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# Workshop

## Understanding why immunization programs work: approaches to evaluation and measurement

Anne LaFond, JSI

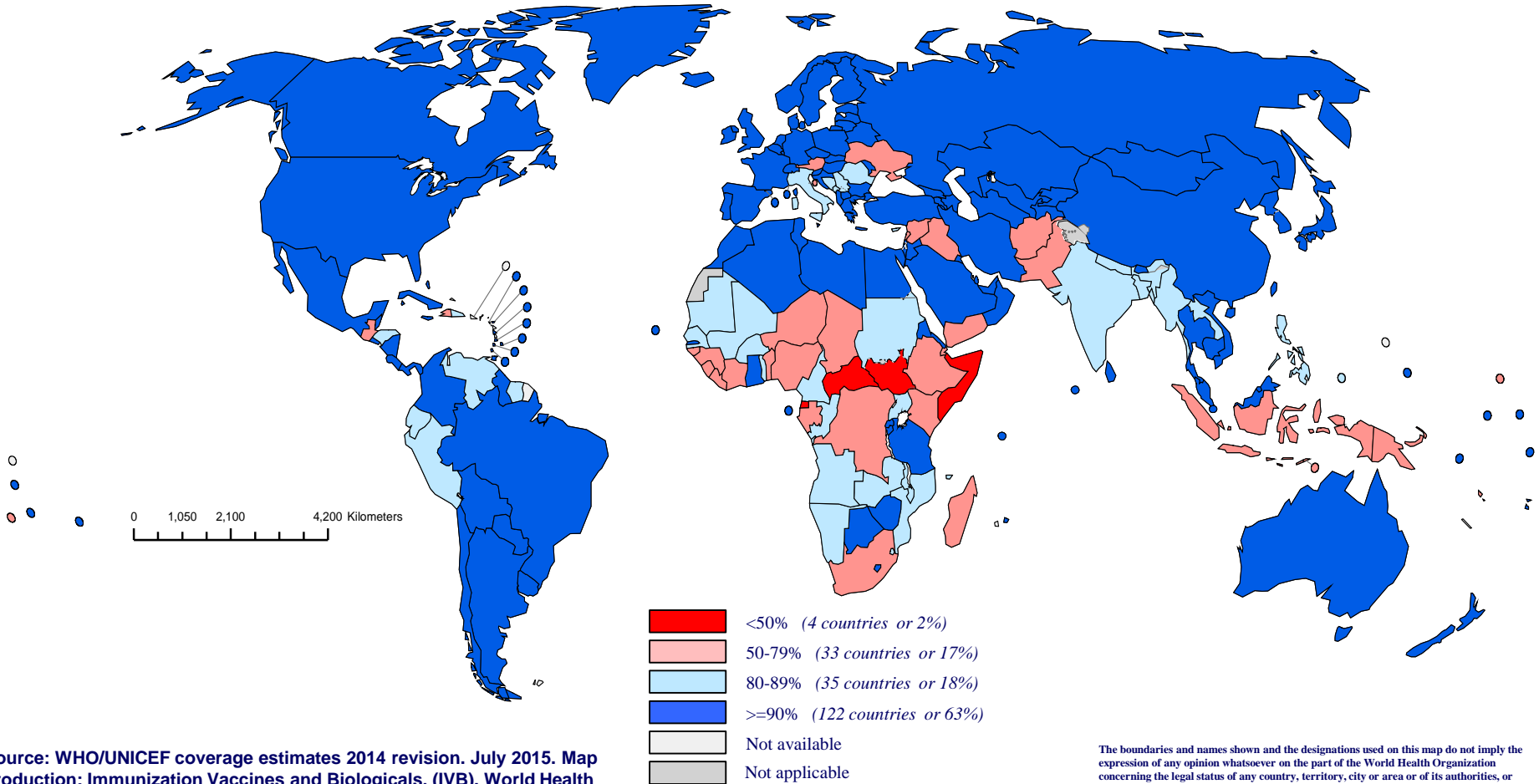
Cath Jackson, Valid Research

September 30, 2015

Foundation Merieux, Annecy



