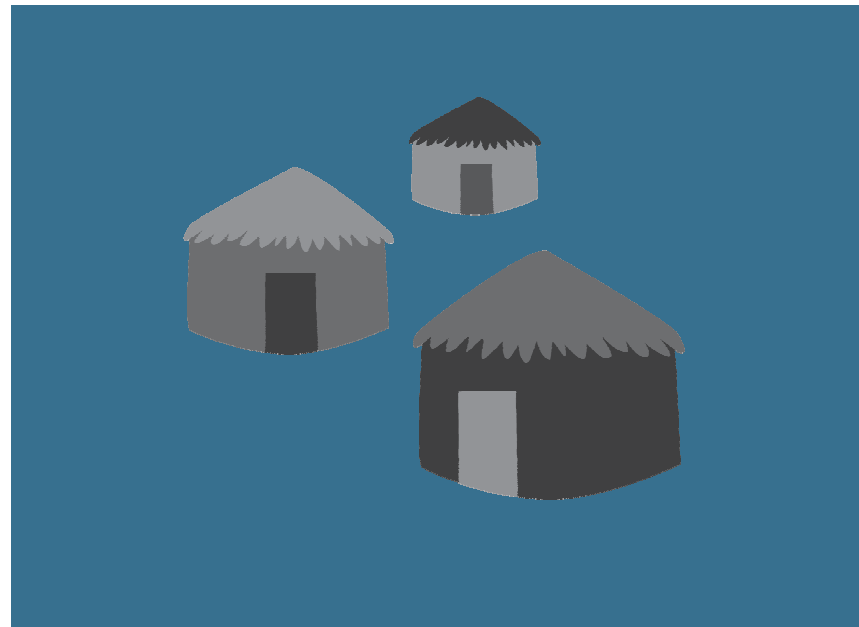# Institutionalizing Community Health Conference

27-30 March 2017 | Johannesburg, South Africa

#HealthForAll
ichc2017.org

Community – Based Information System

Role of Digital Health and Interoperablility

Promoting Continuity of Care & Linkages

Vikas Dwivedi (vikas_dwivedi@jsi.com)
Senior Health Information System Advisor
Maternal and Child Survival Program

- Three-quarters of women globally now deliver with a skilled birth attendant

- This dramatic increase occurred mostly via facility deliveries
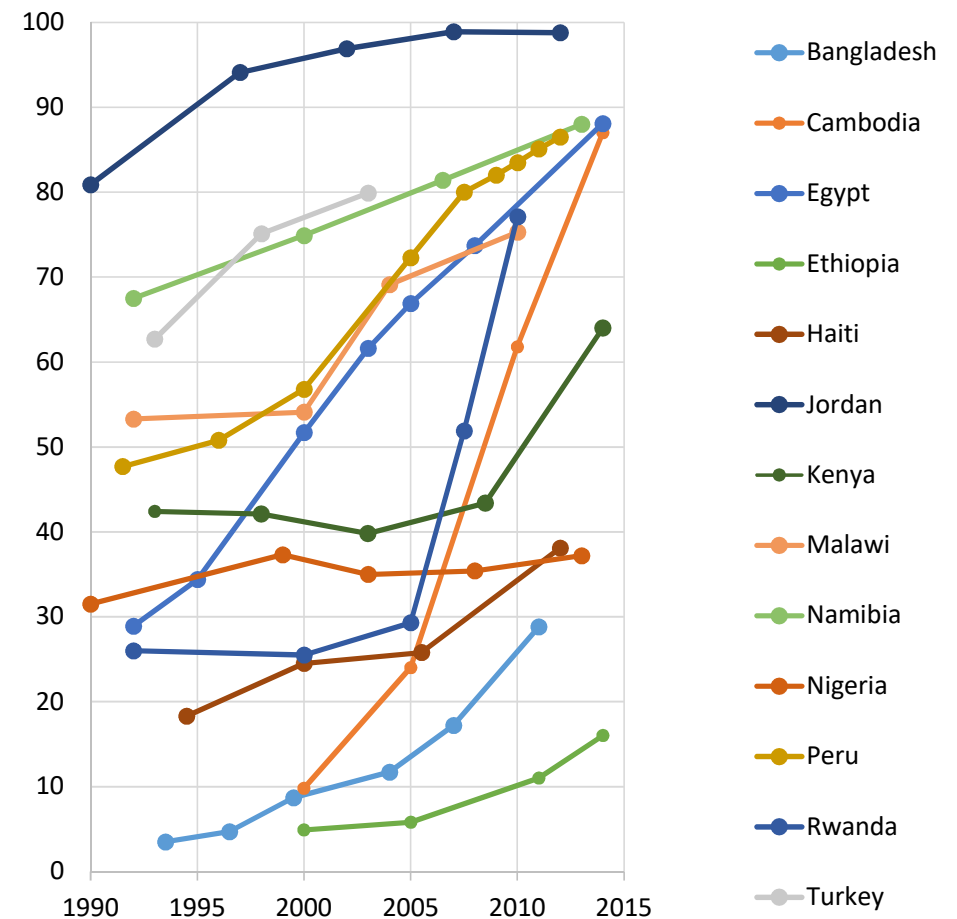
Facility deliveries by country (1990-2014)

