

Panama City, Panama | October 16-19, 2023

Immunization Programmes That Leave No One Behind

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# Experiences and best practices of Implementation of Electronic Immunization Registries in Latin America and the Caribbean

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# Global and regional context



## Global and regional context















Need for more information for program management

Transition from childhood vaccination to the life course

Increased focus on oversight and accountability in IA 2030 and Regional Resolution New information and communication technology (ICT) and greater connectivity Integration of
Health
Information
Systems and
National eHealth
Strategies and
Policies

Guiding
Principles for
Digital Health in
the Region of the
Americas

COVID-19
pandemic
accelerated the
implementation
of digital tools in
health and
immunization







Political Context



Equity



**Displacement** 

# Background

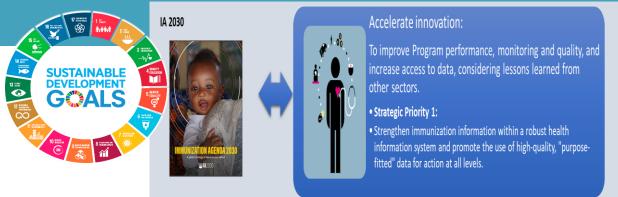
#### 17th TechNet Conference Passana City, Panama | October 16-19, 2023

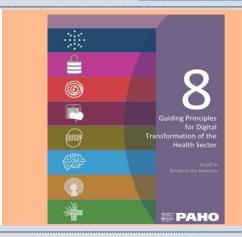
#### **WHO**

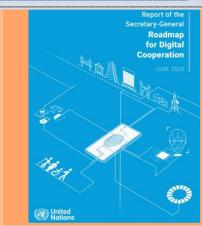
- Resolution on Digital Health unanimously approved by WHO Member States in May 2018
- Immunization Agenda 2030

#### **PAHO**

- Roadmap for the **Digital Transformation** of the Health Sector in the Region of the
   Americas
- Policy On The Application Of Data
   Science In Public Health Using Artificial Intelligence and Other Emerging Technologies
- Reinvigorating immunization as public good for universal health
- TAG Recommendations









#### Strategic Action Line 2:

- Adoption of innovative technologies, including digital intelligence, georeferencing, strengthening the monitoring and surveillance system
- Develop and implement individualized immunization information systems, with reminder functions, making use of predictive, descriptive analysis..

# Electronic Immunization Registries and digital tools for Immunization



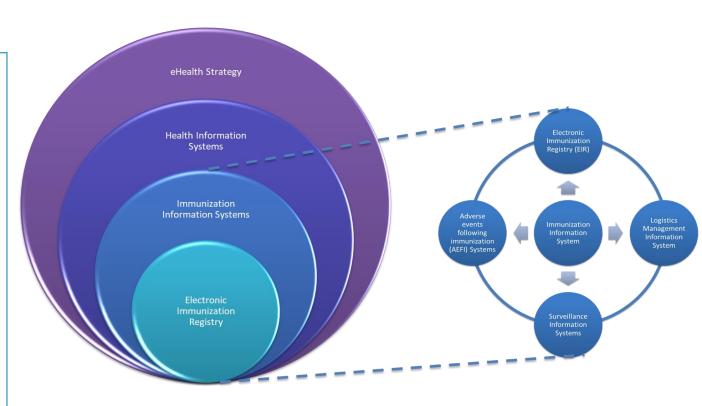
### What is an electronic Immunization Registry?



The EIR are those where the vaccination data of each person are identified and access to their vaccination history.

They are computerized nominal records and are part of the immunization information system, which can have online connectivity, be offline, or a combination of both [PAHO].