# Immunization coverage with 1<sup>st</sup> dose of measles containing vaccines in infants, 2014

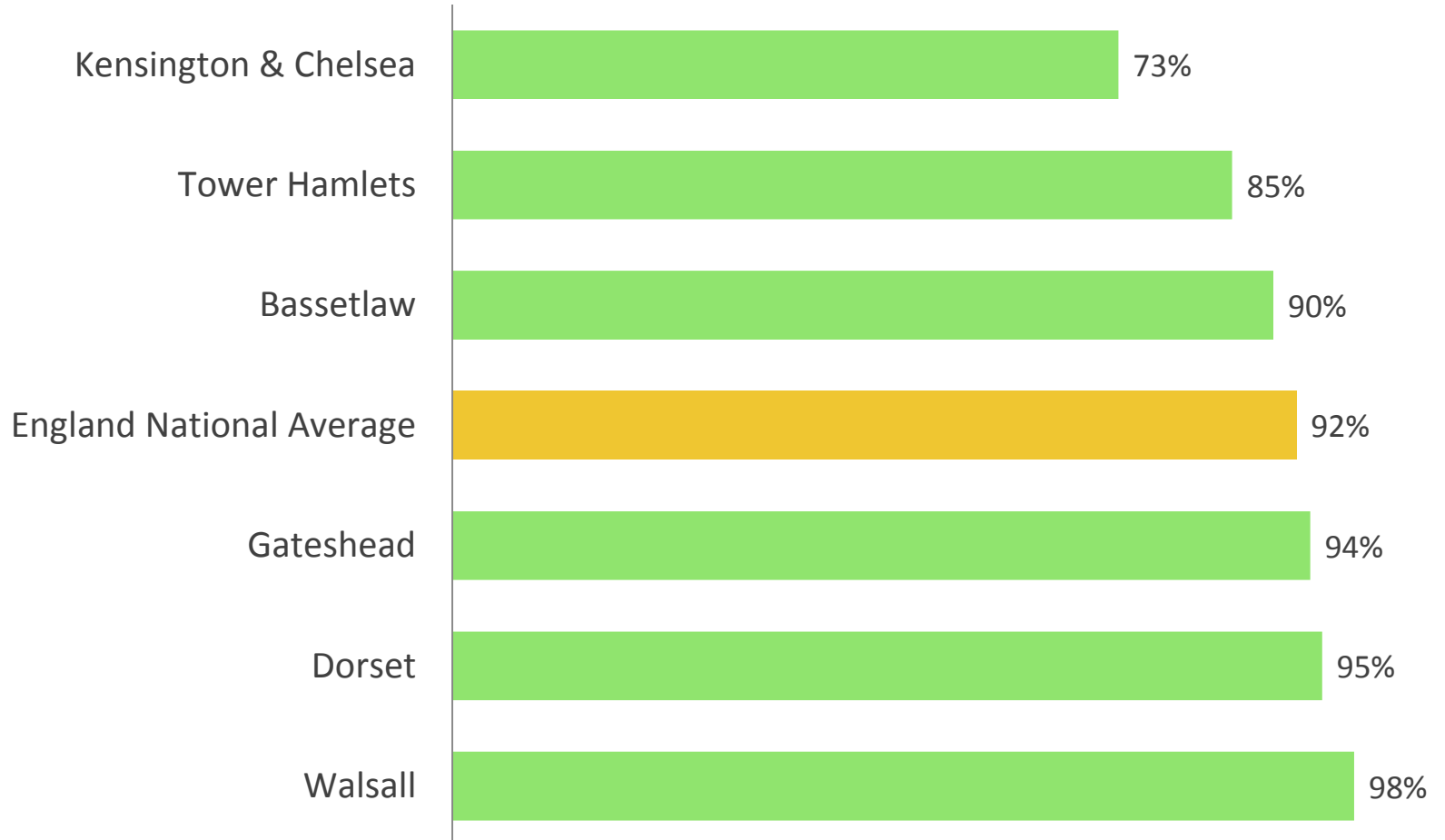


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# England

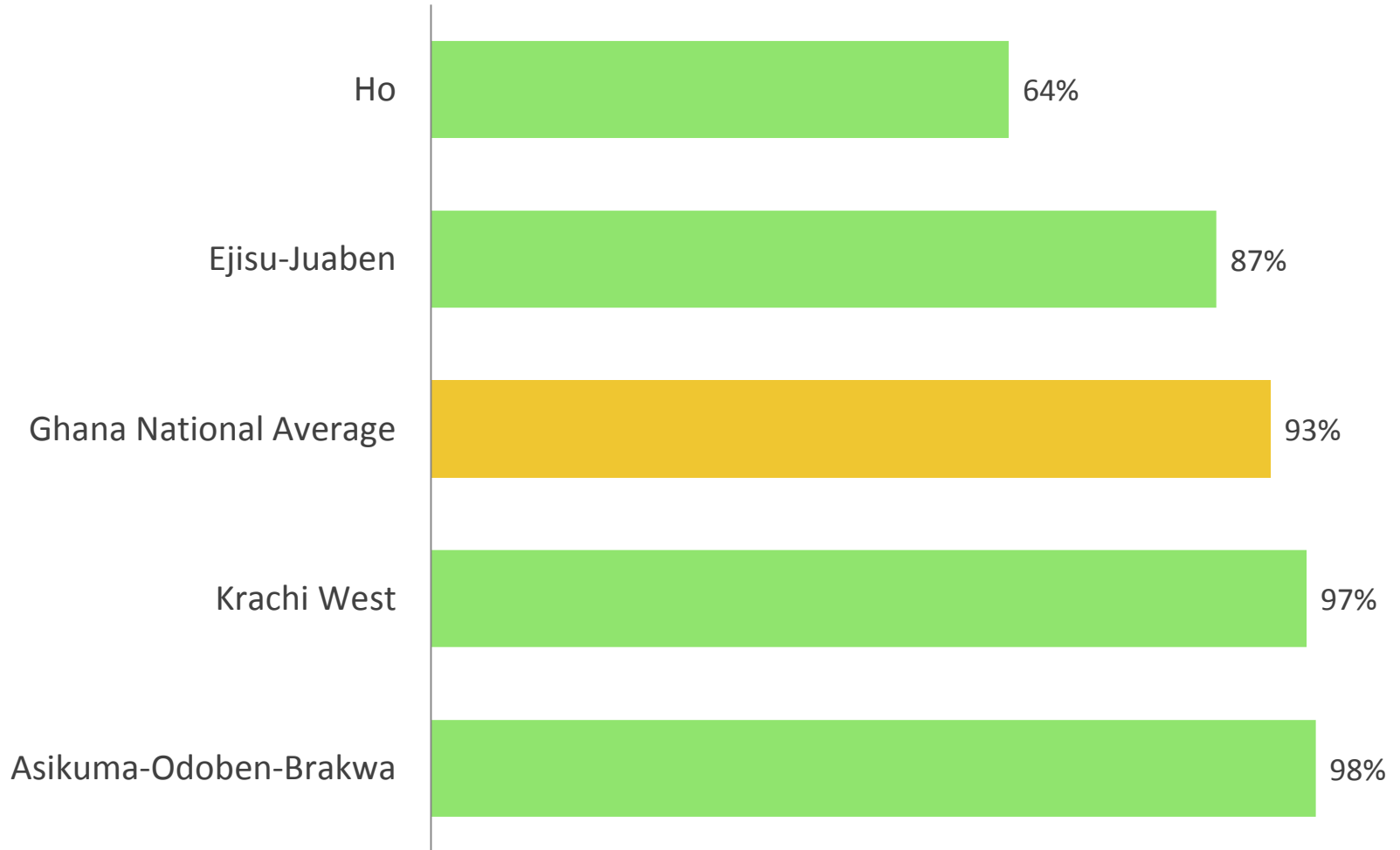
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## 24m MMR1 coverage, selected PCTs (2014 Q4)