Women often left out of good quality care

53 million women
not receiving childbirth care
at all

Innovation: universal health coverage

Adoption of UHC has the potential to:

◦ Provide financial protections & reduce catastrophic health expenditures

◦ Focus on the life-course & non-communicable diseases

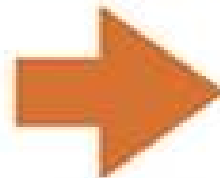◦ Reintegrate maternal health into the broader women's health agenda

Kruk ME, Kujawski S, Moyer CA, Adanu CA, Afsana K, Cohen J, Glassman A, Labrique A, Reddy KS & Yamey G
Next generation maternal health: external shocks & health systems innovations. Lancet 2016

The WHO Health System Framework

System Building Blocks

Overall Goals / Outcomes

SERVICE DELIVERY

HEALTH WORKFORCE

INFORMATION

MEDICAL PRODUCTS, VACCINES & TECHNOLOGIES

FINANCING

LEADERSHIP / GOVERNANCE

ACCESS
COVERAGE

QUALITY
SAFETY

IMPROVED HEALTH (level and equity)

RESPONSIVENESS

SOCIAL & FINANCIAL RISK PROTECTION

IMPROVED EFFICIENCY

FAMILY FOLDER -
THE CENTRE-PIECE OF
CBIS (CHIS) IN ETHIOPIA

In Ghana

The current situation of digital health information systems

HR-HIS

Finance

dhis2 OpenLMIS

M&E Applications

Clinical Record Systems

OpenMRS

OpenClinic
an opensource clinic system

Hospital Information Systems

Bahmni

Laboratory Information Systems

OpenELIS

Others in Private sectors

Mobile Applications

OPENSRP RapidPro mHero

Talking about UHC…multiple system components
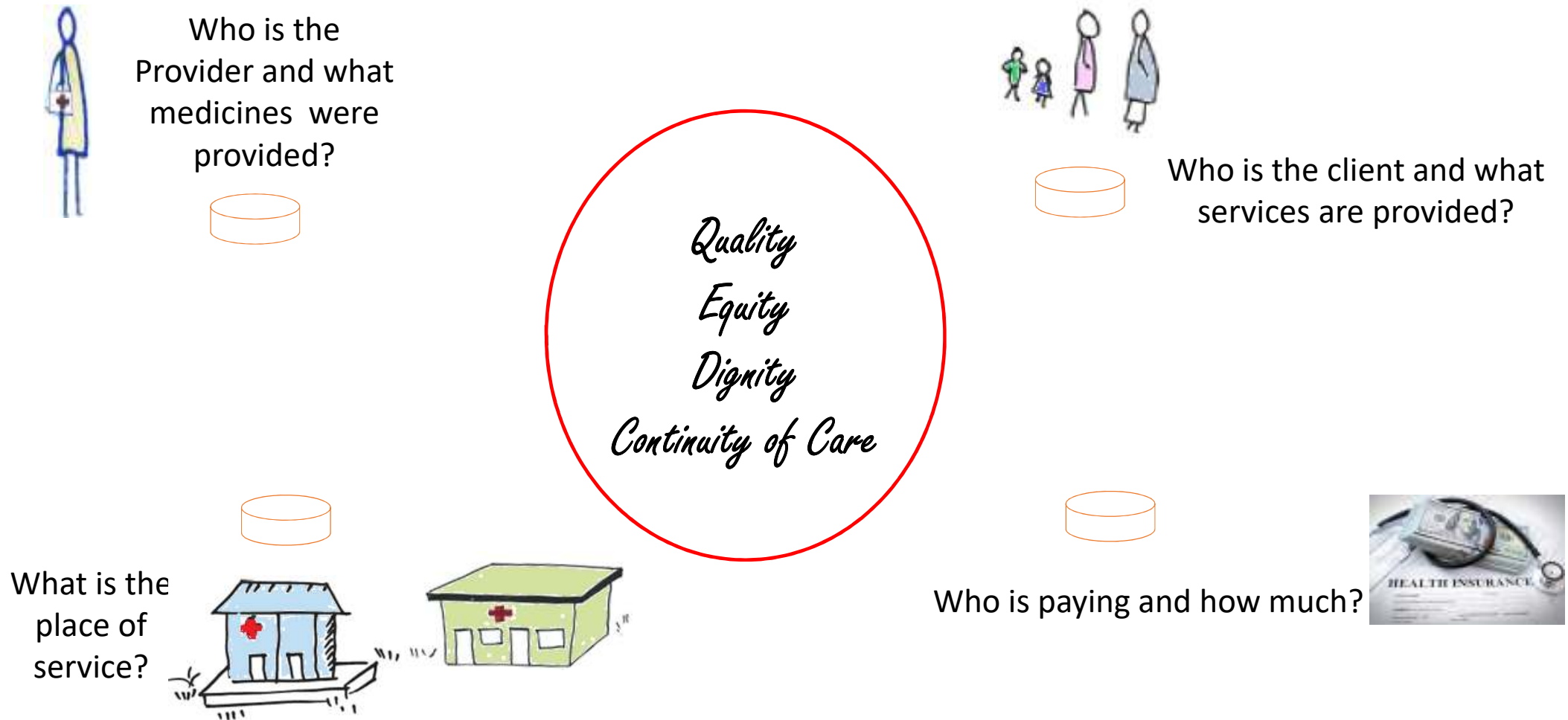
Who is the Provider and what medicines were provided?

Who is the client and what services are provided?

Quality

Equity

Dignity

Continuity of Care

What is the place of service?

Who is paying and how much?

THE QUESTION?

How can Interoperability support decision-making?

OpenHIE Framework and standards

Kenya's FR — Resource Map

Registry of Health Facilities

Registry of Clients

Health Management IS (HMIS)

