

COVID-19 vaccine (in)equity

Pandemic complexity through a phenomenological and systems thinking lens

Background

Unequitable vaccine coverage
 COVID-19 vaccine coverage (April 2021 – April 2022, Fig 1):
8.7% to 72.4% in high-income countries
0% to 10.6% in low-income countries
 Contributing to large socio-economic costs and slow recovery.

Wicked problems
 'Wicked problems' (e.g., vaccine inequity) have **no straightforward policy response** that would adequately address their 'wickedness'. Their properties include societal complexity, difficult to be formulated, causal webs, being a symptom of other problems, and more. [2,3]

Phenomenology
 Phenomenological research focuses on structural elements of lived experience with **foreground-background dynamics** of attention. These dynamics occur as researchers or professionals are trained to pay attention to entities relevant to their disciplinary domain ('work-world'). [4,5]

Systems thinking
 Systems thinking attempts to understand how systems work in a **holistic** manner rather than in isolation. Identifying root causes of problems stimulate effective problem-solving of nonlinear and turbulent systems. [6]

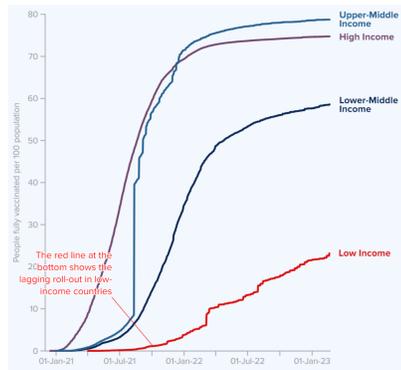


Figure 1: the percentage of people fully vaccinated against COVID-19 over time per income group [1]

Motivation

Amidst a crisis, focusing attention might be seen necessary, though exacerbating existing silos.

Complexity of wicked problems necessitates **innovative approaches** that move beyond one particular 'work-world' to recognize inherent dynamics of attention that might otherwise go unnoticed.

Methodology

Aim

- Explore the value of combining **phenomenology** and **systems thinking**
- Enhance understanding of **wicked problems**, such as vaccine inequity

Facilitate adequate intervention and policy design to better address wicked problems

Approach

DATA

- Narrative literature analysis
- Expert panel discussion [7]

APPLICATION

- Global**: understanding three issues during COVID-19 over time
- Local**: understanding COVID-19 challenges in Tanzania over time

Results

Global (Fig 2)

Procurement: limited concerns for well-being of other nations → vaccine nationalism criticism and donations

Response: strong focus on non-pharmaceutical measures → less attention to longer term socio-economic costs

Supply and demand: foregrounded production capacity → overshadowing capacity issues on the demand side

Local

Tanzania's approach to managing COVID-19 has seen several transitions. In 2020, **emphasis shifted away** from non-pharmaceutical measures **towards local remedies** for COVID-like symptoms. Treatment and testing protocols, backgrounded, increasing attention on practices pushed by political and religious leaders [8]. Following a change in presidency in 2021, a shift in focus was realized, with **renewed attention** directed towards comprehensive case reporting and procuring vaccines via COVAX [9].

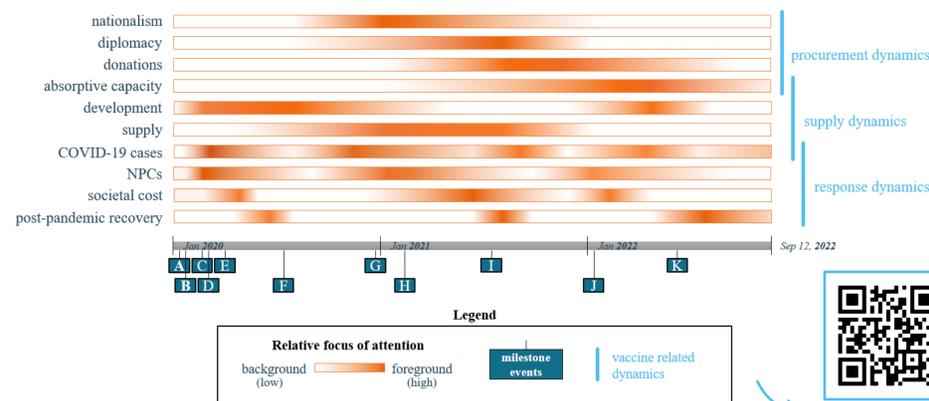


Figure 2: Relative attention on three general dynamics during COVID-19, along with selected milestone events.

Dynamics

Within COVID-19

- **Varying priorities** over time: different 'work-worlds' direct attention to specific issues
- Unintended consequences due to **'backgrounding'**: exacerbated vaccine hesitancy or wastage.
- 'Backgrounding' can enable **'foregrounding'** of problems that were previously overlooked.

Beyond COVID-19

- 'Backgrounding' of **other essential (health) system services**: chronic care, routine immunization, sexual and reproductive health, etc. [9].
- Repeated cycles of **"panic and neglect"**: often focus on one crisis at a time
- Move **beyond traditional approaches** e.g., integrate social sciences in preparedness and response efforts

Phenomenology	explicitly focus on <u>dynamics of (inter)subjective experience</u> implicitly concerned with the overarching systems level
Systems thinking	explicitly focus on the overarching <u>systems level</u> implicitly concerned with dynamics of (inter)subjective experience
Integrated approach	stressing the importance of explicitly focusing on <u>both</u> the dynamics of (inter)subjective experience and the overarching systems level

Take-aways

Wicked problems persist and a good understanding of the problem is required to assure adequate interventions and policy design.

Combining phenomenology and system thinking enables deeper understanding of how 'wicked' problems behave.

It's essential to transcend undesirable trade-offs and 'work-worlds' and explore benefits of other methodologies in understanding perspectives and experiences.

Further research is required to demonstrate the value and practical aspect of this combination in policy design, for instance, by extending it to other wicked problems.

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Supported by VLIR-UOS and a Pandemic Preparedness Research Chair of Janssen Pharmaceutica



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For more info on Fig 2: scan the QR code