



Evidence syntheses on pro-equity interventions to improve immunization coverage for zero-dose children and missed communities

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Agenda

1. Introduction

2. Evidence Map Presentation

- Background

- Methods

- Results (Evidence Map)

- Conclusions

3. Q&A



Background



Background

- Gavi's 5.0 strategic approach centers on equity
- Reaching zero-dose children and missed communities requires:
 - Investment in tailored, effective, and acceptable/feasible pro-equity interventions
 - Operational shifts (e.g., developing differentiated approaches, testing and scaling up innovative methods)
- Evidence synthesis is needed to:
 - Understand which strategies are effective
 - Identify implementation considerations
 - Assess gaps in knowledge and understanding



Objective

To synthesize existing evidence on the effectiveness and implementation considerations for selected interventions that could help achieve more equitable immunization coverage, specifically helping to reach zero-dose children and missed communities.

Results of syntheses presented through evidence briefs and an online evidence map

IRMMA Framework and Intervention Topics

IDENTIFY

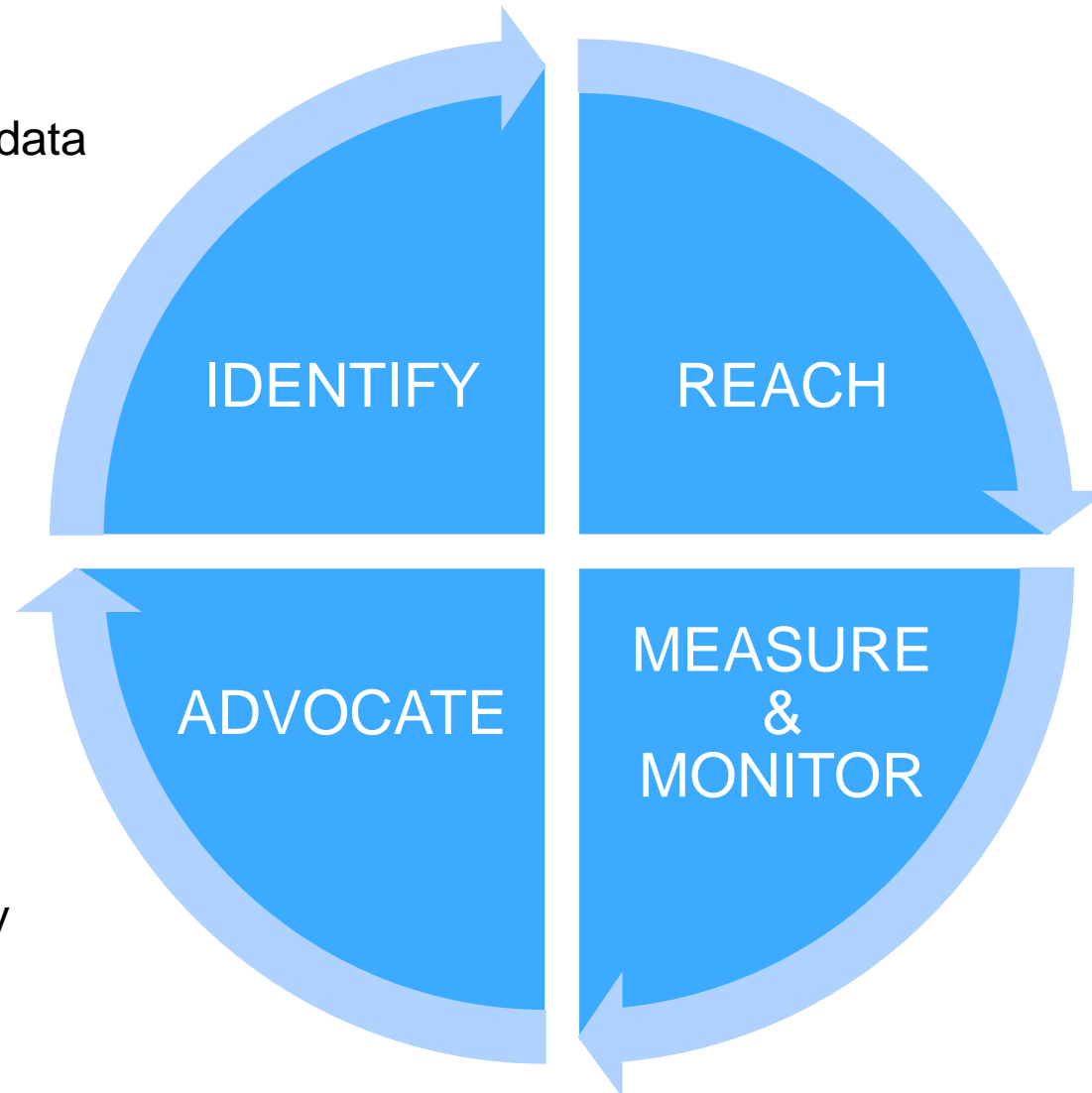
- Use of surveillance data
- GIS mapping