Shared Health Records Repository

Registry of Health Terms

Registry of Health Workers

Interoperability Layer

M&E Applications

Mobile Applications

Clinical Record Systems

Hospital Information Systems

Laboratory Information Systems
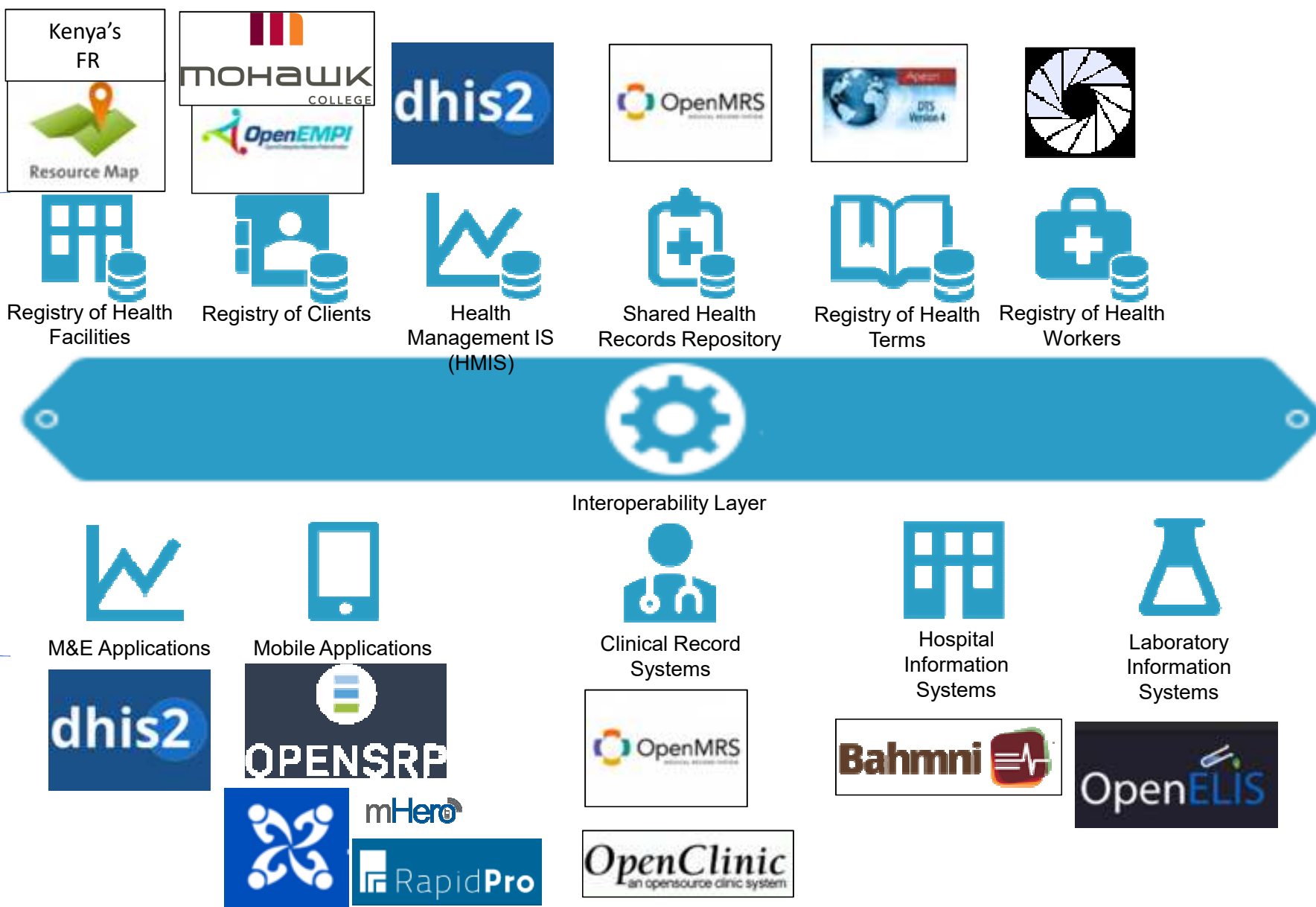
Maternal Health Case Scenario

- Coordinated service delivery
- Two-way information flow
- Continuity of person-centred care

Health Facility 2.

