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Immunization DQ and EIRs: A Regional Context

Comprehensive Family Immunization, PAHO

Chicago, April 2017.

Outline

1. Global Context
2. Regional Context
3. IDQi Project
4. Best Practices
5. Next Steps

1. Global Context: Current situation

Increased number of vaccines and more expensive immunization programmes with high cash flows

- Need for more efficient information systems

Vaccination transitioning from infancy only to life cycle

More emphasis on accountability (eg. Global Vacc. Action Plan)

New Information and communization technologies (ICT) and increased connectivity

Integrated health information systems and National strategies and policies on eHealth

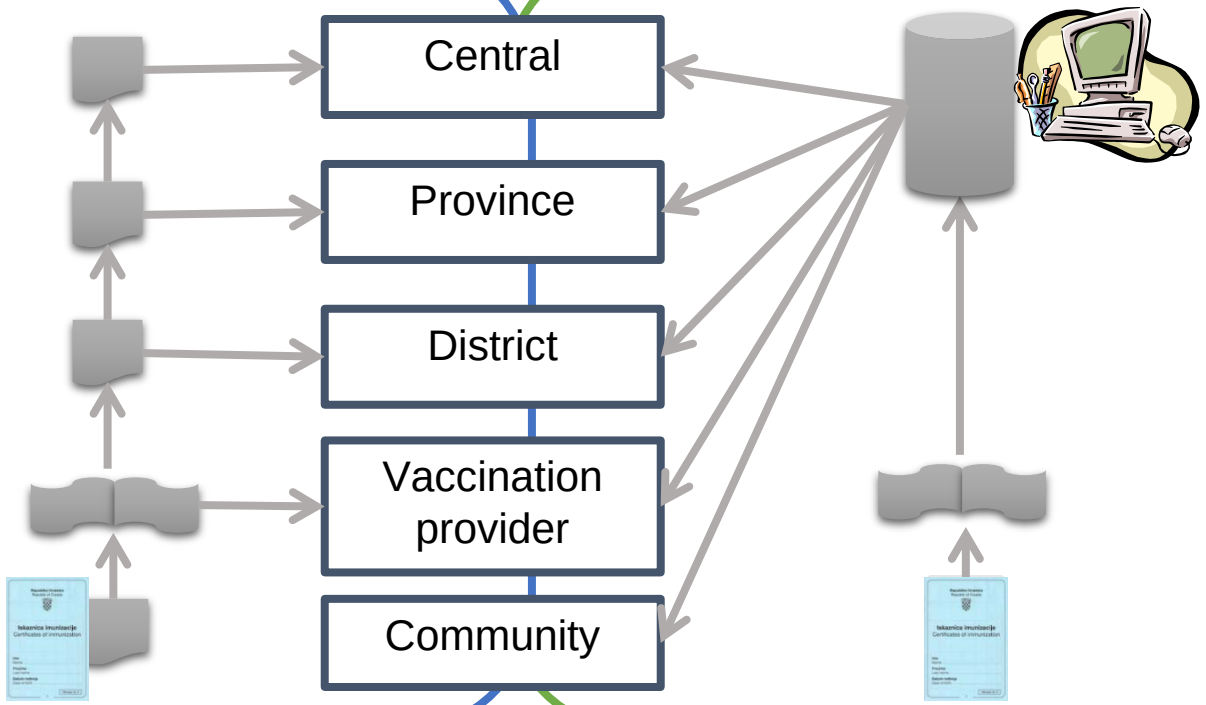
1. Global Context: Immunization information systems

Paper-based aggregation → Electronic registries

Data entry of monthly reports into some tool (Excel, others)

Aggregated paper monthly reports

In-health facility paper registries and tally sheets



- Population based, individual data
  - Individual's identification, contact, characteristics
  - Individual's immunization history
  - National or subnational

Tally sheets, reports

HMIS
(Image: HISP/DHIS2)

Immunization registry

Immunization card

EIR
(photo: BID Initiative)

1. Global Context: Examples of countries with EIR*

Higher

- USA
- Australia
- New Zealand
- Norway
- Iceland
- Denmark
- Netherlands
- Portugal
- Estonia
- Malta
- Bahrain
- UK (Scotland)
- Ireland (6 health boards)
- Sweden (6 provinces)
- Spain (Barcelona, Valencia, Murcia)
- Italy (Puglia)
- Belgium (Flanders)
- Canada