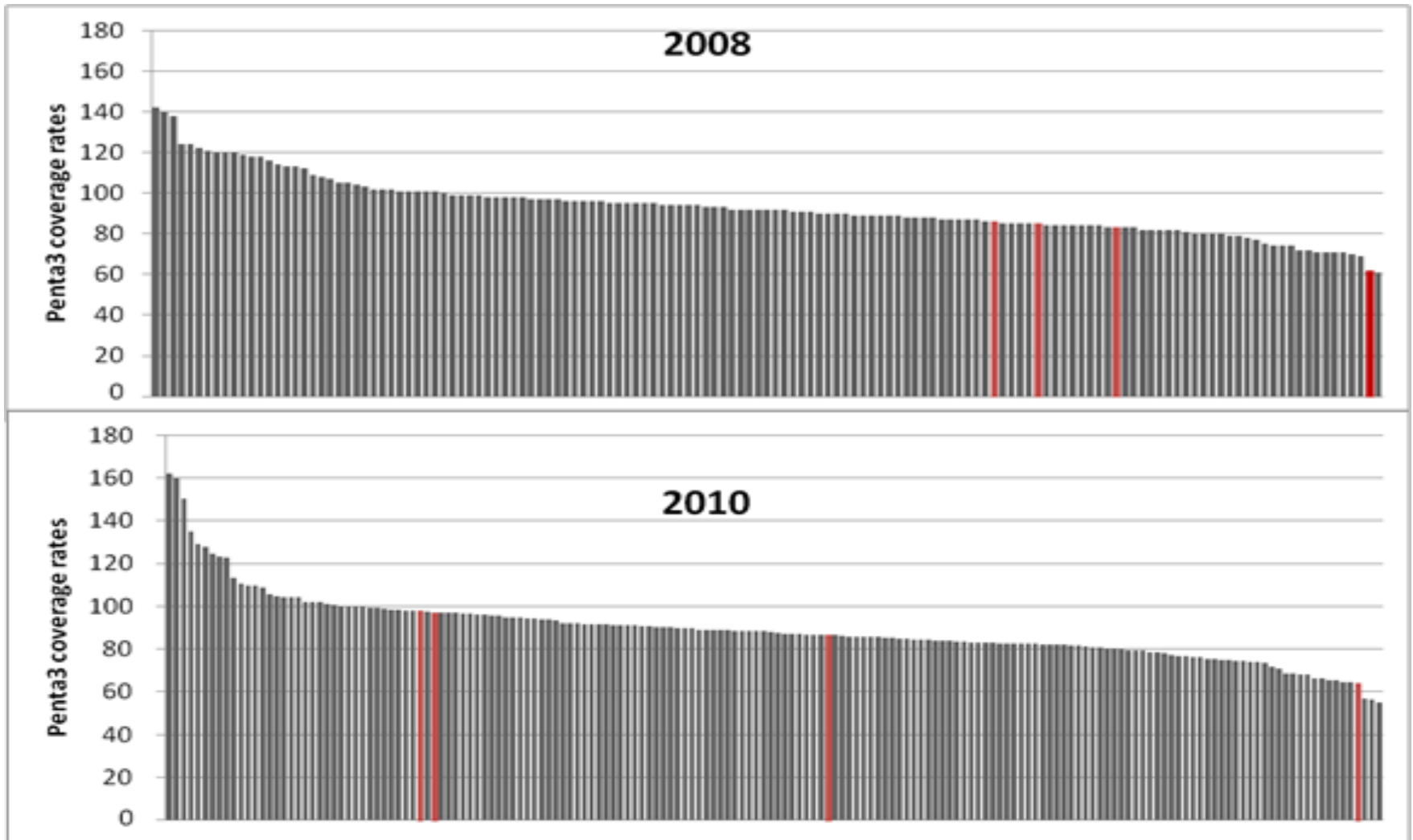
# Ghana

## Penta3 Coverage by District (2010)



# Ghana

## Penta3 Coverage for All Districts (2008 and 2010)



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## Look beneath the surface

- 
- Understand why uptake is low in some areas and high in others?
  - Understand what interventions are effective in increasing uptake and how they work?
  - Use appropriate methods to understand the interplay between supply and demand. Use mixed methods to understand effectiveness

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# Workshop

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- Objectives
    - Map the pathways to immunization uptake
    - Outline key research/evaluation questions related to immunization uptake
    - Consider different approaches and tools for designing and evaluating immunization programs
    - Discuss process and outcome measures related to immunization uptake

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# Immunization Program

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- A single or comprehensive set of interventions or activities focused on improving or sustaining immunization coverage levels at national or subnational level



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## Workshop steps

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- Two approaches to researching/evaluating immunization programs and understanding drivers of performance, including uptake (20 minutes)
  - Small group discussion (30 minutes)
  - Large group present and discuss (30 minutes)
  - Report to plenary (after lunch)

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## Process evaluations of complex interventions

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Outcome evaluations can identify (in)effective interventions but leave unanswered questions....