Data sent to eRegistry

1. **Pregnant woman**

Follow-up Visits

Interoperability layer to facilitate HIE

eRegistry

dhis2

2. **Community Health Worker**

Data sent to eRegistry

Text Results
Reminder messages for medications
Messages for follow-up visits
Question & Answer
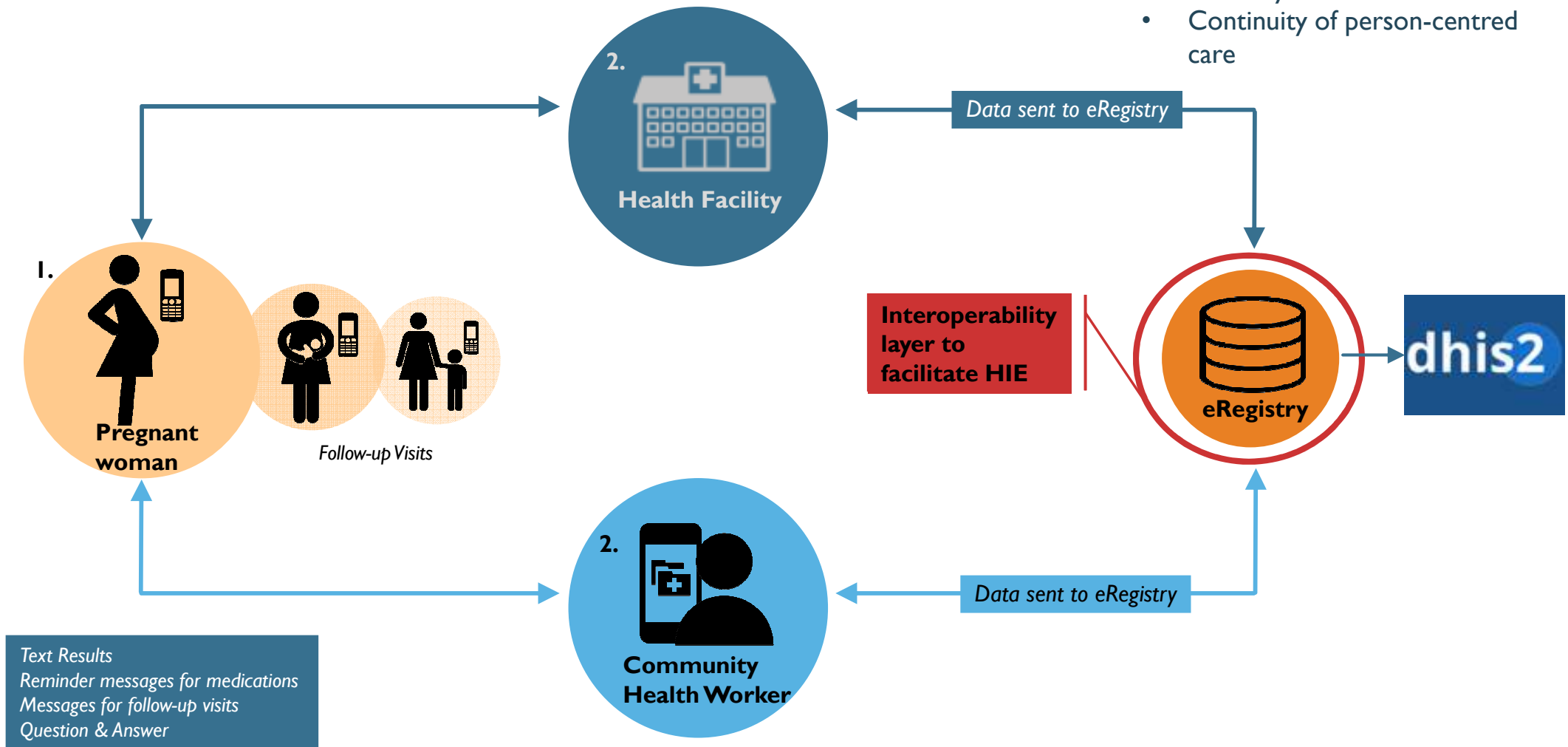
How will this help