CROSS-CUTTING

- Microplanning

ADVOCATE

- Social accountability



REACH

- Integrated campaigns
- Financial provider incentives
- Nonfinancial provider incentives
- Incentives for users
- Leveraging women's groups
- CHWs and community group collaborations

MEASURE & MONITOR

- Community-based monitoring
- Supportive supervision
- Targeted surveys



Methods



Methods: Rapid reviews

- Rapid reviews: relatively narrow, well-defined scope
- Developed general methodology and topic-specific methodologies
 - Topic-specific methodologies developed in two iterative phases (exploratory and execution)
- Focused on evidence for effectiveness and implementation
- Differentiated data extraction approaches
- Evidence synthesized into Evidence Briefs and made available online on evidence map
- Need for some degree of standardization to facilitate interpretation

Evidence Briefs	Reviews	Effectiveness	Implementation in ERG settings				
			Urban poor	Remote rural	Conflict	Gender barriers	Other (not specific to ERG settings)
Identify							
Using surveillance data to identify ZD	●	●	●	●	●		●
GIS Mapping		●	●	●	●		●
Reach							
Campaign integration	●	●	●	●	●	●	●
Financial provider incentives	●	●					
Nonfinancial Provider Incentives	●	●					●
Incentives for users	●	●	●	●	●	●	●
Leveraging Women's Groups	●	●	●	●		●	●
Community groups paired with CHWs	●	●	●	●	●	●	●
Measure & Monitor							
Community-based monitoring	●	●	●	●	●	●	●
Supportive supervision	●	●	●	●	●		●
Targeted surveys	●	●	●	●	●		●
Advocate							
Social accountability	●	●	●	●	●	●	●
Cross-cutting							
Microplanning		●	●	●		●	●

Online Evidence Map:

<https://www.equityevidencemap.org/>

Methods: Four search methods

- Electronic databases:
 - PubMed
 - Global Health
 - CINAHL
 - PsycInfo
 - Embase
- Availability of prior reviews
- Contacting experts
 - When appropriate; used to identify additional sources
- Grey literature searching:
 - Gavi
 - UNICEF
 - World Health Organization
 - Bill and Melinda Gates Foundation
 - Zero-Dose Community of Practice
 - Technet 21
 - Sabin Boost
 - ERG resources
 - Other organization-specific websites, as deemed relevant per topic

Methods: Screening, eligibility, and data abstraction

Screening

- Initial search results screened by one reviewer
 - Potentially eligible citations underwent assessment by another reviewer
 - Differences resolved through consensus when feasible

Eligibility

- Separate eligibility criteria developed per topic
 - Articles could be eligible as “effectiveness” studies or “implementation” studies or both
 - Focus on populations in vulnerable contexts
 - Some topics restricted to LMIC; others not

Data abstraction

- Standardized forms developed in Excel
- Differentiated abstraction based on type of article (effectiveness and implementation)
- Rigor assessed using [Evidence Project’s Risk of Bias Tool](#) for some topics

• Definition of “effectiveness” studies:

- Uses a multi-arm design OR
- Reports on pre-post assessment of outcomes OR
- Assesses time trends following the introduction of an intervention assuming three criteria are met as outlined in Victora et al., 2003: (a) short and simple causal pathway, (b) relatively large expected impact, and (c) unlikely confounding

• Definition of “implementation” studies:

