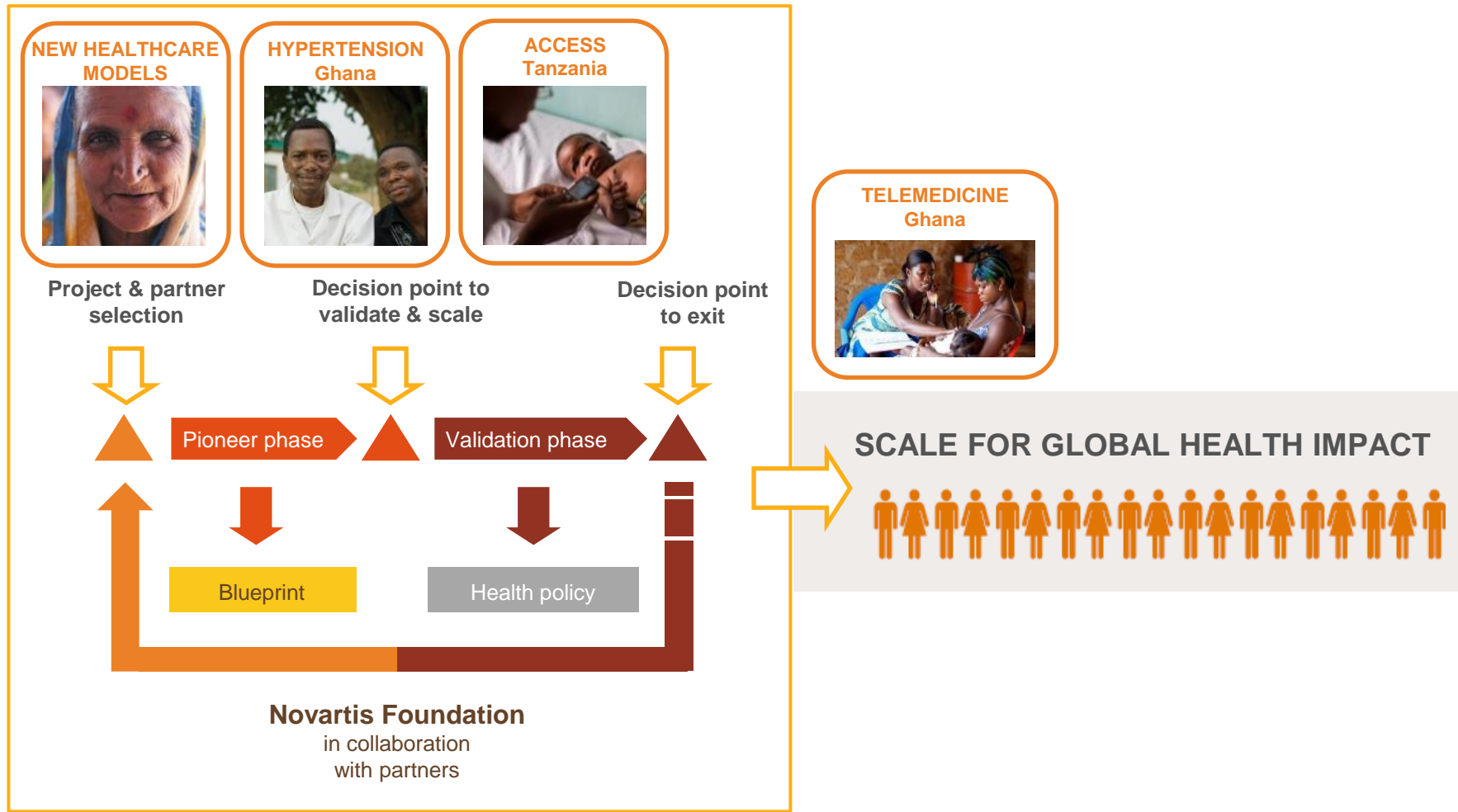
A close-up photograph of a person's hand holding a silver Nokia mobile phone. The phone's screen displays a green interface with text in a non-Latin script. The hand is positioned over a white medical form with a grid and handwritten text. The background shows a blue and yellow patterned fabric.

Using mHealth to address the dual burden of disease: a teleconsultation approach

Blueprints improving health outcomes

Examples at different stages of development and implementation





Economic shift

Population



25.9M

GDP
billion



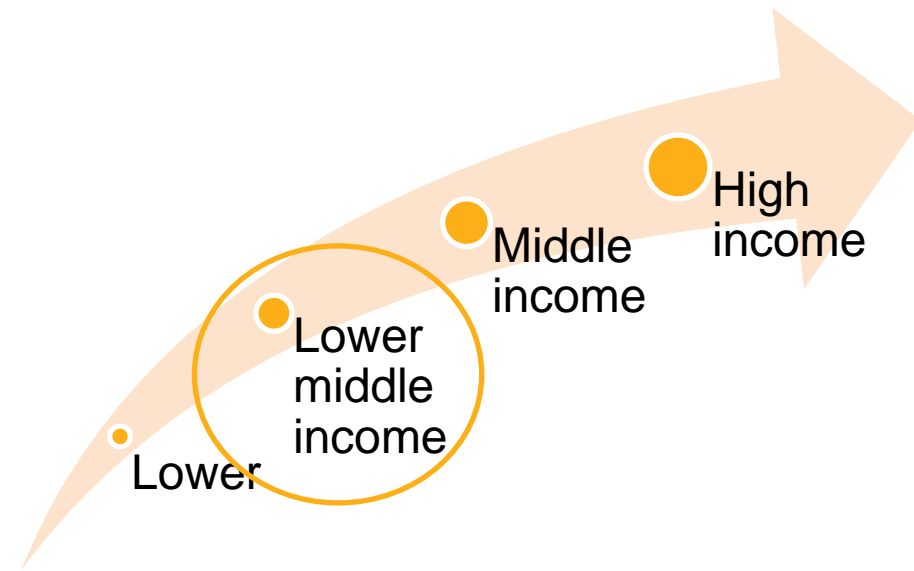
\$47.93

GDP Growth



7.1%





Source: World Bank 2013



Although status shift in 2010, country medians in health are still lower than peers