Middle

- Uruguay
- Chile
- China
- Grenada
- Samoa
- Montenegro
- Argentina
- Brazil
- Colombia
- Thailand
- Albania
- Costa Rica
- Panama
- Belize
- Guatemala
- Georgia
- Vietnam
- Venezuela
- Dominican Republic
- Peru

Lower Income

- Honduras
- India
- Nepal
- Tanzania
- Zambia
- Sri Lanka
- Mozambique

- Established
- Subnational or being scaled up
- Early pilots / under development

*: Not comprehensive, somewhat subjective

PROGRESS OF THE EPI IN THE AMERICAS

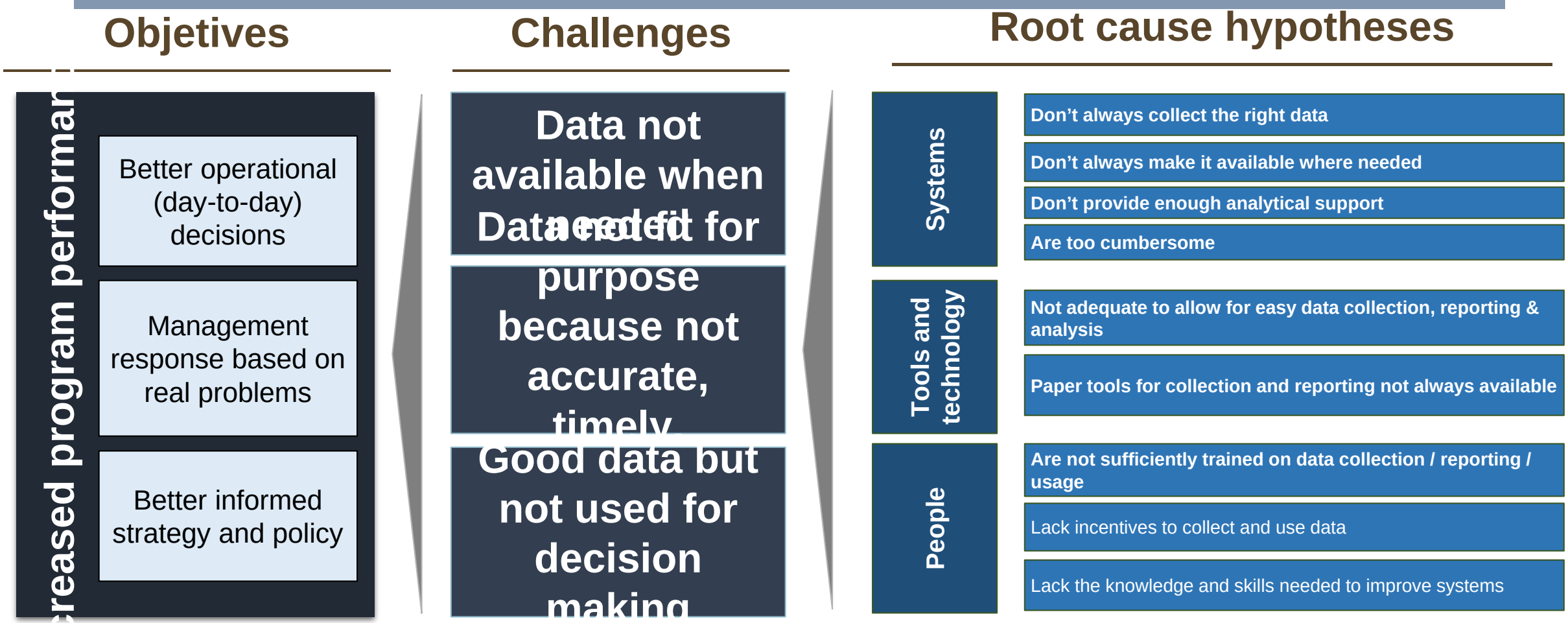
1977		2017
6 VACCINES		 20 VACCINES
10 DOSES/ CHILD <1YR		 20 DOSES/ CHILD <1YR
5 MILLION CHILDREN <1YR		 15 MILLION CHILDREN <1YR
US $5 PER VACCINATED CHILD <1YR		 US $70 PER VACCINATED CHILD <1YR
CHILD VACCINATION		 LIFE COURSE VACCINATION

Regional Coverage, 2015

Source: Joint Reporting Form, JRF 2016.

