# Digital Health: Leveraging Global Public Goods to Fight COVID-19

# Jennifer Antilla, MPH

Director of Community, OpenMRS
Sr. Health Informaticist, School of Nursing, University of Washington

**90%** of **DEATHS** from disasters occur in LMIC

Internally **DISPLACED** Persons in 2020 **46 mil**

National and Regional Infrastructures
- Travel on Roads and Bridges
- Power Issues
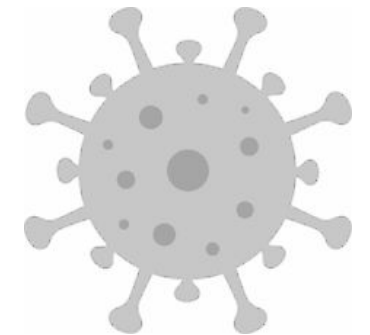- Telecommunications

Effect access to Clean Water, Food, Sanitation…

**…AND HEALTH SERVICES**

**VULNERABLE POPULATIONS COMPLEX CARE NEEDS PATIENTS**

- Medication adherence
- Critical lab testing & results
- Paper medical records and documented treatment plans
- Preventive services for identifying newly infected

**80 mil** Persons forced forced from their homes globally

3

- Limited developer resources
- Multiple implementation partners and stakeholders
- Complex funding environment
- Training and Education
- Testing and Validation
- Change Management, Policy, and Pacing Issues
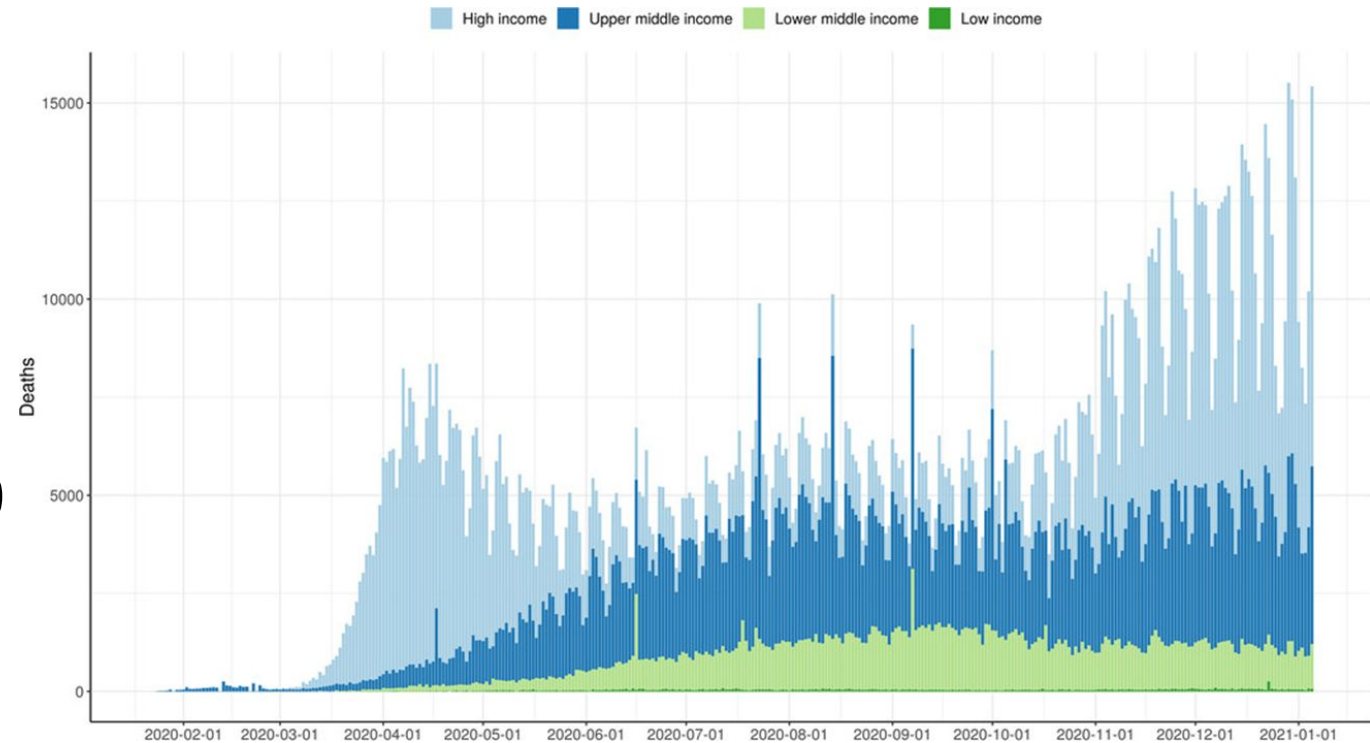- Unreliable Connectivity, Infrastructure, & Environment
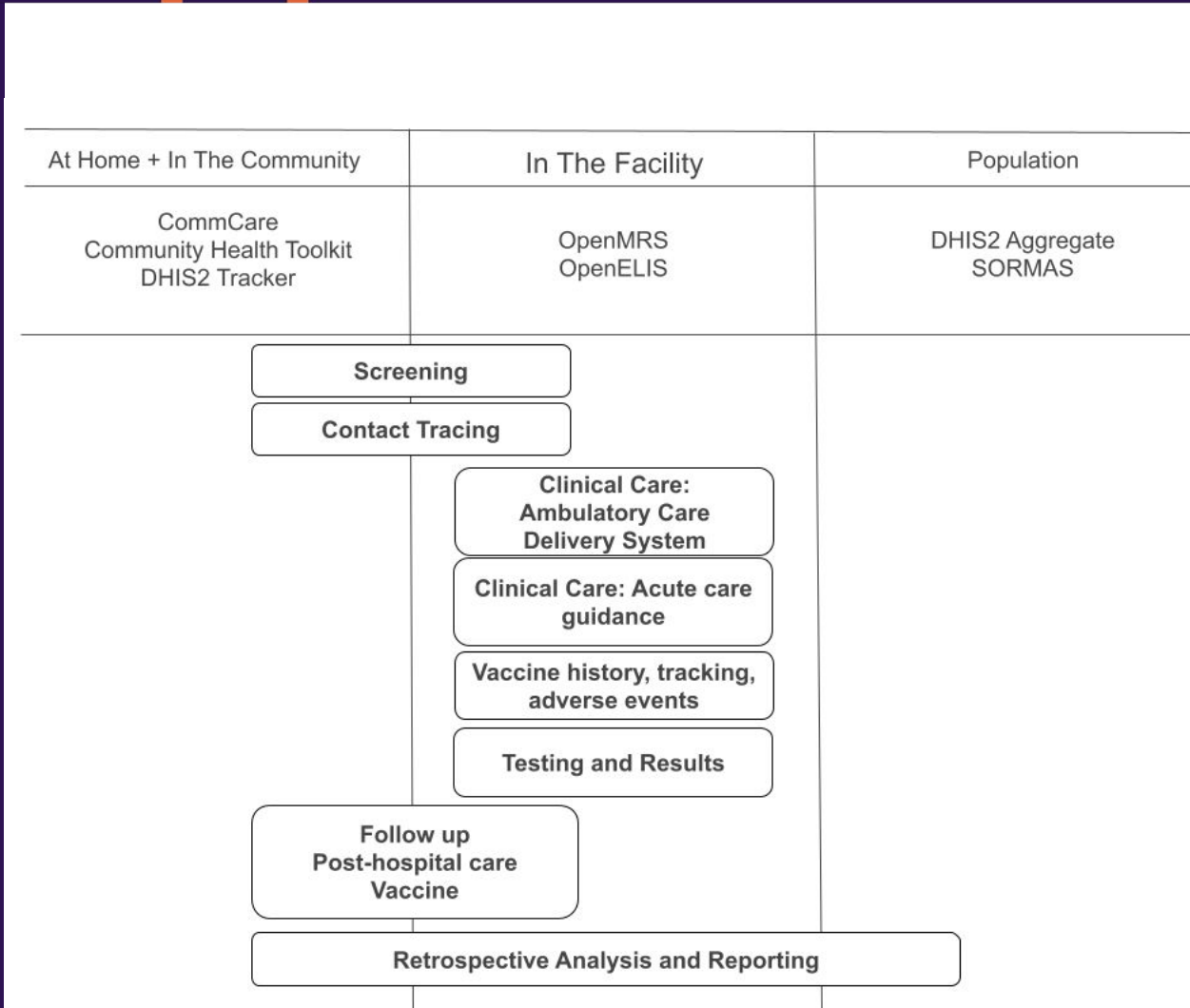- Sustainability and Maintainability
- Scalability

