Immunization Data: Evidence for Action

Find your Finding and let it guide you to better decisions
Agenda

• IDEA overview – 10 minutes
• Dive into the IDEA findings – 15 minutes
• Engagement and Advocacy Approach & Specific Implementers Findings – 10 minutes
• Discussion/Q&A – 25 minutes
The IDEA review is a global synthesis of existing evidence aimed at increasing the use of high quality data to improve immunization coverage. It empowers the immunization community to:

✓ Lean into what’s working.
✓ Learn from what isn’t.
✓ Invest in filling knowledge gaps.


Photo credit: PAHO/WHO
Phase 1: Evidence gathering
Phase 2: Synthesis & framing
Phase 3: Dissemination of actionable findings
A Deep Dive
IDEA review gives the sharpest look yet at evidence for improving the use of data for immunization program and policy decision making.

549 Documents + 1 Theory of Change + 103 Pieces of Evidence in 1 Gap Map + 5 Top Findings + 1 Report + 3 Languages
The IDEA review was funded by the Bill & Melinda Gates Foundation.
Engagement & Advocacy

• Strategic Advisory Group of Experts on Immunization (SAGE) working group
• Gavi – Data Use strategy
• WHO Regional offices
• CDC data improvement plan review
• EPI managers
• PAHO country focal points and partners
• IAIM
• BID Learning Network
• Global Digital Health Network
Connected to Global Norms
Realist Review

Overarching questions:

1. What are the most effective interventions to improve the use of data for immunization decisions? What does not work?

2. Why do these interventions produce the outcomes that they do?
Theory of Change


IDEA Theory of Change: Supporting data-informed decision-making for immunization programs

- **Intervention Mechanisms**
  - Generate demand for data
  - Improve access to data and its availability
  - Strengthen data quality
  - Build data analysis skills and knowledge
  - Strengthen decision-making structures and processes, and data use infrastructure
  - Improve communication of data to decision-makers

- **Behavior Change Components**
  - Timely, high-quality data are more available
  - Data are analyzed
  - Data are synthesized
  - Data are interpreted
  - Data are reviewed

- **Intermediate Outcomes**
  - Communities and health facilities collect and use data to:
    - Know their target populations
    - Track coverage and follow up on unvaccinated
    - Monitor and respond to outbreaks
    - Manage vaccine supply and cold chain
    - Improve data quality
  - Health districts review and use data to:
    - Generate reports
    - Manage vaccine supply and cold chain
    - Track program performance
    - Improve data quality
    - Monitor and prevent outbreaks
    - Manage campaigns
  - National program managers review and use data to:
    - Track immunization and disease trends
    - Monitor progress
    - Prioritize interventions
    - Inform vaccination strategies and policies

- **Goals**
  - Increase immunization coverage and equity

- **Context**
  - Policies, leadership, and governance around data and information systems
  - Human resources and continuing professional development
  - Harmonized and interoperable data systems
  - Electricity and Internet infrastructure

**Systematic Review Flow Chart**

1. **Published literature** identified in PubMed, PLOLINE, African Journals Online, and CABI Global Health databases (n = 297)
   - Records after duplicates removed (n = 268)
   - Additional published literature identified through reference mining (n = 26)
   - Records excluded (n = 247)
   - Published literature excluded (n = 34)
   - 2nd Round of published literature reviewed for eligibility (n = 74)
   - 2nd Round of published literature included in synthesis (n = 37)

2. **Grey literature** identified in online searches and targeted outreach (n = 130)
   - Records after duplicates removed (n = 104)
   - Additional grey literature identified by PAHO (n = 28)
   - Grey literature reviewed for eligibility (n = 132)
   - Grey literature excluded (n = 94)
   - 2nd Round of grey literature reviewed for eligibility (n = 49)
   - 2nd Round of grey literature included in synthesis (n = 15)

3. **Full evidence library** (n = 103)
   - Evidence (n = 69)
   - Promising strategies (n = 34)

*Grey boxes indicate new literature obtained after a second round of data collection, which included literature from immunization and other health sectors.*
Analysis and Synthesis

• 2-day workshop in Washington DC, May 16-17, 2018

• Attendees: IDEA Steering Committee, representatives from across the immunization and health data sectors

• Key objectives:
  • Discuss research findings
  • Validate and refine information about target audiences
  • Identify potential implementation considerations for data interventions.
  • Identify gaps in the findings, as well as potential actions to address them
Evidence presented in the gap map includes studies and evaluations of immunization data use interventions that applied scientific research methods or evaluation design, as well as literature that did not qualify as a study or evaluation but had strong theoretical plausibility of improving data use, as judged by our TOC. We referred to these records as promising strategies, which we define as strategies that have
Top Findings

- Interconnected Strategies Get Better Results
- Data Use Leads to Better Data
- Systemizing Data Use Leads to Long-Term Success
- HMIS and LMIS Increase Availability of Quality Data
- Digital Systems Show Promise, but Barriers Still Exist
Data use improved with the use of a comprehensive set of interconnected and mutually reinforcing strategies that addressed barriers to data use.

