外帶**
- ◆ 婚、喪禮落實**實聯制、社交距離並加強消毒**
- ◆ 公共場域、大眾運輸**加強消毒**

中央流行疫情指揮中心 2021/5/15

入境檢疫系統

電子圍籬

電子圍籬 1.0

超出檢疫處所範圍

居家檢疫、居家隔離者

違反處10~100萬元罰鍰

電子圍籬 2.0 (天網)

進入活動管控範圍 650公尺內

自主健康管理、居家檢疫、居家隔離者

違反處1~30萬元罰鍰

實聯制

疫苗數位證明

防疫與國際人權-以弱勢群體權利保障為核心

COUNCIL OF EUROPE
CONSEIL DE L'EUROPE

Directorate General
Human Rights and Rule of Law

Home News Directorate General Find an activity Major conferences and events COVID-19

You are here: Human Rights and Rule of Law

The impact of COVID-19 on human rights and the rule of law - Our action



“While the virus is resulting in the tragic loss of life, we must nonetheless prevent it from destroying our way of life - our understanding of who we are, what we value, and the rights to which every European is entitled. There is an urgent need to co-ordinate states’ responses, to exchange good practices, and to help each other in the quest for a quicker recovery.”

Marija Pejčinović Burić, Secretary General of the Council of Europe

Protecting vulnerable groups in crisis situations: more effective structures and procedures needed

STRASBOURG | 5 MAY 2021

GUIDELINES ON UPHOLDING EQUALITY AND PROTECTING AGAINST DISCRIMINATION AND HATE DURING THE

C O V I D 1 9

PANDEMIC AND SIMILAR CRISES IN THE FUTURE

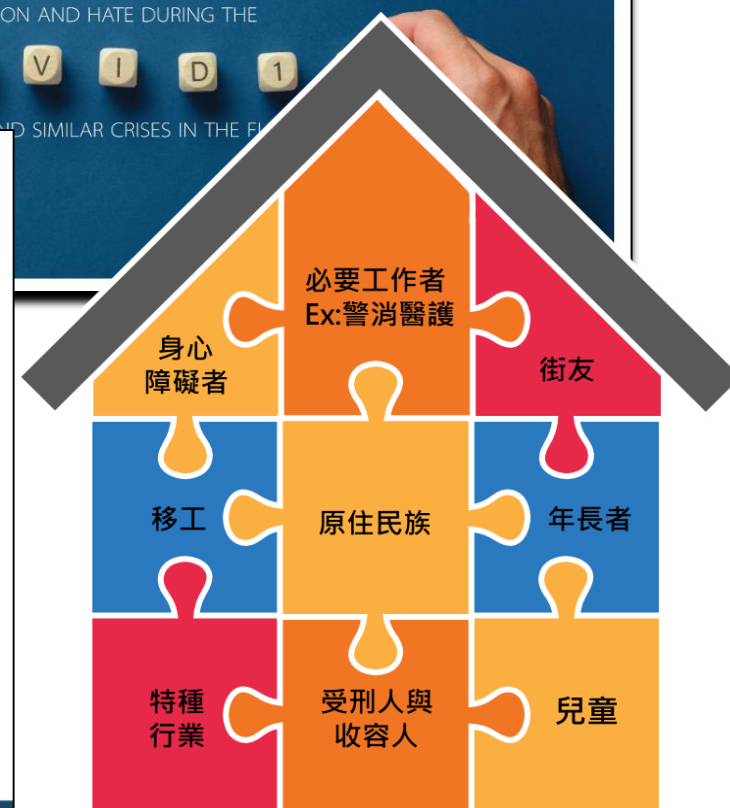
Office of the United Nations High Commissioner for Human Rights
United Nations Development Programme
United Nations Sustainable Development Group



Checklist for a **Human Rights-Based Approach** to Socio-Economic Country Responses to COVID-19



July 2020



防疫物資法制整備-法律如何促進防疫物資到位

01

徵收與徵用防疫物資的法制

傳染病防治法、災害防救法、嚴重特殊傳染性肺炎防治及紓困振興特別條例、貿易法、貨品輸出管理辦法...