- Contain descriptive or comparative data—either quantitative or qualitative—relevant to some aspect of intervention implementation as defined by the Proctor taxonomy of implementation outcomes

Methods: Effectiveness category

Narrative synthesis; effectiveness categorized based on rubric below:

Effectiveness category	Definition
Potentially ineffective	At least one study of relatively good quality found the intervention had no significant impact on outcome(s) of interest, and no additional studies were found showing effectiveness. Conclusions related to ineffectiveness would be relative to the number of studies identified, consistency in results across studies, and quality.
Inconclusive	Used across several scenarios, including: <ul style="list-style-type: none">• Only studies of low-quality have evaluated the intervention• More than one study has evaluated the intervention, but findings were inconsistent (i.e., some show benefit, others show no benefit or harm)• No studies were identified that evaluated the intervention's effectiveness
Promising	At least one study of relatively good quality found the intervention to be beneficial, but more evidence is needed to determine impact and guide implementation.
Proven	Sufficient evidence exists to recommend widespread implementation of the intervention, assuming no major concerns regarding implementation have been identified.

- Implementation across ERG settings also noted, including:
 - Remote Rural
 - Urban Poor
 - Conflict-affected
 - Gender-related barriers

Methods: Implementation

Major implementation considerations described per intervention topic using Proctor's Taxonomy of Implementation Outcomes as guide:

Implementation outcome	Definition
Acceptability	Perception that intervention is agreeable or satisfactory
Feasibility	Extent to which intervention can be successful carried out within a setting
Adoption	Initial decision or action to try implementing the intervention
Appropriateness	Perceived fit, relevance, or compatibility of the intervention
Cost	Cost impact of the intervention
Sustainability	Extent to which intervention is maintained or institutionalized
Penetration	Integration of intervention within system (or practice)
Fidelity	Degree to which intervention was implemented as prescribed/originally intended

Proctor E, et al. Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. *Adm Policy Ment Health*. 2011 Mar;38(2):65-76. doi: 10.1007/s10488-010-0319-7. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3068522/>.

Methods: Implementation

- Extracted data from studies/reports on major facilitators and barriers to implementation
 - Facilitators/barriers related to intervention implementation
 - Facilitators/barriers related to context
- Initial plan was to categorize implementation as favorable/unfavorable/inconclusive across settings
 - Plan was abandoned due to complexities in making such a determination

A note on complexity

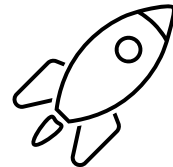
Simple problem:

- Example: Baking a cake
 - Easy to use a recipe to replicate a positive outcome; no particular expertise required.



Complicated problem:

- Example: Building a rocket
 - Requires high degrees of expertise, necessary to divide into smaller tasks for specialists who act in coordination fashion.
 - Building one improves chances the next one functioning well



Complex problem:

- Example: Raising a child
 - Every situation is unique; previous success is no guarantee of future success; and, while expertise may help, it is not necessary or sufficient



Improving equity is almost always a complex problem.

Lessons learned from methods development

1. Challenges with scope

- For some topics, scope extended beyond field of immunization given limited immunization-specific evidence or possibility of relevant evidence in other sectors that could inform pro-equity immunization strategies
- Conversely, scope for other topics was vast, leading to scope reduction or topic-splitting

2. Determining outcomes was challenging across IRMMA categories

- What worked for REACH interventions (e.g., increased immunization coverage) often did not work for IDENTIFY or M&M
- Often REACH indicator could be used as proxy for identification indicator

3. Definitional ambiguities and lack of well-defined theory of change made eligibility/relevance often challenging to assess



Results



Results: Effectiveness

IRMMA Category	Intervention Topic	Effectiveness
IDENTIFY	Using surveillance data to identify ZD	Promising
	GIS mapping	Promising
REACH	Integrated campaigns	Promising
	Financial provider incentives	Inconclusive
	Nonfinancial provider incentives	Inconclusive
	Incentives for users	Proven
	Leveraging women's groups	Promising
	Community groups paired with CHWs	Promising
MEASURE & MONITOR	Community-based monitoring	Promising
	Supportive supervision	Inconclusive
	Targeted surveys	Promising
ADVOCATE	Social Accountability	Promising
CROSS-CUTTING	Microplanning	Promising