Unfinished MDG agenda

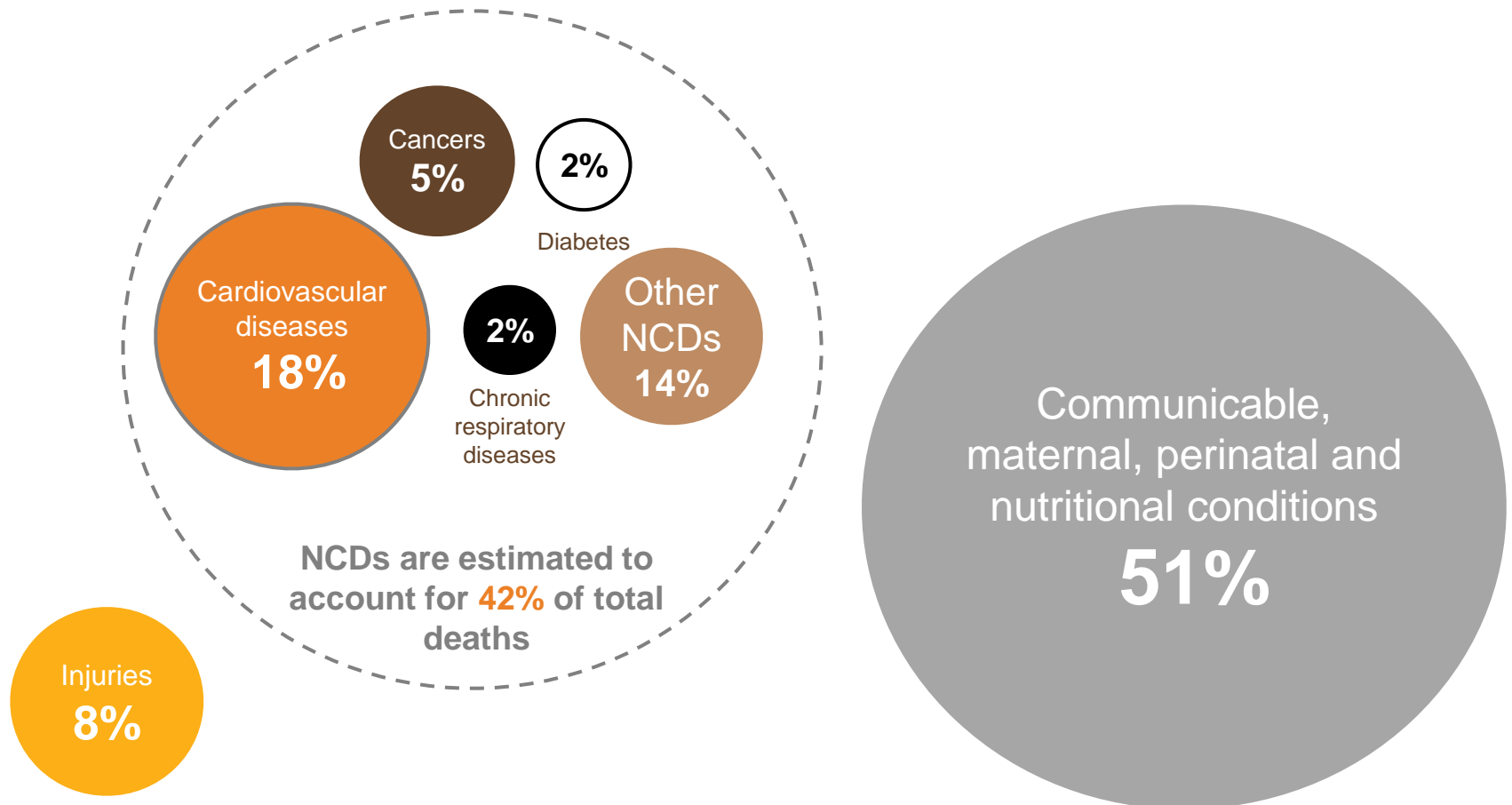
On course to meet MDG 1 and 2 targets on poverty and basic education
Limited progress on MDG4, 5 and 7 – maternal and child health,
sanitation and availability of portable water

FP Modern Methods	34%	
Antenatal care	84.7%	
Supervised deliveries	68.4%	
Maternal mortality	350 per 100,000 live births	