02

防疫物資生產仰賴事實上的協商與鼓勵

法規只能徵收既有的口罩或徵用工廠，緊急生產與上市仰賴政府與業者的協商與支持

03

防疫物資在現有的法制上檢討

緊急製造的法制整備、緊急授權的要件與程度、產品製造人損害責任的豁免與給民眾的保障

04

它山之石，可以為錯

	美國	歐盟	我國
緊急使用授權法源	食品藥物管理法 (Federal Food, Drug, and Cosmetic Act, FDCA) 第 564 條	REGULATION (EC) No 726/2004 § 14(7) REGULATION (EC) No 507/2006	藥事法第 48-2 條、特定藥物專案核准製造及輸入辦法
產品	藥品、醫療器材	藥品	藥品
主管機關	FDA	EMA	衛生福利部
適用情形	公共衛生、軍事、國內緊急事件 (包括化學、生物、放射與核能意外)	用以治療、預防或診斷嚴重衰弱或生命受威脅之疾病之藥品; 用於緊急狀況; 孤兒藥	因應緊急公共衛生情事
「緊急」之認定方式	HHS 部長宣告「緊急狀況」	WHO 或歐盟依 Decision No 2119/98/EC 認定公共衛生威脅	N/A
緊急使用授權之名稱	Emergency Use Authorization	Conditional Marketing Approval	專案核准
授權之標準	該產品有效、考量到緊急狀態的威脅，產品的利益大於風險、無適當的替代產品	風險效益評估為正向、未來有機會提供更全面的臨床數據、產品能滿足醫療迫切需求、立即上市對公共健康的益處大於欠缺充足資訊所帶來的風險	僅有相關之要件但未有明確標準： 符合因應緊急公共衛生情事之需要、利益風險、數量計算方式
授權之條件	必要條件：提供專業人員及一般民眾應告知事項、不良事件之監視及報告、製造商紀錄保存及報告 附加條件：產品之分配與使用限制、安全性及有效性分析、製造商以外之紀錄保存及報告	依個案決定。 如應進行研究，以確認風險效益評估為正向、要求蒐集關於藥品安全監視的資料。 包裝應標示 CMA	必要時得要求定期檢送藥物之安全或醫療效能評估報告
授權之期間	緊急狀態終止宣告時終止	一次一年，可展延	個案決定
資訊公開	緊急狀態之宣告及終止、每項 EUA 之授權及終止 (附理由)	每項 CMA 的准駁 (附理由)	N/A

疫苗的分配正義-怎麼分配才公平



疫苗排序的必要性

有限疫苗的最大效益、降低濫權、提升民眾團結抗疫意願

疫苗排序的公平性

科學證據、透明說理

疫苗排序決策機制的可問責性

決策透明、多元參與

Who should get a Covid-19 vaccine first?

The World Health Organization has a recommended priority order for vaccine allocation. This is intended to protect those most at risk of harm or death from Covid-19, and to slow or stop the spread as quickly as possible.

Vaccine Launch

- 1. Healthcare Workers**
- 2. Older People**
- 3. Vulnerable**
- 4. Everyone Else**

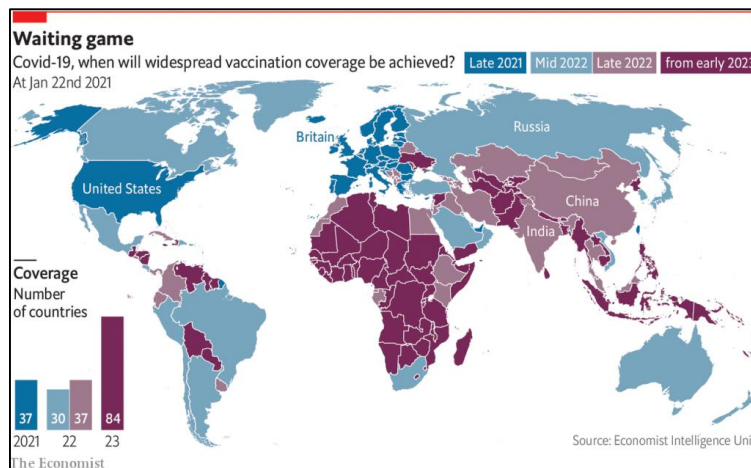
Doctors, nurses and other essential healthcare workers are at a much higher risk of catching Covid-19 through their work.

Those who are more likely to die from the disease, such as people over the age of 70.

This includes those suffering from conditions such as asthma or cancer that make them more susceptible to severe Covid-19 illness.

The general public below the age of 70 and no medical issues.