Implementation: Common enablers

- Adequate **training and supervision** of implementers
- **Enabling environment**
- Working with experienced partners/leveraging **partnerships**
- **Community participation**
 - Community-led/supported/owned, community/participant buy-in
- **Cost-effectiveness**
- Clear, effective **coordination**
- **Communicating** results to decision-makers
- Use of **existing tools**

Implementation: Common barriers

- **Sustainability** challenges
- **Logistical** issues
- **Cost/budget issues**
 - Examples: High costs of interventions; lack of adequate funding
- Geographic **inaccessibility** of communities or health services
- **Systemic constraints/** existing health system barriers
- **Data quality/**access to accurate data sources
- Existing **norms, stigma**

Evidence Map

www.equityevidencemap.org



Contains links to all evidence briefs (downloadable PDFs)

Evidence Briefs	Reviews	Effectiveness	Implementation in ERG settings				
			Urban poor	Remote rural	Conflict	Gender barriers	Other (not specific to ERG settings)
Identify							
Using surveillance data to identify ZD 🔗	●	●	●	●	●		●
GIS Mapping 🔗		●	●	●	●		●
Reach							
Campaign integration 🔗	●	●	●	●	●	●	●
Financial provider incentives 🔗	●	●					
Nonfinancial Provider Incentives 🔗	●	●					●
Incentives for users 🔗	●	●	●	●	●	●	●
Leveraging Women's Groups 🔗	●	●	●	●	●	●	●
Community groups paired with CHWs 🔗	●	●	●	●	●	●	●
Measure & Monitor							
Community-based monitoring 🔗	●	●	●	●	●	●	●
Supportive supervision 🔗	●	●	●	●	●		●
Targeted surveys 🔗	●	●	●	●	●		●
Advocate							
Social accountability 🔗	●	●	●	●	●	●	●
Cross-cutting							
Microplanning 🔗		●	●	●		●	●

Circles (proportional to size of evidence base) provide links to all papers and reports used in briefs

Circles for “effectiveness” are color-coded to reflect categorization



Limitations and concluding themes



Limitations

- We don't know what we don't know
- Relevant interventions often occurred in bundles. It was mostly infeasible to tease out the impact of specific components, thus complicating determinations of effectiveness
- Literature reviews were rapid (13 conducted in ~6 months)
 - Efforts were made to ensure comprehensiveness and rigor, but relevant articles/studies could have been missed and rigor was not uniformly assessed across identified reviews and studies
 - Despite standardized methods, some subjectivity remained in assessing and categorizing results
- Definitional ambiguities and lack of TOC
 - We might be missing some requirements for an intervention to work without this information.
- Complexity of implementation and context make overarching conclusions challenging to draw (i.e., no singular “recipe for success”)
 - Recommendations for scaling up should be issued with care