Successful packages included strategies that addressed:

- Skill and capacity building
- Behavior change management
- User-centered design principles
- Integrating data use
- Consideration for human resource capacity gaps
- Measures to address workload increases
- Mechanisms for increasing collaboration
- Structured approaches to problem solving and decision making
- Long-term resource commitments
The relationship between data quality and its use is dynamic and cyclical.

The more data is used, the more its quality improves, and as data quality improves, health care workers are more confident about using it to guide their actions.

There is a missed opportunity for strengthening data use at the facility level, where emphasis has been narrowly focused on data quality.
Interventions are more likely to be successful long term if they institutionalize data use through:

- Dedicated staff positions for data management
- Routine data review meetings
- Training and guidelines for front-line staff
• Digital systems such as health management information systems (HMIS) and computerized logistics management information systems (LMIS) have made higher-quality data more available to decision-makers in real-time.

• Even greater gains in data use are achieved when digital systems are paired with other activities that reinforce data use.
Digital Systems Show Promise but Barriers Still Exist

• Although the transition from paper to digital systems has made higher-quality data more available, it has not automatically translated into greater data use.

• There is more success at the district level or higher because of fewer operational challenges than at the facility level.

• This finding points to the need for a phased approach, ensuring data use infrastructure, human resource capacity and skill building are in place before a full digital transition.
Recommendations for Monitoring & Evaluation

Monitoring
• Monitoring could be strengthened through the use of better process and outcome indicators.
• We propose a set of indicators that are adapted for measuring routine immunization data use.

Evaluation
• Process evaluation is one approach we recommend to uncover why and how the intervention works and its relationship to context.
Engagement & Advocacy Approach

Implementers  Policymakers  Funders
Communications Activities
IDEA is now on TechNet-21!


Immunization Data: Evidence for Action (IDEA)
Curated by: Jacqueline Baxtior

The use of high-quality data is widely understood in the global health community to be a cornerstone of well-functioning health systems. However, despite continuous growth in the amount of health data available, the actual use of data in immunization program decision-making remains a challenge. The Immunization Data: Evidence for Action (IDEA) review is a global synthesis of existing evidence aimed at increasing the use of high-quality data to improve immunization coverage. Developed in partnership between PATH and the Pan American Health Organization (PAHO), the IDEA review draws on findings from nearly 250 documents—including published literature, working papers, project evaluations, and reports—distilled and prioritized by global immunization experts. The review identifies five proven strategies to improve data use and outlines how funders, policymakers, and program implementers can incorporate these best practices to improve the efficacy of state, regional, and national immunization programs. The resulting report provides a concise guide for global and public health practitioners, explaining what works to improve data quality and use, why it works, and how the immunization community can take evidence-based action to improve immunization outcomes around the world. This page provides a list of IDEA report materials, which include the evidence identified by the IDEA team, the IDEA report, and the top findings.
FIND YOUR FINDING

Find the evidence that speaks to you.
And for you.

**Step 1:** Find us on TechNet: https://www.technet-21.org/en/topics/idea

**Step 2:** What are your main data use challenges? Find an IDEA finding that helps address your needs.

**Step 3:** Share your commitment and put it into action.

#findyourfinding
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Annex
Communications Impact
• **Data-based actions have impact.** Data based decision-making and actions can effectively address existing immunization challenges such as data visibility, inventory stability, and program impact.

• **Best practices to inform programs.** Low- and middle-income countries in particular can benefit from the IDEA review’s best practices to inform immunization program strategy.

• **Time is of the essence.** Improving data quality and decision-making can start today—with existing systems and staff.

• **Better data can lead to more timely and better informed decisions.**
Evidence for Action

• **Recognize the human element.**
  - Prioritize learning and improvement over simply meeting targets to increase data use.
  - Focus on data quality as well as human resource requirements to motivate data use.

• **Infrastructure is essential.** Transition to computerized systems is most successful when tech infrastructure improvements come first.

• **Technology makes a difference.** Immunization information systems (IIS) and electronic immunization registries (EIR) can generate better data for decision-making around immunization coverage and timing.
Make an Impact

• Design interventions to **address multiple mechanisms** of data use, such as demand, access and availability, data quality, data use skills, structure and process, and communication.

• Incorporate data use within **data review and decision-making processes** to better manage vaccine supply and cold chain, improve data quality and program performance, and monitor and prevent disease outbreaks.

• Develop **national guidelines** with well-defined processes and procedures for data collection, analysis, and use.

• In **training programs**, include curricula that builds health worker skills on how to use routine service delivery data for decision-making and problem-solving.
Make an Impact

• Ensure that adequate feedback loops are in place.

• Develop M&E strategies to measure whether data is being used and defined as intended.

• Ensure that district level health workers have adequate tools and training to deliver effective supportive supervision.

• Use information to monitor progress, prioritize geographic areas and populations, and inform vaccination strategies and policies.