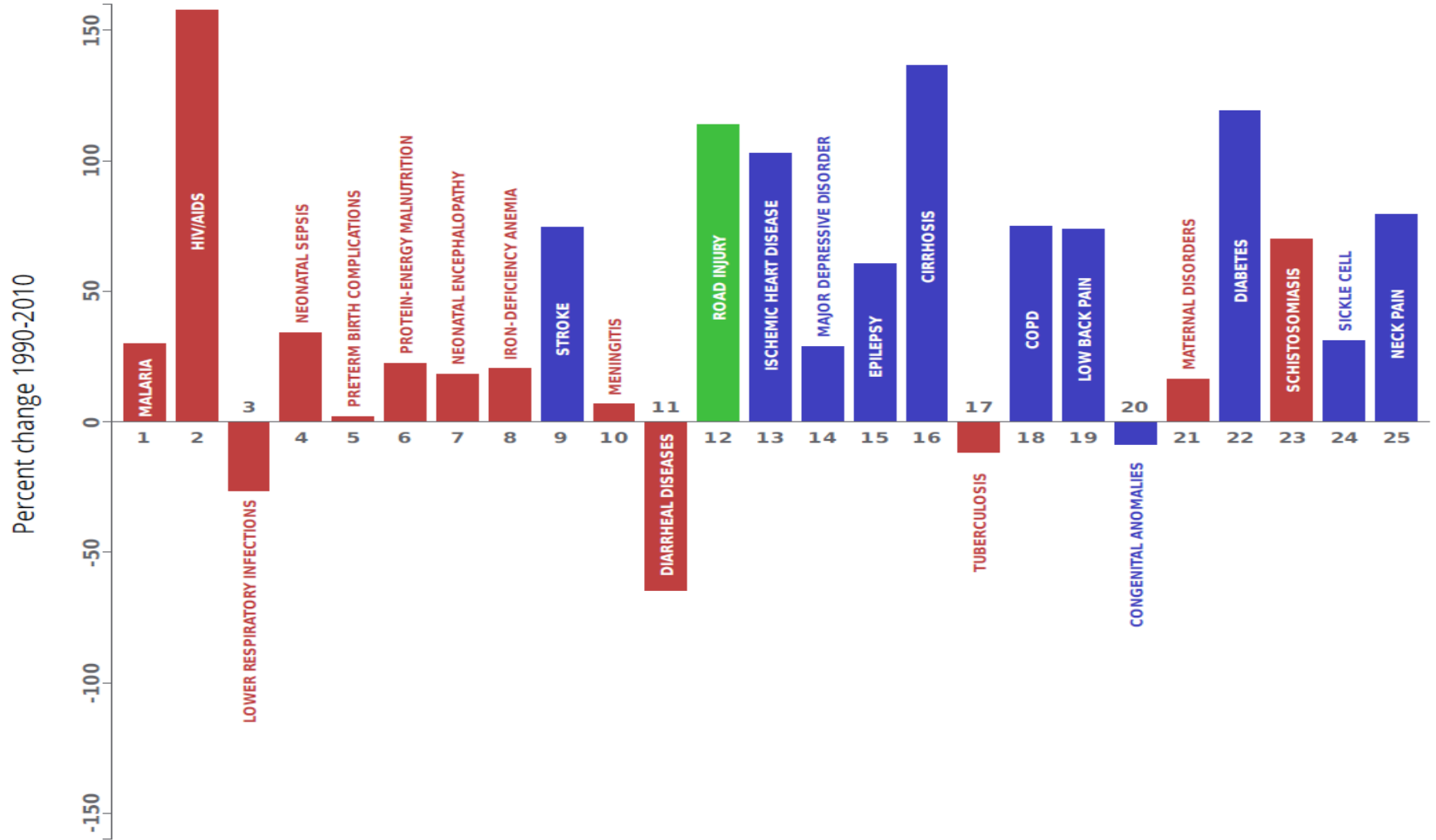
Source: Millennium Development Goals Indicators, 2014

Yet, the MDG-agenda remains unfinished

NCDs account for 42% of total deaths



Leading causes of DALYs and percent change 1990 to 2010 for Ghana



Source: Institute for Metrics and Evaluation, 2013

The problems

- Protracted human resource challenges
- Existing weakness in health infrastructure
- Continuing rural / urban limitations
- Weak referral systems
- Barriers to follow-up

The health policy perspective

- National focus on primary health care:
 - Community based services delivered through Community Health Workers – The CHPS programme
- Improving access to health services by:
 - Expanding the scope of activities of specialists despite scarce HRH
 - Support the establishment of a rapid response system to enhance performance in both clinical and public health care
 - Empowering patients to seek quality care and make right demands on health system
- Improve quality by:
 - Supporting transfer of skills and experience to health workers in the periphery to improve on the job performance

Emerging opportunities

- Increase use of information technology
- Exponential growth of mobile phone use
- Increase computer density
- Availability of powerful ICT equipment



Opportunity for public private partnership (PPP)

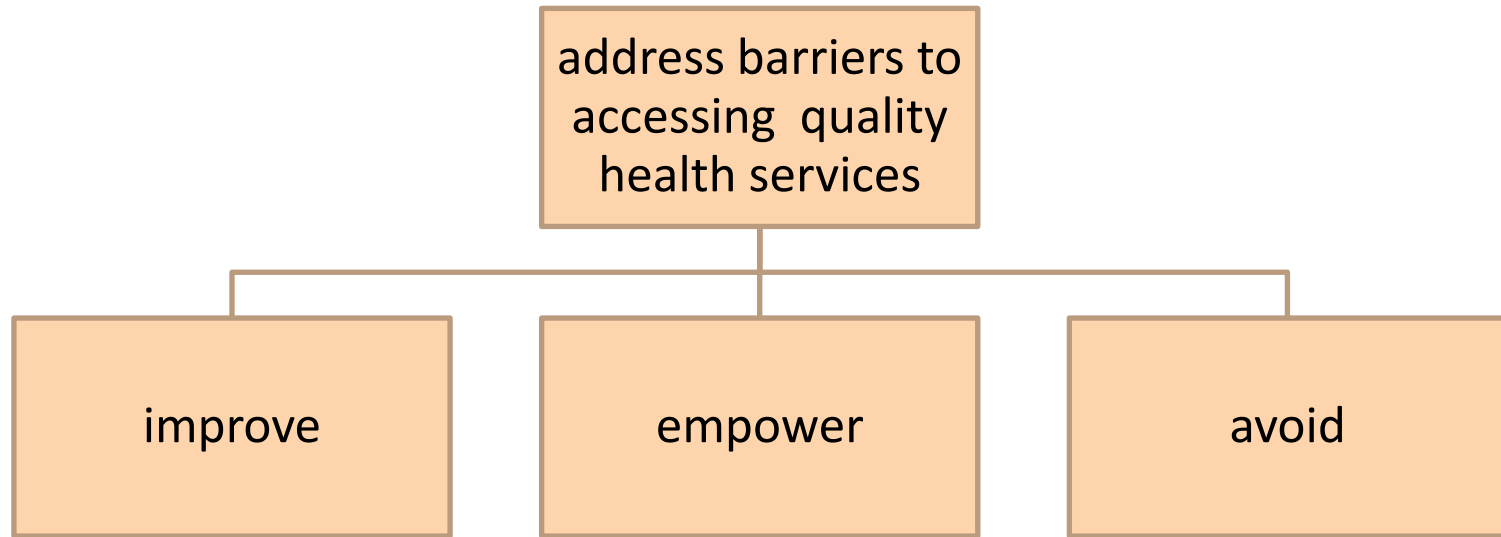
Telemedicine



Why telemedicine?