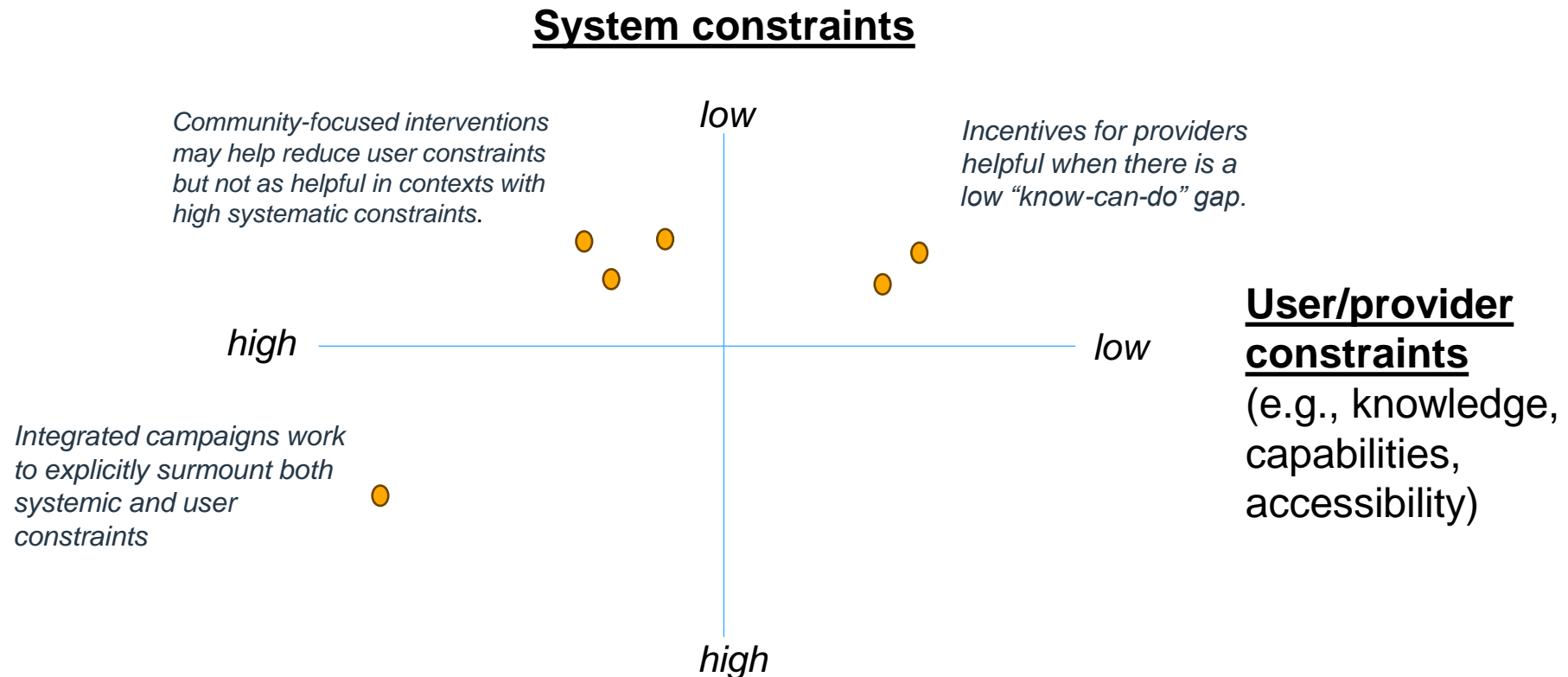
Theme #1: Context and implementation matter!

- Effectiveness is dependent on critical contextual issues and on how interventions are implemented
- What works in one place may not work in another, but we can learn **when/where** an intervention is more likely to work or not and avoid past mistakes.
- Similarly, **how** an intervention is implemented impacts the outcome. Having a theory of change is critical
- Prior to implementation, three critical questions to answer:
 1. Does the intervention address the problem at hand? How?
 2. Does the context mostly enable or hinder conduct of this intervention? How can enabling factors be leveraged and barriers minimized?
 3. What are critical factors for implementation?



Theme #1: Context and implementation matter!

Notably, most interventions were unsuccessful in the face of systemic constraints. Other notable enabling contextual factors for interventions are depicted below:



Theme #2: Importance of Community

- Community involvement was central to many interventions across the IRMMA framework:
 - Leveraging women's groups
 - Pairing CHWs and community groups
 - Community-based monitoring
 - Social accountability
 - Microplanning



Theme #2: Importance of community

- Community involvement leveraged to:
 - Influence community-level structures and norms
 - Serve in mediating role to foster communication between levels
 - Facilitate change across levels
- However, “instrumental” use of community was mostly unsuccessful
- Most successful when communities had:
 - Autonomy
 - Ownership
 - Meaningful and inclusive opportunities for engagement
 - Respect & responsiveness from other stakeholders



Theme #3: Leveraging data

- Interventions across IRMMA categories often informed by availability and accessibility of accurate data
- Often trade-offs were noted, including:
 - Benefits of micro-level data collection vs. time/effort/cost
 - Data quality vs. access (e.g., GIS mapping vs. hand-drawn maps)
 - Using data in innovative ways vs. changing the status quo
- Notably, determinations of “effectiveness” were often hindered by lack of comparative data (e.g., lack of baseline data)
- Disseminating data to policy-makers and stakeholders is critical
 - Involving stakeholders and decision-makers in data interpretation and use can foster local buy-in and improve use



Questions?