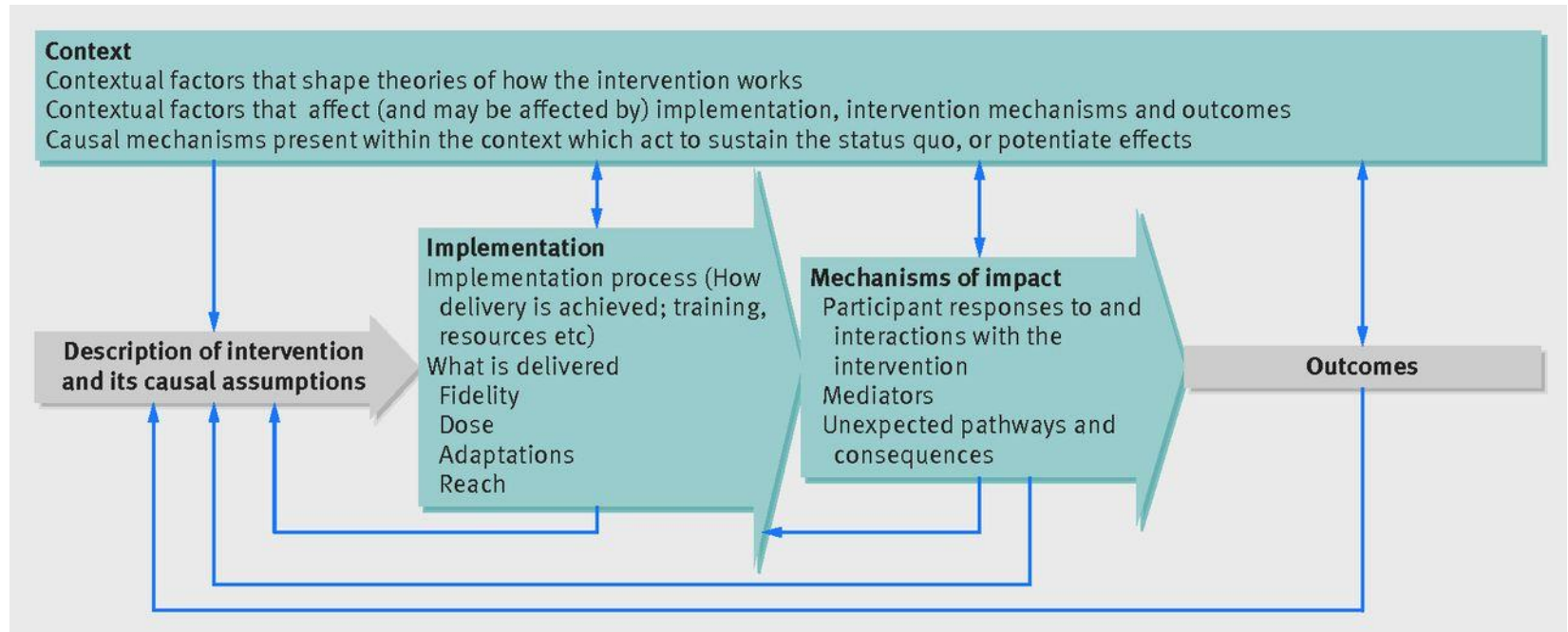
- If effective in one context, will it produce the same outcomes in new contexts?
- If ineffective, is this due to the intervention itself or poor implementation? Might it benefit some?

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## What is a process evaluation?

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- A study which aims to understand the functioning of an intervention, by examining **implementation, mechanisms of impact** and **contextual factors**
  - Is complementary to, not a substitute for, high quality outcomes evaluations

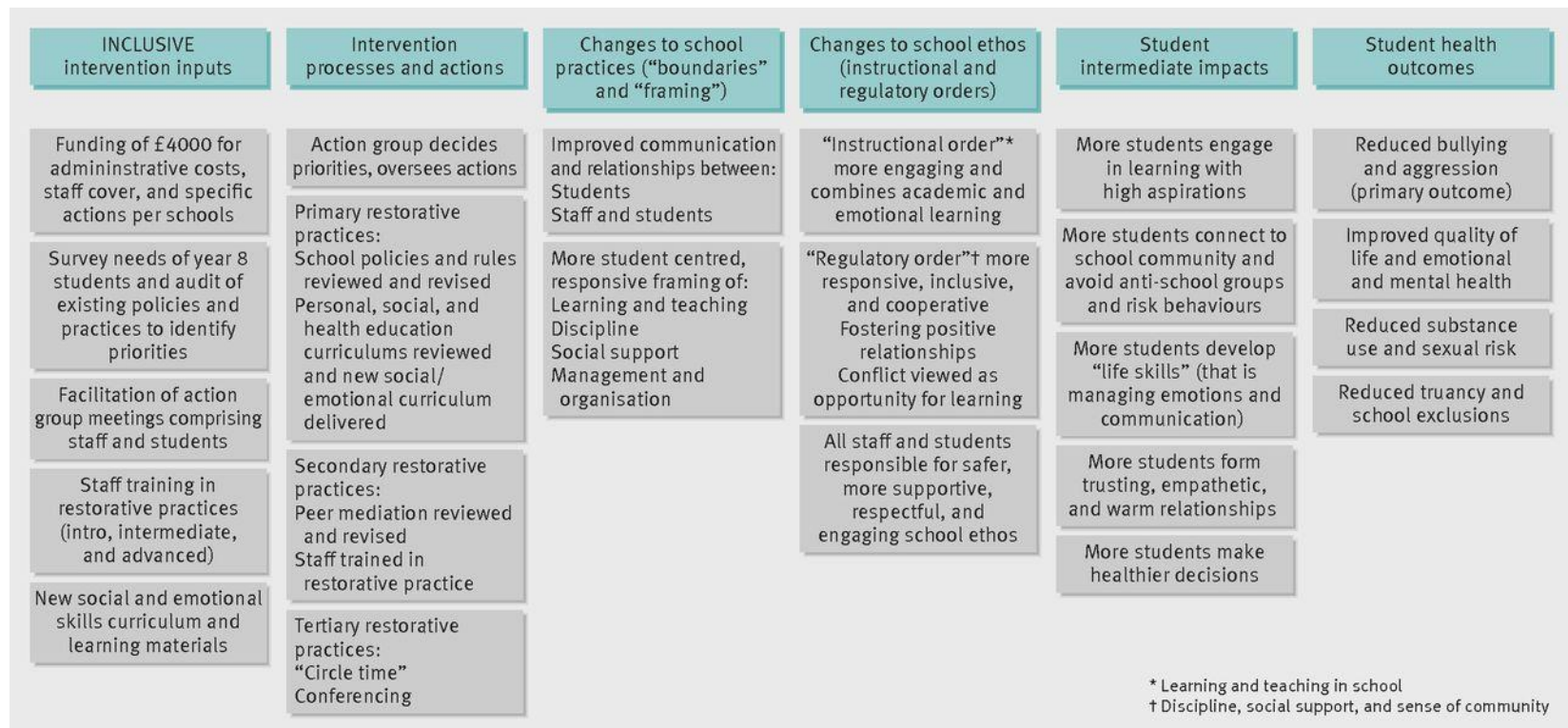
# Key functions of process evaluation and relations among them