Why telemedicine?



Diverse partnership

- Ghana Ministry of Health
- Ghana Health Service
- National Health Insurance Agency
- Ghana Ambulance Service
- St. Martin's Hospital
- Millennium Villages Project/ The Earth Institute at Columbia University
- MedGate
- Ericsson/Airtel/Vodafone
- Novartis Foundation

Process flow and pilot achievements



COUGH - ADULT

1. Cough duration?
2. Wheezing? Is it acute? Does it interrupt speech flow?
3. Haemoptysis? (Coughing up blood?)
4. Fever of more than 3 days and associated symptoms (confusion, weight loss)?

Alarm/Danger Symptoms:

-> Usually refer to hospital

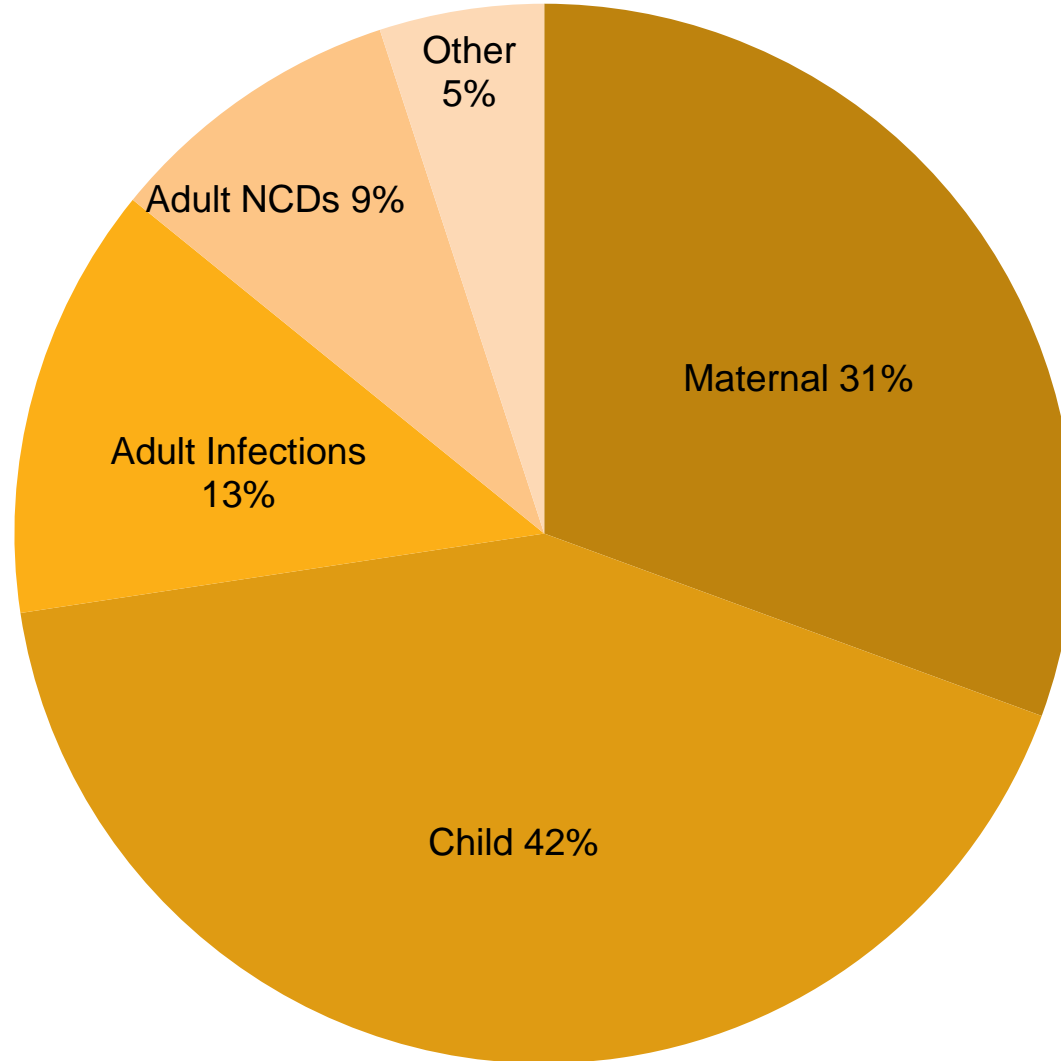
- o Cough of more than 2 weeks
- o Blood Stain/Haemoptysis
- o If fever of more than 3 days in addition to coughing
- o Difficulty in breathing/Shortness of breath
- o Wheezing
- o Weight loss (with cough > 2 weeks)
- o Confusion

History/Questions

- o Sudden onset of cough?
- o What is the time of day of cough?
- o Productive? (Does any substance come up with cough?)
 - Nature of sputum (blood stain, brownish, yellowish, greenish, colourless,)
- o Is fever present? What is the duration of the fever?
- o Chest pain?
- o Difficulty in breathing/Shortness of breath?
- o Orthopnoea? Is the cough/shortness of breath worse when lying down?
- o Any signs of allergy? (Runny nose, itchy throat, sneezing, itchy eyes, rash)
- o Feet swelling? Edema?