Facing challenges

Data Quality



Source:: WHO, 2014

Data Quality

Data Quality

Strengthen the habit of monitoring and evaluating data quality of immunization data at all levels

Establish guidelines for data quality of EIR systems

Systematic monitoring of routine data

3. Improving Data Quality in Immunization (IDQi)

Main Assumption: Data Quality (DQ) and Electronic Immunization Registries (EIRs) result in measurable improvements in coverage, though improved DQ may initially lower coverage rates due to more accurate measurement

OUTCOMES

- Launch of a virtual library of DQ best practices, drawn from 3 case studies
- Launch of live toolkit that helps countries effectively initiate and/or improve embedded monitoring
- Launch of a live toolkit that helps countries decide whether, when and how to introduce and/or expand EIRs
- By 2016, 50 countries are aware of IDQi tools

Data Quality

Workshops in IM data Monitoring and evaluation and DQ

- Monitoring toolkit
- 9 trained countries.
- Adequately manage the concepts, methodologies and tools to analyze and monitor vaccination coverage and EPI performance indicators.

DQS

- 27 DQS

Workshops in JRF DQ and RIAP/GVAP indicators

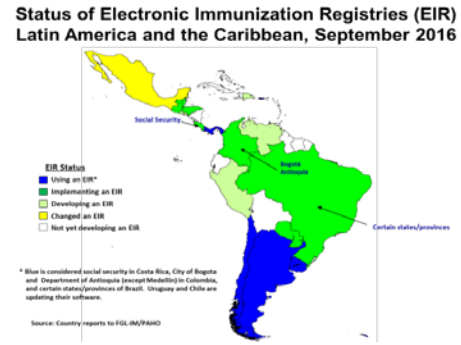
- Improve the quality of the JRF data.
- Review the barriers and facilitators of the JRF filling out process.
- Review the status of advancing the RIAP and GVAP indicators

DQ Technical Assistance

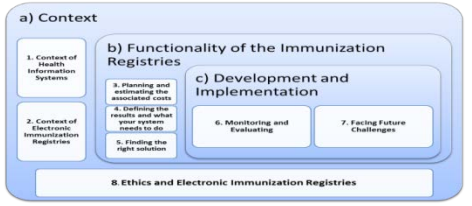
- Constant technical assistance to the countries.