Graham F Moore et al. BMJ 2015;350:bmj.h1258



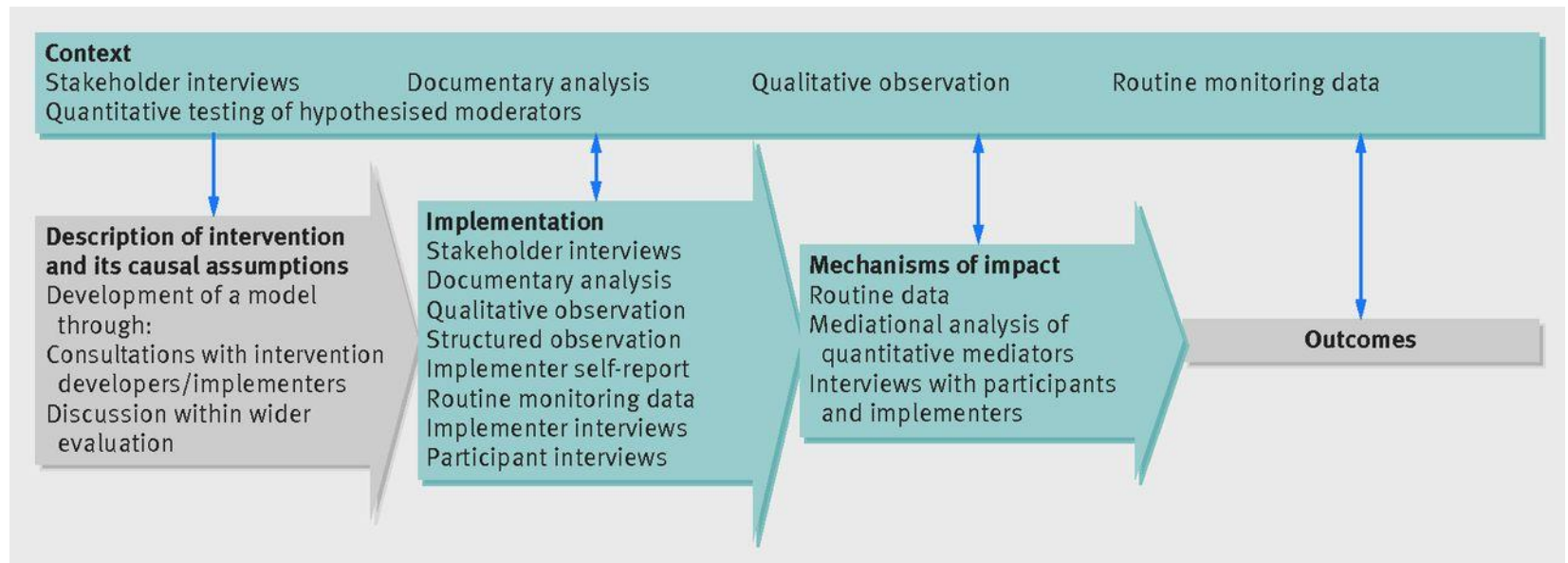
**Fig 2 Logic model for the INCLUSIVE intervention to reduce violence and aggression in schools<sup>24</sup>.**



Graham F Moore et al. *BMJ* 2015;350:bmj.h1258



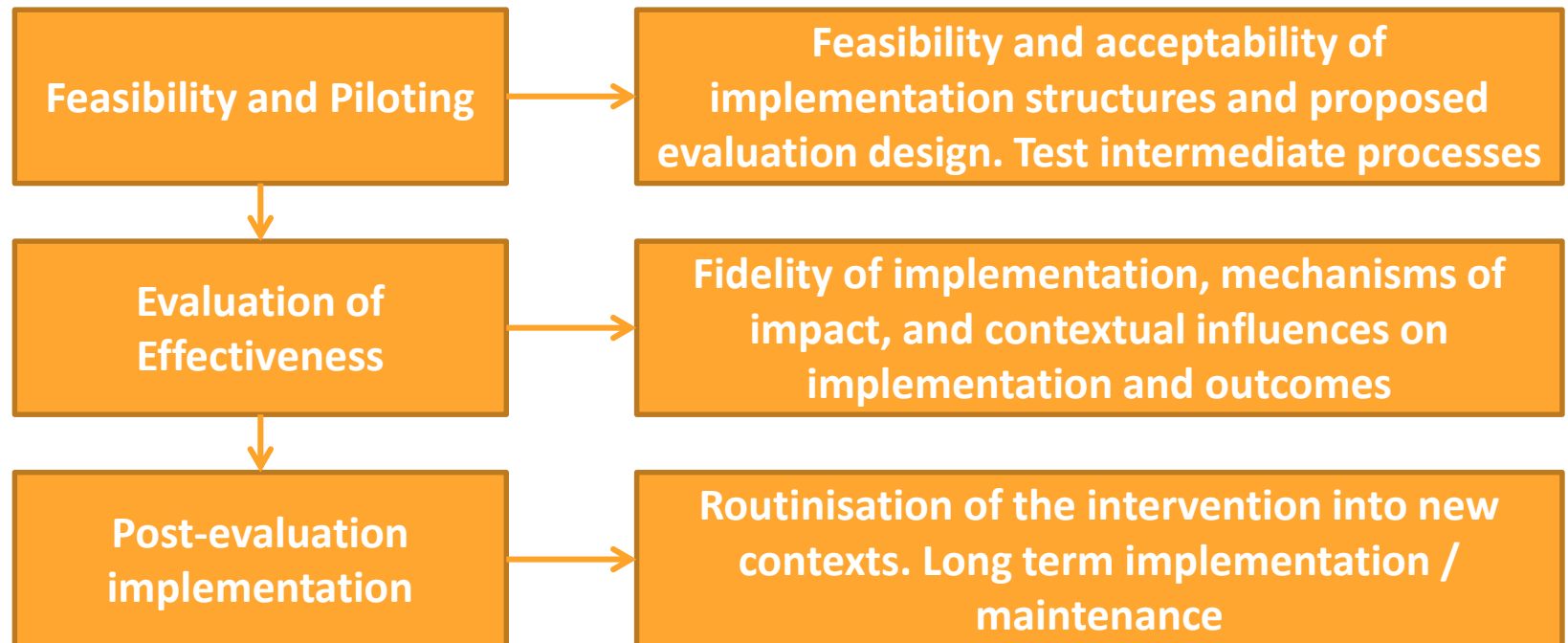
# Commonly used data collection and analysis methods for process evaluation