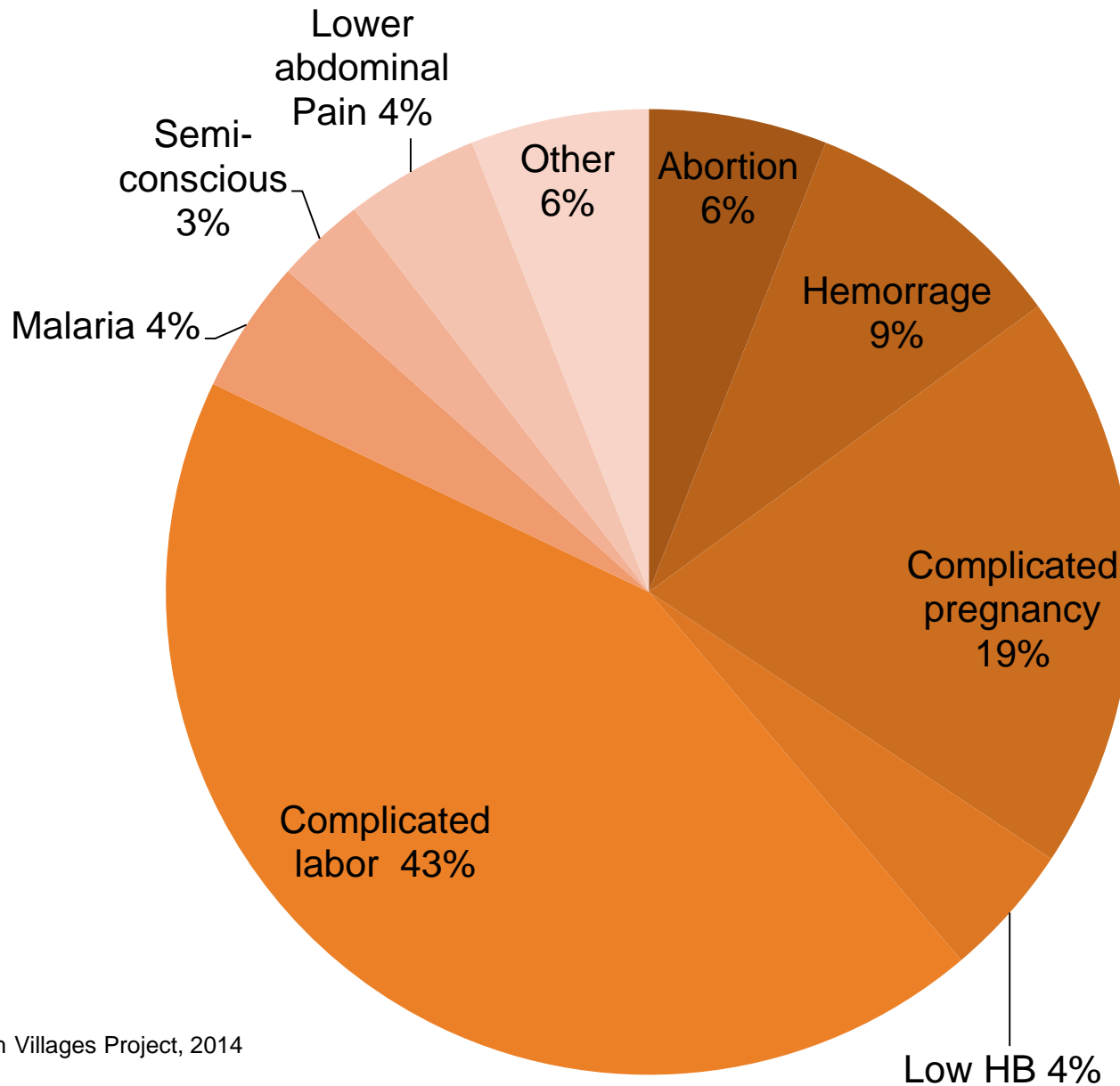


Telemedicine case reportings: 2013



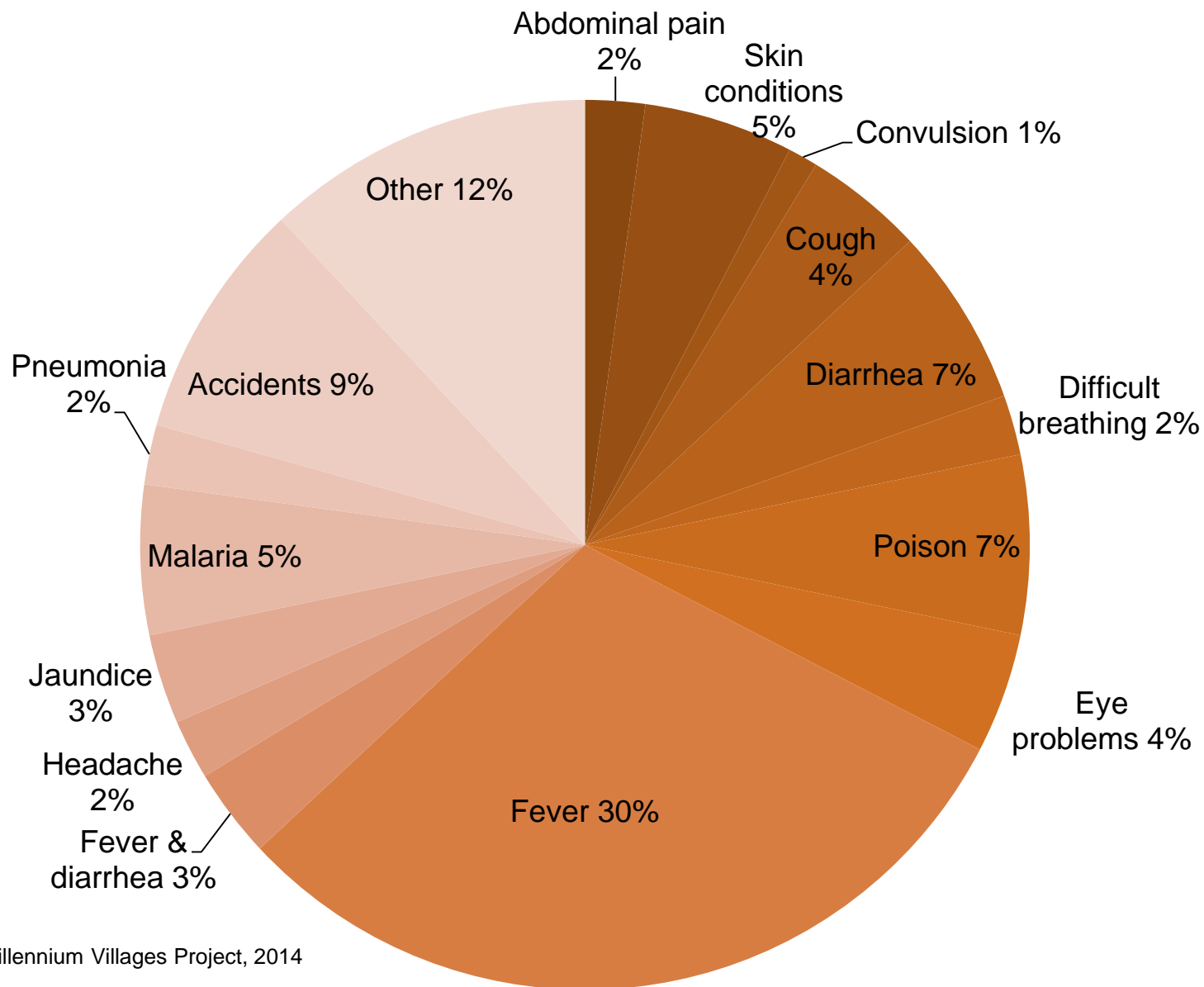
Source: Millennium Villages Project, 2014