Electronic Immunization Registries

- 4 countries with EIR*

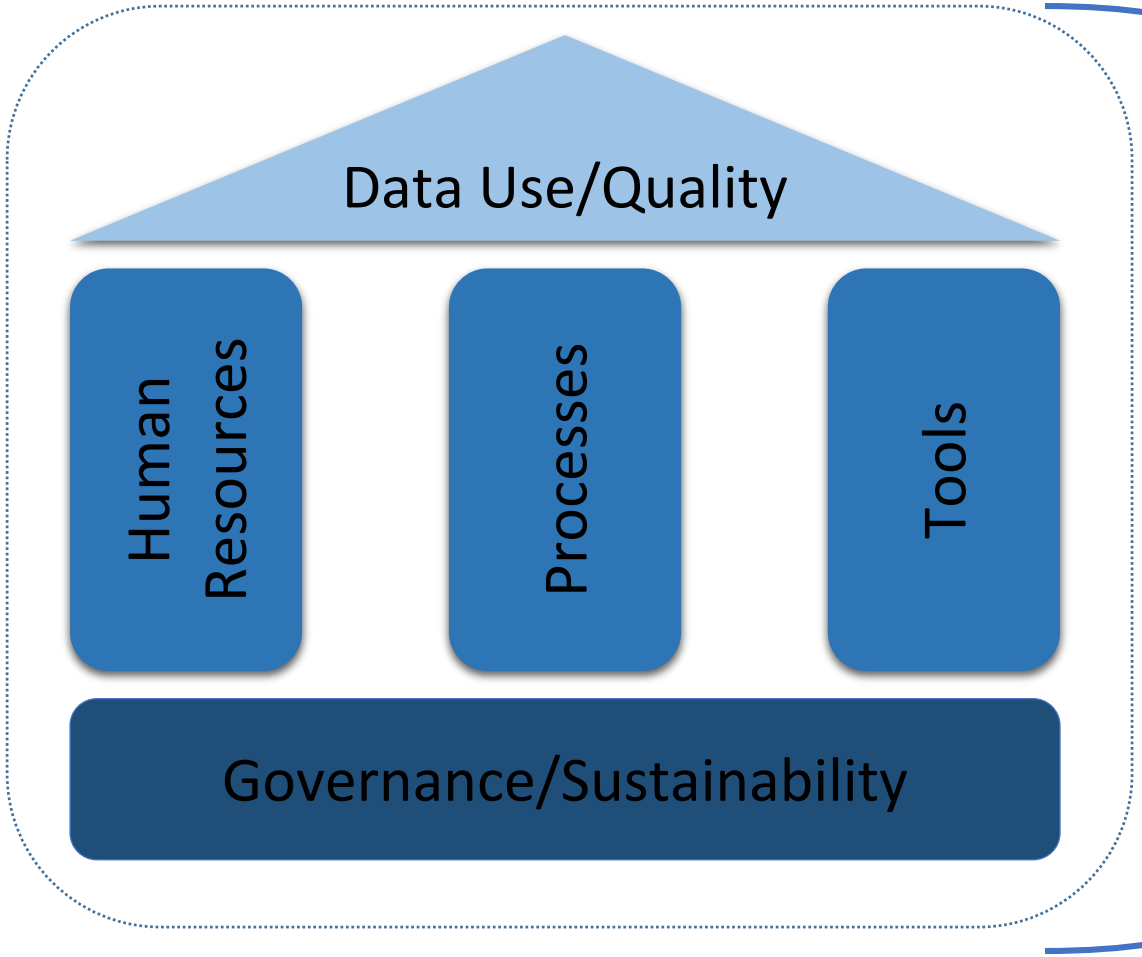


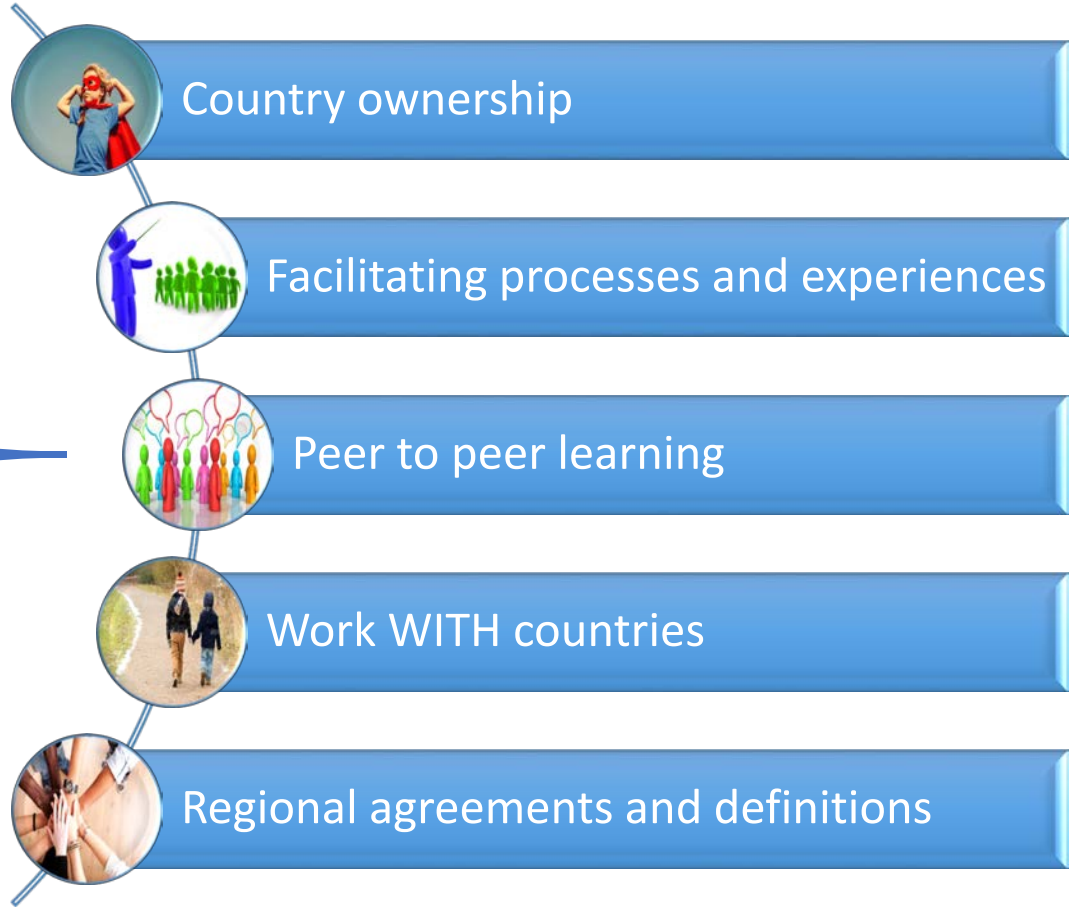
- EIR Guide



- Case Studies
  - Mexico
  - Peru
  - Chile

PAHO Technical Assistance on DQ





Electronic Immunization Registries (EIR)

New Technologies

EIR

eHealth

mHealth

Challenge:
Focus on technologies and tools and not on strengthening the foundations for SUSTAINBILITY

Tools

Sustainability

PAHO Definition of an EIR

- **Immunization registries:** Electronic information system, confidential, population-based, with identification data sent directly from vaccination providers.[1]
  - Not to be confused with immunization information systems

- Population-based information system, confidential, with vaccination data (doses given) from an entire country
  - It had outputs to facilitate coverage monitoring by vaccine, dose, geographical area, age and provider
  - It supports individual (and timely) schedule follow-up

1. Linkins et al, 2001 & Freeman et al. 2003

An “Ideal” EIR

Demographic record

- Thorough inclusion of all persons who are EPI target (vaccinated and unvaccinated), ideally at birth.
- Unique identification of all individuals.

Vaccination event record

- Information on the vaccine administered.
- Including all vaccination moments/acts.
- Traceability of vaccine products
- Follow up of ESAVI/AEFI.

Reports & individual follow-up

- Coverage data and other Program indicators.
- Consolidation of data at different administrative and geographic levels.
- Data and information on people with pending vaccinations .
- Data that feeds into graphic vizualiations and risk maps.

System

- Data entry closer to the act of vaccination (in time and place)
- Flexibility / adaptability and scalability to integrate new modules, vaccines and schedules.
- Data safety and privacy protection.

Important factors to have in mind

EI
R

Bogotá, Colombia. 2011

Brasilia, Brazil. 2013

San José, Costa Rica. 2016

+IDQi AG

- Shared vision among countries and even among regions
