Building Resilience Against Outbreaks & Pandemics

Research to identify sustainable solutions

The 3rd Global Research and Innovation Forum
Collaborative Studies are possible: the Unity Studies

Key research achievements / Progress update

Professor Jodie McVernon
Director of Epidemiology, Doherty Institute
Global architecture: HEPR and PRET

https://www.who.int/publications/m/item/strengthening-the-global-architecture-for-health-emergency-prevention--preparedness--response-and-resilience

https://www.who.int/initiatives/preparedness-and-resilience-for-emerging-threats
Definitions and scope: Investigations & Studies (Unity Studies)

• A needed “mosaic” of respiratory viruses’ surveillance approaches
• Discrete studies and early investigations meet those objectives not efficiently met by existing surveillance systems
  • E.g., Transmissibility, pop. susceptibility (sero-surveillance), severity (infection severity), vaccine effectiveness, etc.
  • Enhanced surveillance and operational research
• Why “Unity” studies?
  • Unified (standardized) global collaborative approach for evidence-based action

Avoiding waste

Chalmers I, Glasziou P. Avoidable waste in the production and reporting of research evidence. Lancet 2009; 374: 86-89

• Overarching aim: epidemic/pandemic preparedness and effective response
History: building preparedness

- **Built on more than 10 years of preparedness efforts**
  - pandemic influenza, MERS-CoV, Zika, etc.
- Work began after 2009 influenza pandemic with WHO and CONSISE
- WHO adapted influenza and MERS standardized protocols for COVID-19
- Standardized protocols and questionnaires/forms designed to ensure:
  - that data can be rapidly and systematically collected and shared
  - a format that facilitates analysis across different settings globally.
COVID-19 global implementation: Key achievements & lessons learned

- As of 31 December 2021 (2 years into the pandemic):
  - **103 member states** (103/194–53%) had started implementing at least one sero-epi investigation aligned with the WHO Unity studies master protocols (**UNITY**)
  - **63% (65/103)** were LMIC (**EQUITY**)
  - Implemented in 38/64 (59%) humanitarian settings countries (**HRP**)

- Publicly accessible dashboard and data platform for SARS-CoV-2 seroprevalence
- As “real time” as seroprevalence, and results sharing or publication, can “afford “
- Co-branded and developed

https://serotracker.com
COVID-19 global implementation: Key achievements & lessons learned

- Several global and regional meta-analyses published*
- WHO Special Collection in ISIRV journal for LMIC
  - Facilitating publication of Unity studies conducted globally
- External independent evaluation performed.
- Lancet commentary: “operational protocol repository”
  https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(23)00964-9/fulltext

*Meta-analyses: [link 1], [link 2], [link 3], [link 4]
Access revised protocols: pan respiratory approach and disease specificities

- Influenza viruses template protocols

- SARS-CoV-2 template protocols

- MERS-CoV protocols
  (https://www.who.int/emergencies/outbreak-toolkit/disease-outbreak-toolboxes/mers-outbreak-toolbox)

- Respiratory or pathogen “X” template protocols
  (https://www.who.int/initiatives/respiratory-pathogens-investigations-and-studies-unity-studies)

- More in development
  e.g., FFX “light”, immunity/seroprevalence, vaccine effectiveness, health workers, rapidly assessing severity, mode of transmission
Future research priorities
Unity Studies “2.0”: Future directions and operationalization

Headline: 3 Keys

Before
During
After
the next pandemic

Watch: https://www.youtube.com/playlist?list=PL4653C266780FC21E
Web: https://www.who.int/initiatives/respiratory-pathogens-investigations-and-studies-unity-studies
A global operational network of sites

- **Primed** to conduct country-specific standardized, pre-planned and pre-approved investigations
- **Exercised** through “peace time”
  - during seasonal influenza epidemics, MERS-CoV cluster, etc.
- **Composed** of representative settings
  - with the available capacity, or
  - through public health/research collaborations to develop local capacity

**Governance:**
- Unity Studies Network Sites will be governed by a terms of reference which provides:
  - description of duties;
  - the benefits of participating, and;
  - criteria for site selection.

[Terms of Reference (ToR) for Unity Studies network sites](#)
Acknowledgements

- Informed individuals participating in investigations
- National government partners and researchers conducting investigations.
- WHO HQ, Regional Offices, and Country Offices staff
- Partners in ECDC, SeroTracker, Calgary University, US CDC, Institutes Pasteur, BMGF, RKI, Africa CDC, Melbourne University, GLOPID-R, Epiconcept
- Funders: PIP PC (Pandemic Influenza Prep), US CDC, German Federal Ministry of Health, WHO COVID-19 Solidarity Response Fund, Bill and Melinda Gates Foundation BMGF, RKI (Robert Koch Institute), and many more

Contact generic global email available: unity@who.int

Web 1 (pan resp): https://www.who.int/initiatives/respiratory-pathogens-investigations-and-studies-unity-studies
Web 3 (MERS): https://www.who.int/emergencies/outbreak-toolkit/disease-outbreak-toolboxes/mers-outbreak-toolbox