Source: [https://www.who.int/news-room/q-a-detail/coronavirus-disease-\(covid-19\)-vaccine-access-and-allocation](https://www.who.int/news-room/q-a-detail/coronavirus-disease-(covid-19)-vaccine-access-and-allocation)



SENATOR MARKEY PRESENTS

ACCESSIBLE & EQUITABLE VACCINE DISTRIBUTION

SENATOR ED MARKEY SENATOR ELIZABETH WARREN CONGRESSWOMAN AYANNA PRESSLEY STATE REP. NIKA ELUGARDO MICHAEL CURRY, MA LEAGUE OF COMMUNITY HEALTH CENTERS REVEREND MINIARD CULPEPPER

SATURDAY, FEBRUARY 20TH, 12PM EST

ED MARKEY

打造防疫共同體的前瞻政策



2020年2月6日 為支援全球面對COVID-19防疫需求，陽明與交通大學、台北榮總成立研發聯盟，將結合產業，首先投入快篩試劑與抗病毒藥物研發，全力協助防疫



生醫創新科技研製能力



法規監管因應彈性



優化管理架構

Home > Rankings Portal

THE WORLD'S BEST SMART HOSPITALS

2021

Information technology and other tools that make health care "smarter" are now essential for providing the best and most efficient patient care

BY NEWSWEEK



WORLD'S BEST SMART HOSPITALS

2021

Newsweek

POWERED BY



打造防疫共同體的前瞻政策(1/2)

NATURE MEDICINE

FOCUS | REVIEW ARTICLE



韌力及復原力

Activate comprehensive responses

- Multi-ministry task forces or committees and whole-of-government approach
- Training on COVID-19 including infection prevention and control for all health workers
- Advance purchase agreements and participation for novel medical products (e.g., participation in COVAX)
- Active surveillance, testing and contact tracing mechanisms supported by networks of laboratories
- Quarantine and isolation facilities, routine press briefings and regular updates on the situation

Adapt health system capacity

- Public-private approaches that are cost-effective, accountable and transparent
- Financial and social supports for health workers
- Reallocation and recruitment of health workers, including retired or foreign-trained health workers and trainees
- Access and use of digital technologies
- Creation of temporary healthcare facilities or adaptation of existing civic facilities
- Postponing elective procedures

Preserve health system functions and resources

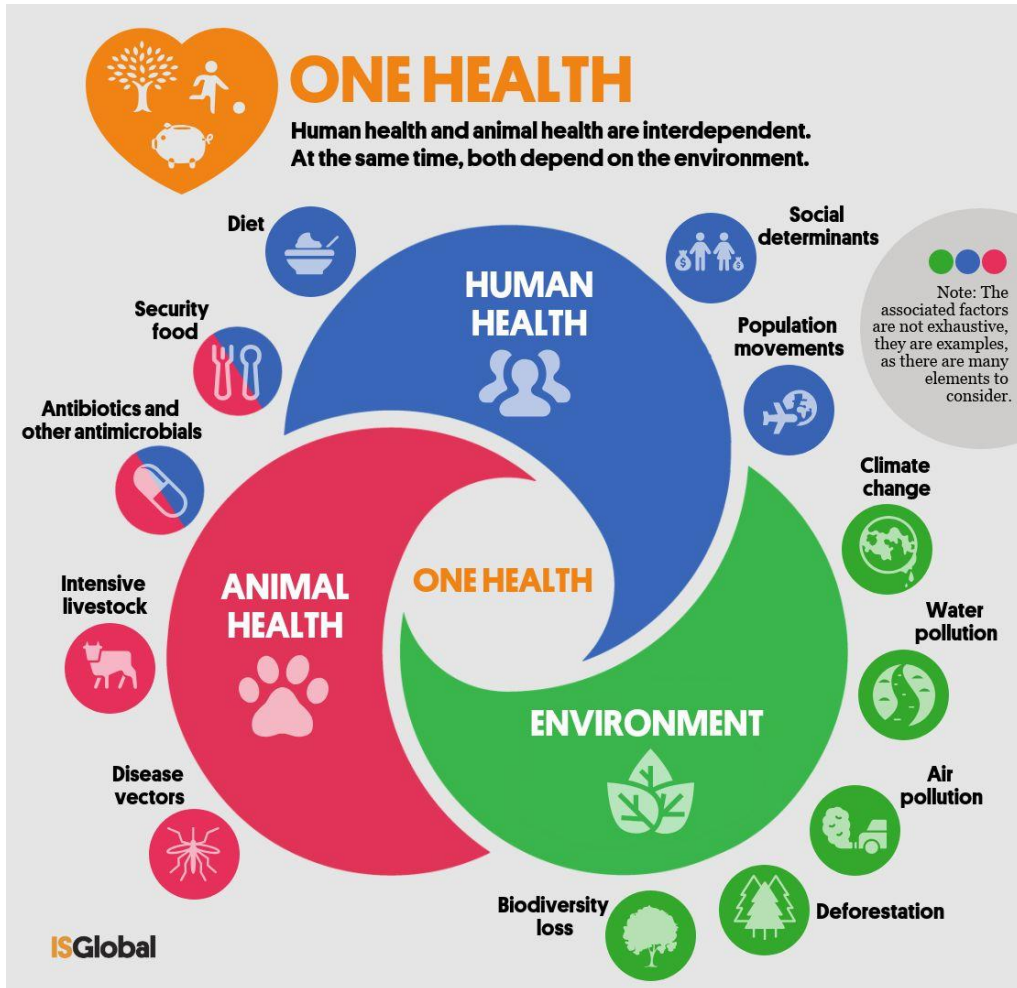
- Cost-effective procurement through purchasing consortia participation
- Rational-use guidelines to maximize and preserve medical resources
- Domestic research, development and production of PPE, test kits and other medical equipment
- Support CHWs so that public health can reach local populations
- Support primary care for response activities and ongoing routine and acute care
- Engage the community in the planning of health services

