

Figure 1. System dynamics simulation model dashboard showing vaccine stock levels at the health center, vaccine hesitancy levels for different measles vaccine doses, susceptible children and vaccine coverage levels



Figure 2. National measles —rubella campaign during mother and child health week (photo: www.afro.who.int)

Community-level service delivery model for tailored immunization

Immunization - Vaccine Hesitancy

Systems Modeling

Local - Operational

Goal: Offer model-based support to local and subnational stakeholders for tailored immunization strategies and service delivery solutions

Problem

Subnational underimmunization of measles triggering local outbreaks.

Vaccination strategies to **improve local service delivery** are difficult to design based on data only.

Method

Bottom-up primary data collection and systems modeling.

Revealing causes of historic local under-immunization and outbreaks based on field research and system dynamics simulation modeling.

Modeling impact of interventions on health outcomes.

Application/Insights

Sustainable and effective interventions for timely immunization depend on local service delivery (supply-side) and local vaccine hesitancy (demand-side).

Community health workers' capacity, focused campaigns based on coverage data, and accessibility to vaccination services are key.











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