- It had outputs to facilitate coverage monitoring by vaccine, dose, geographical area, age and provider
- It supports individual (and timely) schedule follow-up



### EIR "ideal"







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



event record

Vaccination

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



individual

Š

eports

# • Coverage data and other Program indicators. • Consolidation of

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

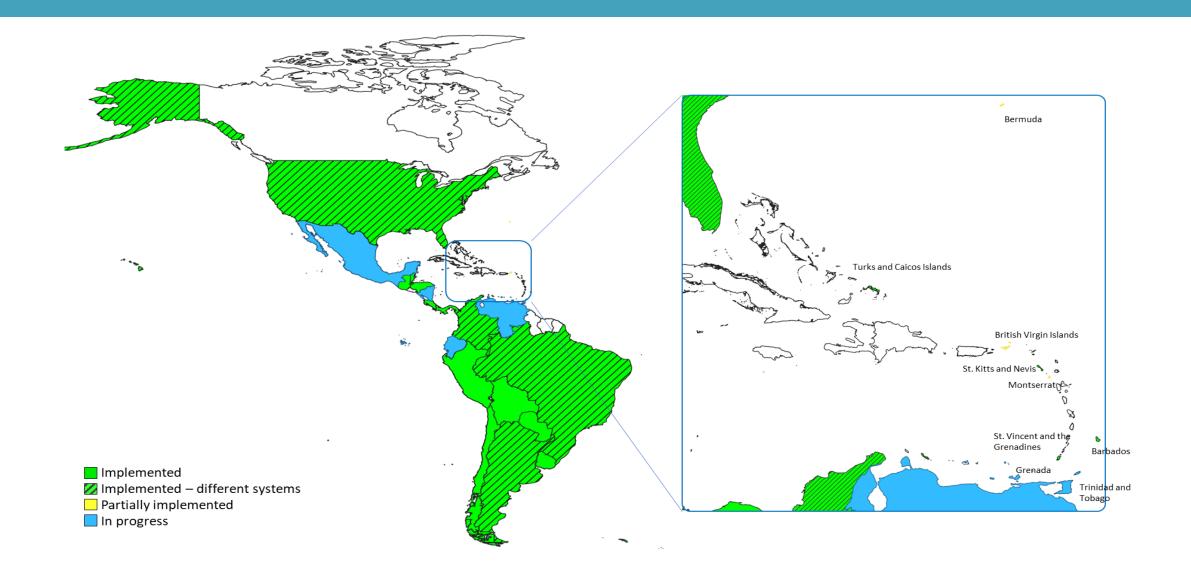


# ystem

- Data entry closer to the act of vaccination (in time and place)
- User friendly
- Data safety and privacy protection.

# Current Implementation Status in the Region ® TATALLES CONTROLLES OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS





# **Country Experiences**

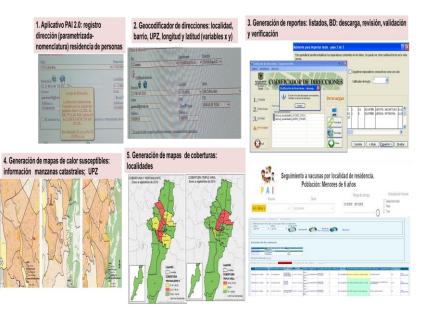


# Examples of countries using EIR data



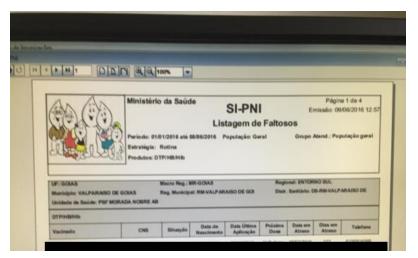
#### Bogota, Colombia.

Use of GIS integrated with the EIR



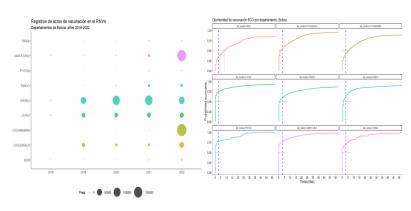
#### Brazil.

List of unvaccinated children



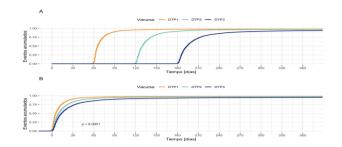
#### Bolivia.