Reduce vulnerability

- Financing mechanisms to provide relief for businesses, individuals and families
- Leverage the skills and knowledge of CHWs or other community leaders (e.g., youth groups and religious groups) to reach the general population and at-risk subpopulations
- Manufacturing and supply chain strengthening
- Proactive testing and contact tracing strategies
- Communication strategies that reach people where they are, e.g., social media, WhatsApp and public campaigns

Learn and adjust

打造防疫共同體的前瞻政策(2/2)



Why ONE HEALTH is Important

As Earth's population grows, our connection with animals and the environment changes:



People live closer together



Changes in climate and land use



More global travel and trade



Animals are more than just food

These factors make it easier for diseases to spread between animals and people.

A One Health approach tackles shared health threats by looking at all angles—human, animal, plant, and environmental

www.cdc.gov/onehealth



打造防疫共同體

解析COVID-19醫藥、人權、大數據與前瞻政策

The screenshot shows the Books.com.tw website interface. At the top, there are promotional banners for Nike x New Balance shoes and a 50% discount for university and office newcomers. Below the navigation bar, a search bar and category filters are visible. The main content area features a large banner for 'SOS! 情緒自救' and a breadcrumb trail: 博客來 > 中文書 > 專業/教科書/政府出版品 > 醫藥衛生類 > 公共衛生 > 商品介紹. The product page for '打造防疫共同體：解析COVID-19醫藥、人權、大數據與前瞻政策' is displayed, including the book cover, author information (國立陽明交通大學防疫科學暨健康一體研究中心團隊), publisher (國立陽明交通大學出版社), and pricing details. The book is available in both electronic (280元) and paperback (316元) formats. The current price is 316元 (79% off the 400元 list price). The shipping method is set to '臺灣與離島' and the delivery location is '台北、新北、基隆宅配快速到貨(除外地區)'. There are also buttons for '主題活動' and '試閱'.

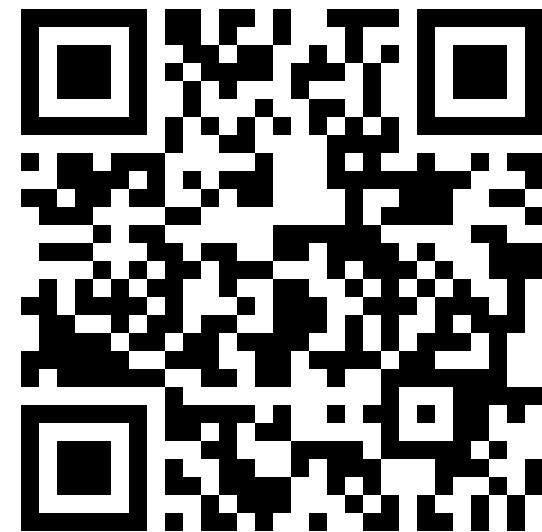
博客來：<https://www.books.com.tw/products/0010927544>

讀墨：<https://readmoo.com/book/2102344940001>

博客來



讀墨(電子書)



無知與歧視
比病毒更可怕

Knowledge, respect, and empathy are
our best safeguards against viruses.



讓我們心連心
一起努力!

United we will overcome them!

國立陽明大學

愈來愈多確診感染者可能就在你我之間，公衛學者在研討會中提出國人應傳遞光明面，在防疫期間互相支持！圖為國立陽明大學外，就掛出「無知與歧視比病毒更可怕」海報，盼國人心連心一同抗疫。
(王爵暉攝)

互相扶持也要調適自處

謝謝聆聽
Thank you