Maternal case reportings: 2013



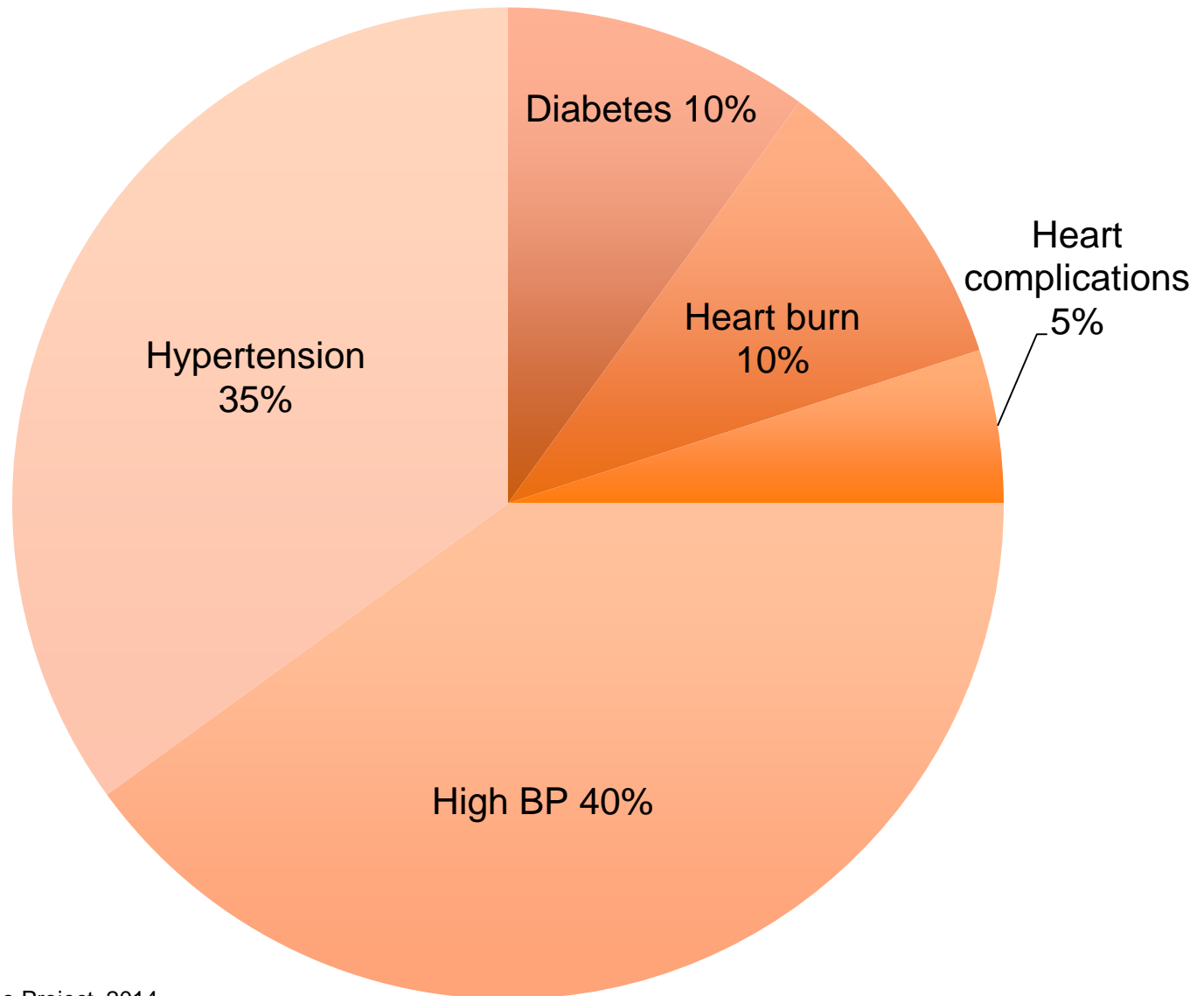
Source: Millennium Villages Project, 2014