- Governance
- Differences and synergies between EIR and EMR
- Need for a Regulatory framework
- eHealth Policy
- Life cycle stages
- Guarantee the maintenance and sustainability
- Respond to the local level
- Promote the information from the EIR
- DQ Monitoring and Evaluation in an EIR
- Transition period and Change management
- Delete the paper?
- Promote the use of mobile technologies
- Feasibility of the EIR implementation in the countries.

What have we learned?

Work with countries

[According to each country's own reality]

Peer-to-peer Learning

[Among countries within the Region and from other Regions]
[Case studies]

Country ownership

[Sustainability]
[National investments into information systems and data quality]

Data use

[Intersectoral and interprogrammatic work]
["Marriage" between EPI and Statistics]
[All levels]

Monitoring and evaluation of data quality

[Continuous and systematic process]


Next Steps

PAHO vision and proposed next steps (1/2)

- Leverage data monitoring and evaluation
  - Equity
  - Routine
  - SIAs (vaccination campaigns)
- Leverage data quality monitoring and evaluation
  - DQS
  - DQS + EPI Review
  - DQS + EIR
  - DQ Supervision
- Share lessons learned
  - Among countries in the Region
  - With other Regions
  - With other partners

PAHO vision and proposed next steps (2/2)

- Support countries with their decision-making processes, design, testing, implementation, and M&E of their EIR
  - Leverage the use of the EIR guidance document
  - Pilot the use of the EIR guidance document
  - Build on existing networks to establish a community of practice
- Document experience, lessons learned and best practices for regional and global dissemination
- Support and document experiences with mHealth use and individualized registries
  - For data entry and/or for automated recall reminders
- Support intersectoral and interprogrammatic work to ensure data quality.

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Thank you!

www.paho.org/immunization