Graham F Moore et al. *BMJ* 2015;350:bmj.h1258



# When should you do a process evaluation?



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## Online MMR decision aid

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### Implementation

- How intervention delivery is achieved - record costs of developing/hosting DA
- What is delivered – track how parents use the DA
- Fidelity of intervention delivery – *not in this project*



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## Online MMR decision aid

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### Mechanisms of impact

- Experiences, (dis)benefits
- All parents complete a short acceptability questionnaire, semi-structured interviews with purposively selected parents (high/low decisional conflict)
- Quantitative data on decisional conflict, attitudes, social norms explored as mediator

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# Online MMR decision aid

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## Context

- How primary care environment and other factors seen as influencing implementation and outcomes of DA
- All GPs, nurses complete short questionnaire
- Semi-structured interviews with purposively selected GPs, nurses (enthusiastic/not enthusiastic centres)

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Mixed  
method,  
case studies  
(Assets-  
based)

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- Drivers of immunization coverage improvement at district level in Sub-saharan Africa

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## Literature review

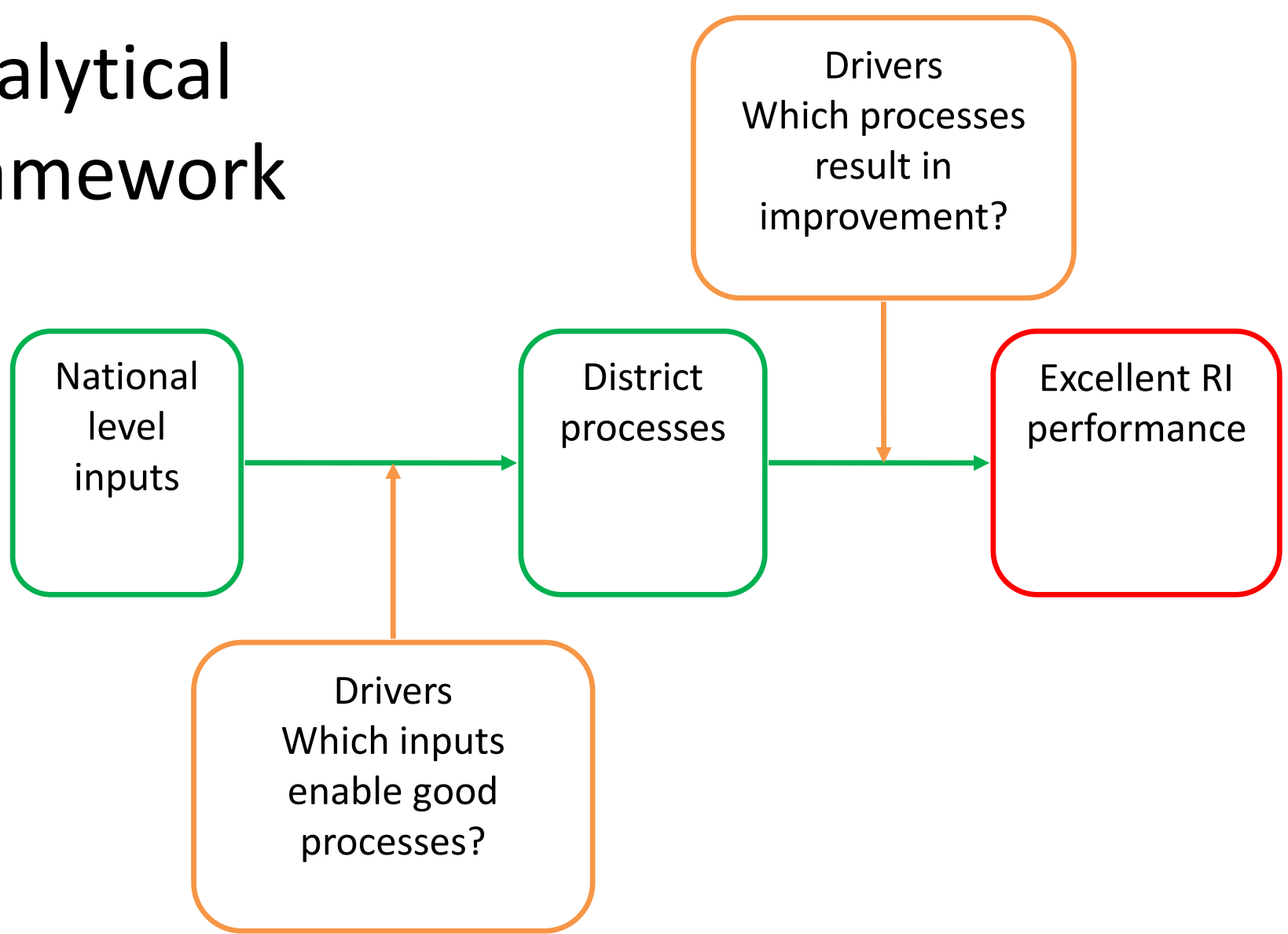
- 
- Focuses mostly on barriers, gaps and obstacles.
  - We generally do not ask “what works?” rather we focus on “what does not work?”
  - New way to think about investment – “what works and why in what context?”
  - Need: in-depth, context-based investigation

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# Objectives

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- Conduct in-depth case studies in three countries (Ethiopia, Cameroon, and Ghana) to explore and describe the underlying factors of immunization performance improvement in Africa.
  - Define the pathways by which specific performance drivers improved routine immunization system performance (DPT3/Penta3 coverage) by investigating the experience of 12 districts