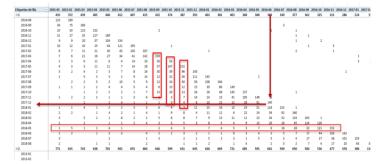
Analyses using EIR



#### Chile.

Other analyses. Vaccination timeliness



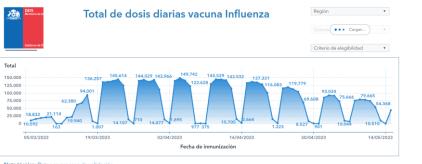


### Dashboard



#### Chile

#### Influenza vaccine monitoring



#### Porcentaje de avance de vacunación, según criterio de elegibilidad

Criterio de elegibilidad	Total Población	Vacunados 1° y única dosis	Avance de vacunación
Niños y niñas de 6 meses a 5 años de edad	1.296.324	688.501	53,11%
Escolares de 1° a 5° año básico	1.264.185	857.823	67,86%
Enfermos cronicos de 11 a 64 años de edad	2.005.039	1.112.980	55,51%
Personas mayores de 65 años y más	2.664.128	1.287.024	48,31%
Embarazadas	231.109	66.473	28,76%
Estrategia Capullo	44.271	7.384	16,68%
P. de salud: Privado	108.759	97.572	89,71%
P. de salud: Público	327.922	285.824	87,16%
Trabajadores de avícolas y de criaderos de cerdo	38.831	29.558	76,12%
Trabajadores de la educación preescolar y escolar hasta 5° añ	247.775	227.488	91,81%
Otras prioridades	656.358	191.375	29,16%

https://informesdeis.minsal.cl/SASVisualAnalytics/?reportUri=%2 Freports%2Freports%2F3279bfc4-8460-4707-9b8c-15f8935aa77b&sectionIndex=0&sso\_guest=true&reportViewOnl y=true&reportContextBar=false&sas-welcome=false

#### **Uruguay**

#### COVID-19 vaccine monitoring



https://monitor.uruguaysevacuna.gub.uy/

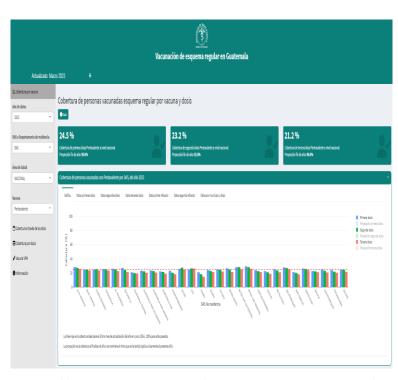
#### **Panama**

#### COVID-19 vaccine monitoring



#### Guatemala

#### **Routine Immunization**



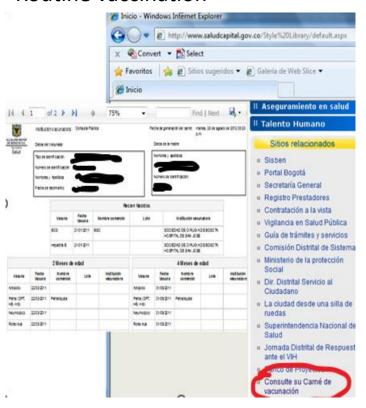
https://tableros.mspas.gob.gt/vacunacionesquemaregular/

# Electronic Vaccine certificate for the Routine Immunization



#### Bogota, Colombia.

Routine vaccination



#### Argentina.

Routine vaccination



#### Honduras.

Routine vaccination

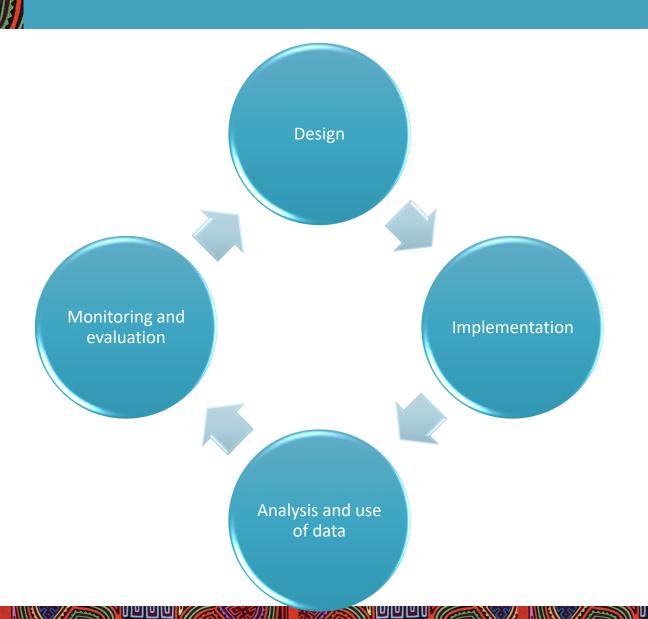


### **PAHO Technical Cooperation**



## PAHO Technical Cooperation





#### EIR diagnosis 2023

Diagnosis, evaluation, and proposal for improvement of the immunization information systems of the countries of the Region, with special emphasis on Electronic Nominal Vaccination

Registries.