Child case reportings: 2013



Source: Millennium Villages Project, 2014

Adult NCDs case reportings: 2013

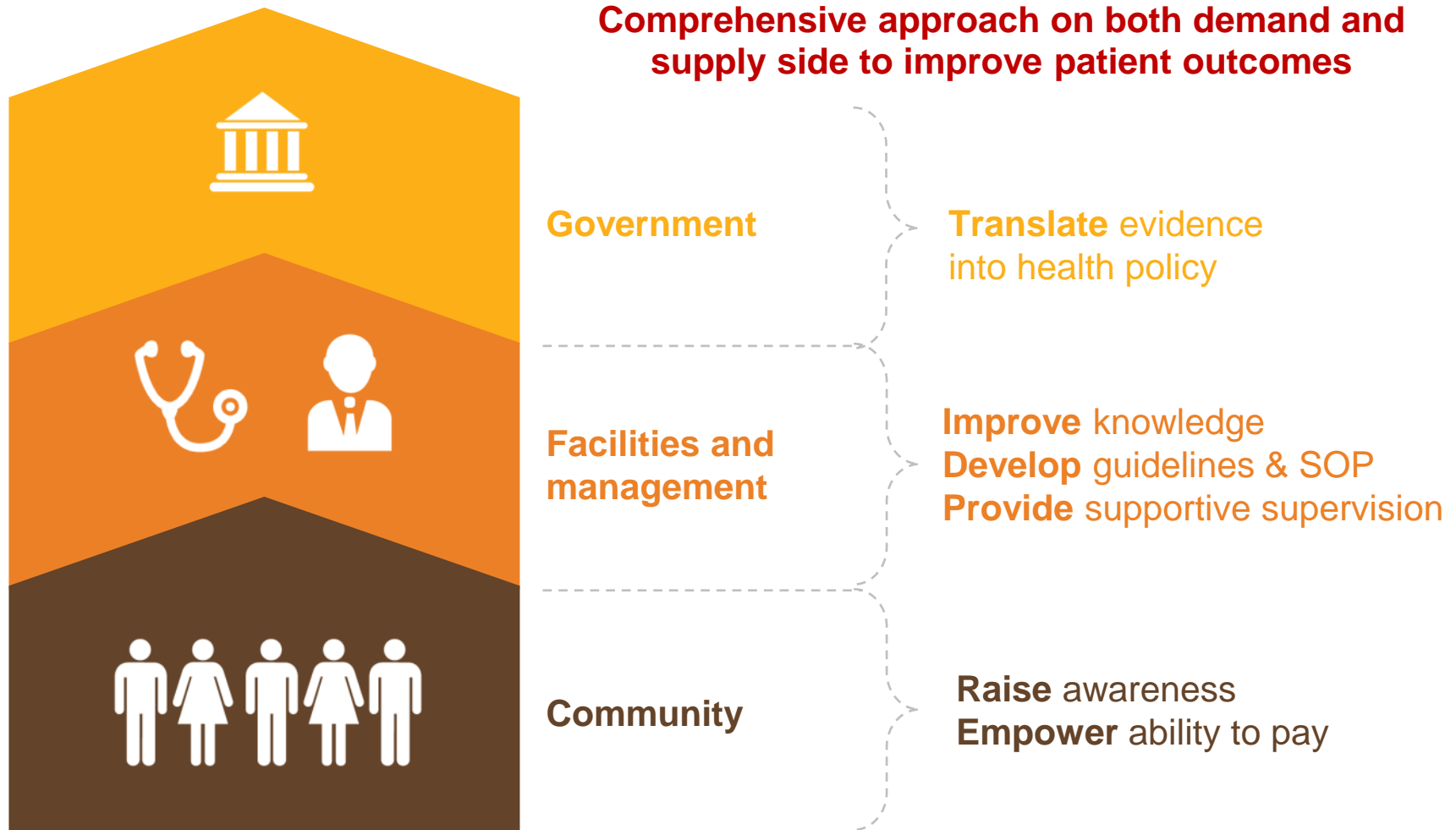


Source: Millennium Villages Project, 2014

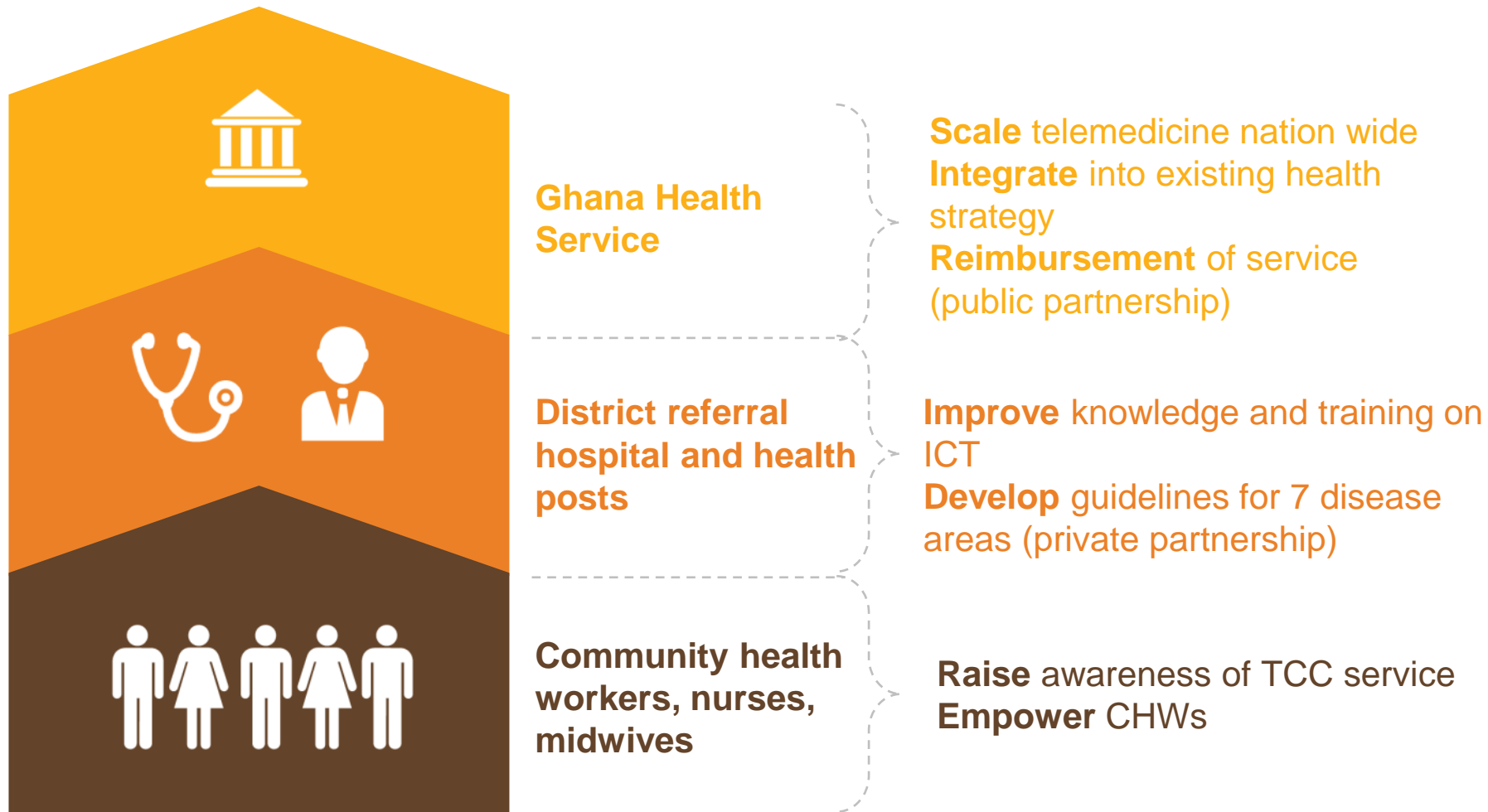
How do we address these barriers?