# Analytical Framework

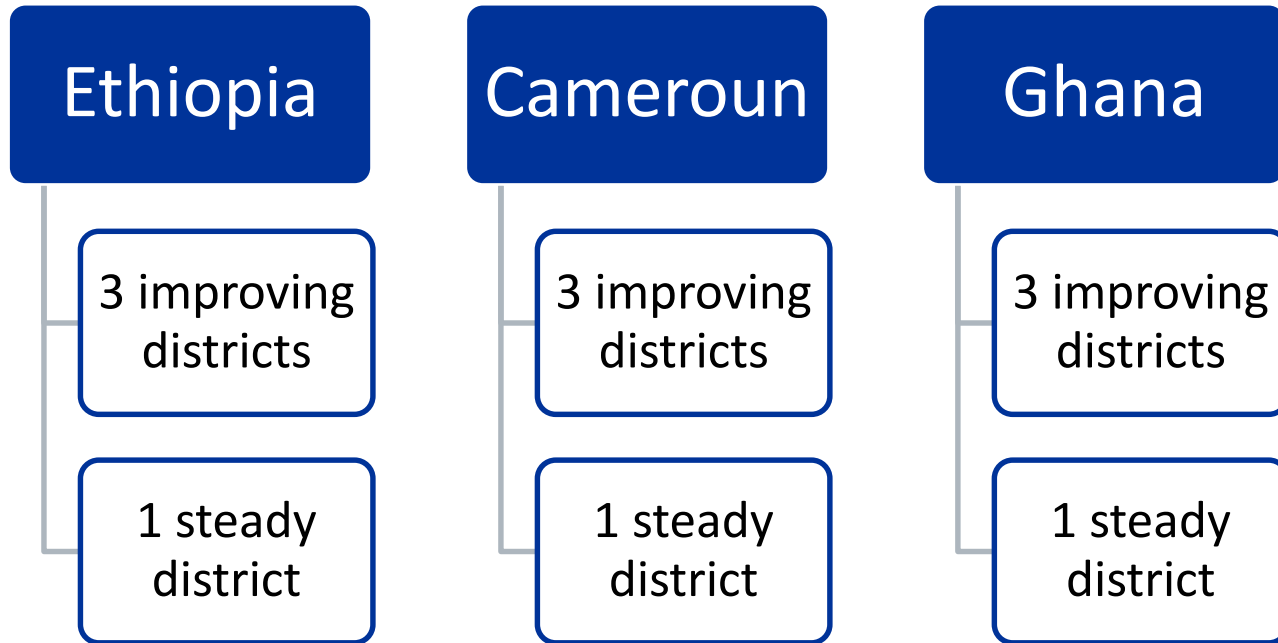


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# Methods

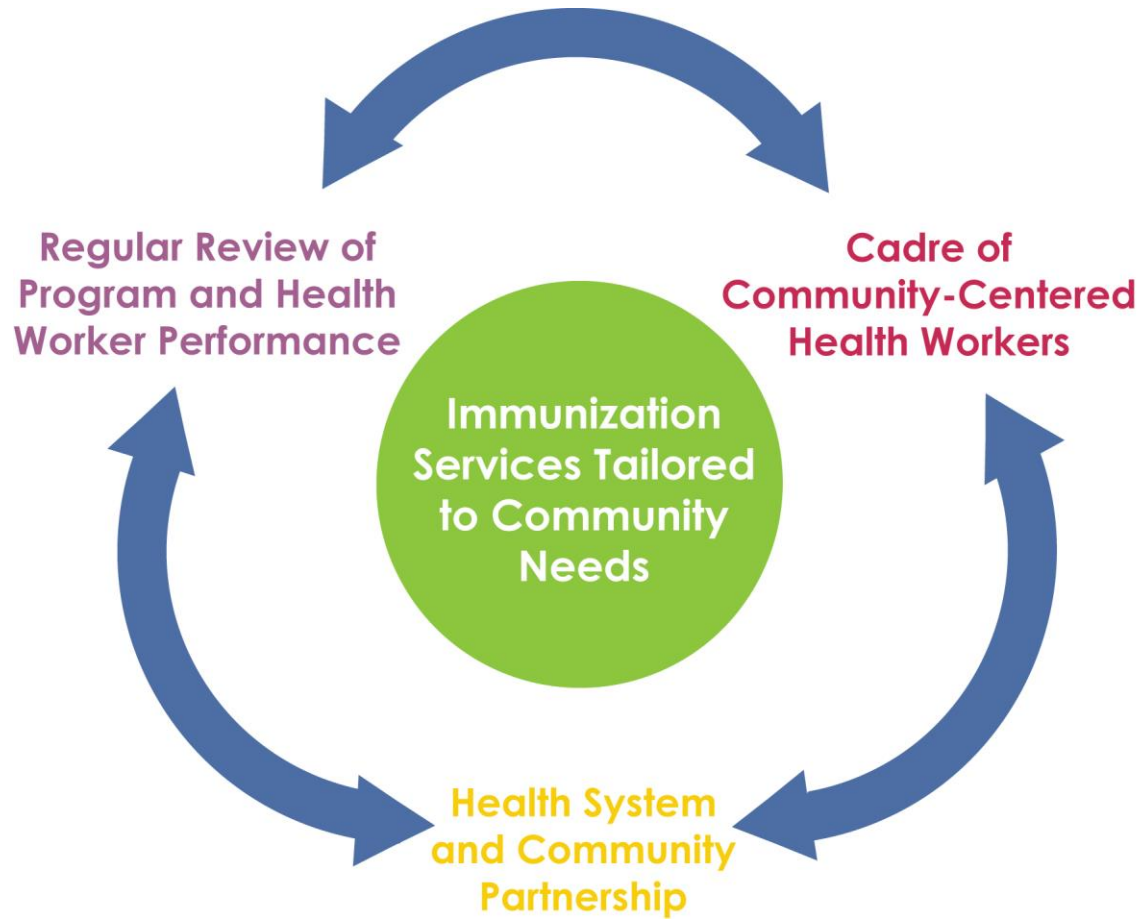
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- Mixed-method case studies
  - Unit of analysis: health service district as defined in Ethiopia, Cameroon and Cameroon
  - Primary data collection mainly qualitative: immersion in the district. Driver identification and exploration using open ended and semi-structured interviews, group discussion, and observation
  - Quantitative and qualitative data collection to understand immunization system capacity (RI situation analysis) and performance
  - Iterative: focus broadened, narrowed, shifted as saturation and convergence reached, and as new relationships and factors emerged.
  - Systematic review of data for structured analysis on country level and for synthesis of country findings