4

- Faster public health response early on
- Relatively younger population
- Under-reporting of infections and deaths
- Accessing & delivering COVID-19 vaccines and therapeutics
- Financing for vaccine and therapeutics
- Identifying eligible individuals

Reported COVID-19–attributed mortality according to the country's income category. Source: https://mrc-ide.github.io/global-lmic-reports/ (accessed December 14, 2020).

- Improve data collection and access to high quality data
- Support the care cascade across sites and borders
- Reduce the multiplicity of systems
- Address the human resource gap

**Why this approach?**

- Go Further Together, Continuity with Pooled Knowledge
- Replicability + Reusability
- Faster available solutions broadly available for COVID-19

**What is the Implementation approach?**

- Community engagement and decision-making
- Reuse and improve
- Standardised and community approved processes

**Outcomes?**

- Broad sustainability, diversified resources/funding
- Increased efficiency, Re-use rather than re-invention
- Quick success/fail fast, iterate for improvements

OpenHIE
Architecture
Specification

IHE Profiles

HL7 V3, FHIR

**OpenHIE** and **OpenMRS** support for IPS for immunization records, smart vaccine certificates incorporation



**OpenELIS** and **OpenHIE** architecture support in-bound passenger registration, on-arrival and national laboratory testing, referral testing workflows, and contact tracing in Mauritius - all using FHIR

**Technology isn't the focus – changes too fast – instead <u>how data is used:</u>**

❖ Focus on data availability, exchanges, and re-use despite challenges

❖ Focus on the permanence of data through modular architectures

❖ Focus on equipping countries with the knowledge and capacity for standards-based sustainable architectures and protections for the data they produce and use.

**Potentially unprecedented benefits to both population and individual health**

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