The classic way – experience from ACCESS Tanzania

Comprehensive approach on both demand and supply side to improve patient outcomes



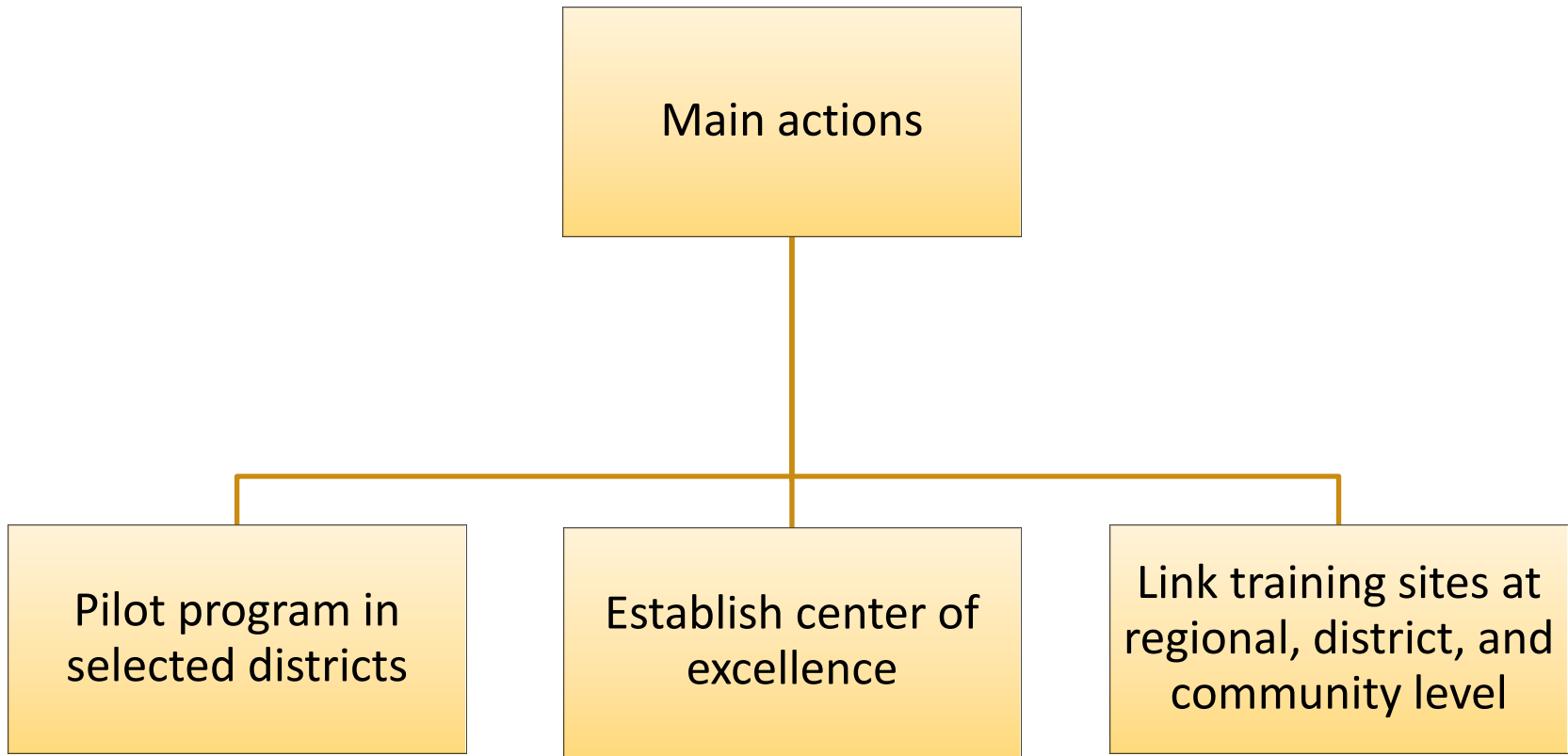
Telemedicine - PPP





What next?

Sustaining telemedicine in Ghana's eHealth Strategy



1. Develop a roadmap for national scale-up
2. Determine financial sustainability plan for NHIS reimbursement and MOH investment



Thank You