Thank You!

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Annex

Topic-specific results



Results: IDENTIFY

- Using surveillance data to identify zero-dose children or missed communities (**PROMISING**)
 - Common methods included using data to identify immunity gaps through triangulation with other data, modeling, and risk assessment tools for SIAs
 - General lack of evidence for identification purposes in routine settings
- GIS Mapping (**PROMISING**)
 - Shown to increase immunization coverage at national and regional-levels; GIS mapping also shows promise for use in microplanning
 - Concerns related to expertise required, cost, and sustainability

Results: REACH

- Financial incentives for providers (INCONCLUSIVE)
 - Much evidence exists, variations in approaches/outcomes of incentives and results of studies/reviews limit ability to determine effectiveness
 - Less likely to be effective where structural and health system constraints exist; more impactful when improvement in control of providers/facilities
- Nonfinancial incentives for providers (INCONCLUSIVE)
 - Limited studies fit “effectiveness” or “implementation” categories; other studies show association with provider satisfaction, motivation, retention
 - Emphasis on community recognition and appreciation of providers, financial incentives; challenge to find incentive package that meets diverse needs/cadres
- User incentives (PROVEN)
 - Most effective in areas with low baseline coverage and vaccine hesitancy, and demand-side (not supply-side) barriers drive low uptake
 - Improve rates of full immunization coverage in populations facing vulnerabilities

Results: REACH

- Campaign integration (**PROMISING**)
 - Demonstrated effectiveness in reaching missed communities, especially in remote rural and conflict settings.
 - Concerns of feasibility, costing, and how to enable them to leave a lasting impact on routine systems.
- Leveraging women's groups (**PROMISING**)
 - Robust evidence for child health outcomes, evidence lacking for immunization-specific outcomes.
 - Intervention most frequently implemented in remote rural settings
 - Recruiting local facilitators and being community-led were successful strategies; role of women's empowerment in results remains unclear.
- CHW and community group collaborations (**PROMISING**)
 - Demonstrated improvements in MCH outcomes and few on immunization coverage.
 - Collaborations seem to work better and leave a lasting effect when there is an enabling PHC environment in the country, including supportive CHWs policies.

Results: MONITOR & MEASURE

- Supportive supervision (INCONCLUSIVE)
 - Lack of evidence specific to improved monitoring and decision making.
 - Often included in intervention bundles designed to reach missed communities, but specific contribution unclear.
 - Might be better fit for addressing quality of care, motivation and retention; less useful when issues are structural in nature.
- Community-based monitoring (PROMISING)
 - Involves use of data collected by users to inform stakeholders decision making.
 - Some studies showed positive results across multiple areas, including improved quality, expanded hours of services and reduction of stockouts, potentially being the driver for better coverage in some missed communities.
 - Seems to work better when it is community led and responsive to community needs.
- Targeted surveys (PROMISING)
 - Widely used in SIA and routine systems to track progress and adjust programs to reach better results, but gap on its use with a pro-equity perspective.
 - There are still some concerns on ensuring rigorous methods at local level and using representative sampling frames that can ensure inclusion of missed communities.
 - Costs and sustainability are also a concern and because of that it is likely this can only be useful for ZD only when applied in a targeted way in high ZD areas.

Results: ADVOCATE

- Social accountability (PROMISING)
 - Promising results demonstrating impact across multiple health programs, but paucity of immunization-specific evidence.
 - Results suggest intervention contributes to community empowerment and self-efficacy, which may contribute to communities' ability to advocate for better health services.
 - It is frequently bundled with community-based monitoring; barriers and enablers are similar.

Results: Cross-cutting

- Microplanning (**PROMISING**)
 - Mostly led to meaningful increases in vaccination coverage mainly in remote rural settings.
 - Often, but not always, microplanning involved a component of digitalization, with GIS enabling being a common feature.
 - Works as a pro-equity approach mainly by better reaching missed communities and by enabling community ownership.
 - It has been considered a cost-effective initiative, however most evidence available is related to SIA and not routine immunization.
 - Paucity of data and discussions on which settings this could work better and on how to enable a lasting effect in routine systems of those interventions.