# Districts

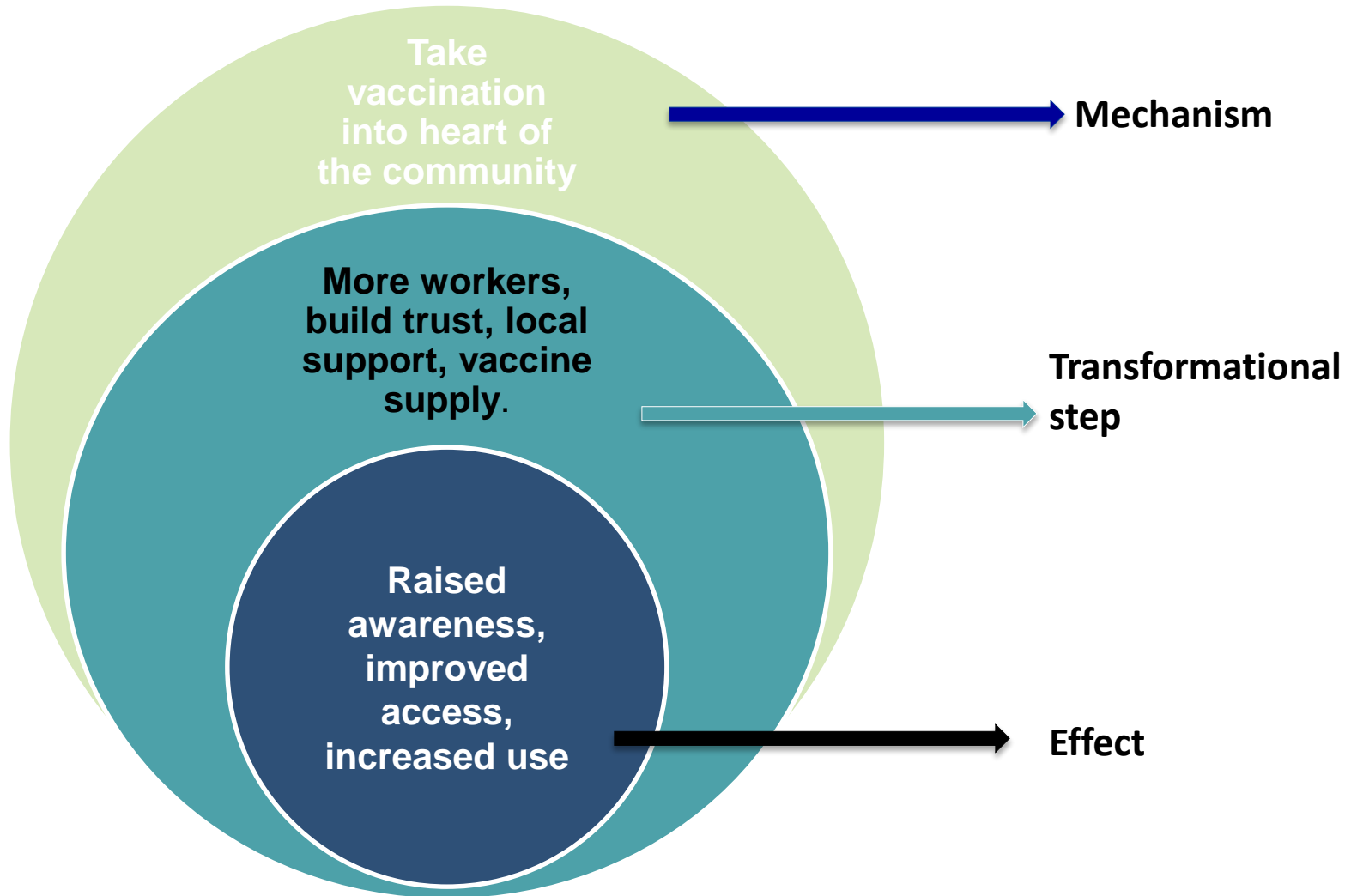




# Four Direct Performance Drivers



# Cadre of Community-centered Health Workers



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# Small group work

- 
- **Choose a facilitator, note taker and rapporteur**
  - Discuss key drivers of immunization uptake (based on presentations at this symposium)
  - Define key questions related to immunization uptake that could be addressed using each research/evaluation approach
  - Consider how each approach could be used to answer these questions?
  - Discuss the pros and cons of each research/evaluation approach for improving our understanding of immunization uptake
  - Provide guidance for program designers and evaluators for improving understanding of immunization uptake including process and outcome measures: 3 messages.
  - **Prepare short summary of your discussion**

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THANK  
YOU!

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valid research

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Extra slides

# Techniques for Data Collection and Analysis

Validity and generalizability through specific data collection and analysis processes that reduce interviewer bias and subjective interpretations

- Interviewing technique and note taking
- Verifying using more than one source source or method
- Confirming the chronology of events to be consistent with causality
- Ensuring the logical plausibility of relationships
- Using a steady district as a control

Multiple means of testing for drivers

<b>Reliability</b>	<b>Driver mentioned frequently and considered important</b>
<b>Internal validity</b>	<b>Opinions about drivers and their cause and effect are consistent</b>
<b>Triangulation</b>	<b>Driver emerged through different data methods and sources</b>
<b>Chronology</b>	<b>Driver emerged prior to changes in performance or outcomes</b>
<b>External validity</b>	<b>Stakeholders and subject experts consider the drivers' effect to be plausible</b>
<b>Internal validity</b>	<b>Driver present in improving districts and absent or weak in steady district</b>