1. Provide granular data on clients and treatment/medications provided
2. Provide data on various quality of care measure
3. Track drop-outs
4. Provide data on continuity of care (people centered care)
5. Integrated care (improve referral)
6. Linkages with financial data (RBF/PBF)

Rwanda Health information Exchange
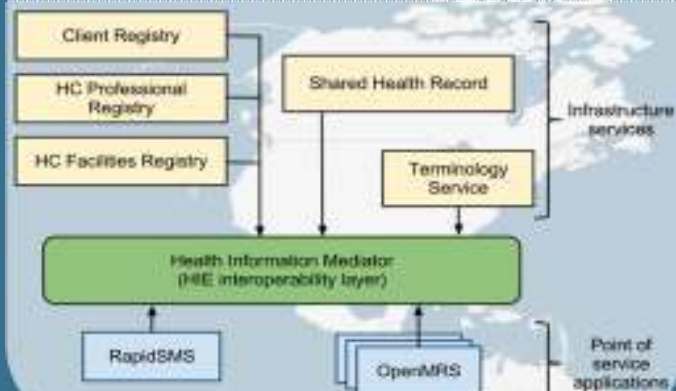
'Ananya' for messaging to CHWs & 'Kilkari' for pregnant families

eRegistry: Pregnant woman

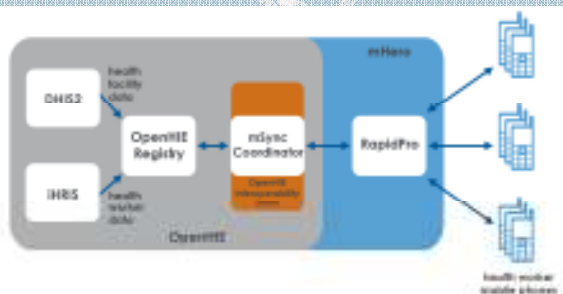Achieving UHC at scale with linked insurance and clinical systems

Bangladesh

Thailand

India

Philippines

Liberia

Rwanda

Tanzania

Zambia

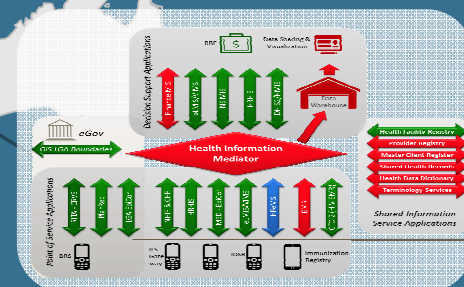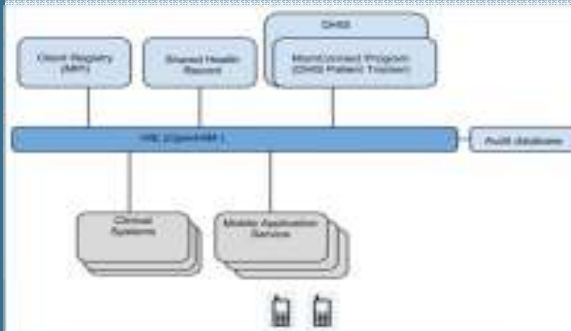South Africa

mHero

South Africa's: MomConnect

Tanzania's HIE *To Be* Conceptual Model

Decision Support Applications

RBF
Data Sharing & Visualization

Finance MIS · eLMIS/VIMS · NS MIS · HRHIS · DHIS2/HMIS · Data Warehouse

eGov
GIS LGA Boundaries

Health Information Mediator

Shared Information Service Applications

Health Facility Registry
Provider Registry
Master Client Register
Shared Health Records
Health Data Dictionary
Terminology Services

Point of Service Applications

RITA - CRVS · PlanRep · LGA EpiCor · NHIF & CHF · HRHIS · MSD - EpiCor · eLMIS/VIMS · iHFeMS · EMR · CTC 2 (HIV EMR)

BRS
ILS Gate way
IDSR
Immunization Registry