Are there leadership and political commitment to impute digital health strategies at national level?  Digital Health Policy  Did the country prioritize the investment in Information Technology and Communication (ITC) to improve the service?  Is there a national budget for investment/reposition/improvement of hardware, so	Are there units/department/agency, national coordination bodies for digital health?	Select	
	Did the country prioritize the investment in Information Technology and Communication (ITC) to improve the	Select Yes	,
		No No	
		Doesn't know	
	service?		
	Is there a national budget for investment/reposition/improvement of hardware, software and annexed equipment required to support digital health?	Select •	





# Digital Certificates





11 LAC Countries measured their maturity level for the development and implementation of digital certificates

#### Diffusion Knowledge and Standards

2 Training Cycles to the associated countries, related to international standards of interoperability in health.



### Working with enabling countries

Development and delivery of technical tools to facilitate implementation with interoperability standards.



8 LAC countries achieved technical equivalence of COVID-19 digital certificates with EU-DCC, achieving cross-border interoperation.



# Training



- 1. Online training with mentoring and peer support (Geneva learning Foundation): Participants developed peer-reviewed activity plans to improve EIR in their contexts of work and were awarded a certificate.
  - •Spanish: 77 participants joined, 58 participants (75%) from 16 countries.
  - •English: 66 participants joined, 42 participants (75%) from 21 countries (all WHO regions)
- 2. Development of a training course for PAHO virtual campus → Coming soon!



https://iris.paho.org/handle/10665.2/34865

### PAHO Technical Cooperation





**Analyses Manual** 

Participants at the EIR workshop in Argentina, September 2017. Credit: PAHOWHO

Vaccine 36 (2018) 7923-7928 Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine



The use of eHealth with immunizations: An overview of systematic



\*World Health Organization (WHO) Regional Office for the Americas, Pan American Health Organization, Washington, DC, United States b World Health Organization (WHO), 20 Avenue Appla, 1211 Geneva, Sortzerland



Received 23 December 2017 Received in revised form 26 June 2018 Accepted 29 June 2018

immunization and improve immunization program efficiency.

Objectives: To see where and how ellealth technologies have had a positive impact on immunization practices—using eHealth strategies to increase vaccination uptake, improve immunization program effi-ciency and advance heath literacy related to immunizations.

Web of Science for systematic reviews published through August 2017 for eHealth and immunization (using pre-determined concepts for each). Two independent reviewers selected studies based on a priori criteria; disagreement was resolved by consensus. The quality of the included studies was evaluated using the Measurement Tool to Assess Systematic Reviews (AMSTAR).

Results: The primary search identified 198 results. After eliminating duplicates 158 remained. Upon applying the a priori set criteria to these, six articles were left to analyze. Four articles showed a positive relationship (a demonstrated benefit, improvement, increase in vaccination uptake, etc. when using eHealth technologies for immunization), one showed a promising relation / with potential, and one showed unknown effects as it focused on the difficulty of analyzing cost-benefits of immunization infor

PROCESO DE IMPLEMENTACIÓN DEL SIV

OPS THE BEST

Conclusion: The review the use of eHealth for

December, 2022

DOCUMENTATION

CONSULTING FOR THE

DEVELOPMENT OF THE NATIONAL REGISTRY OF

IMMUNIZATIONS OF THE

MINISTRY OF HEALTH OF

CHILE

Promover la equidad en la inmunización en las Américas

Promover la equidad en la inmunización en las Américas

Establecimiento de un registro nominal de vacunación electrónico

EL PROCESO DE IMPLEMENTACIÓN

OPS OF OUR



LECCIONES APRENDIDAS

🖋 EL APDYO POLÍTICO ES FUNDAMENTAL PARA LA INPLEMENTACIÓN DE UN NUEVO RNVA y para garantuar so sostenibi LECCIONES APRENDIDAS

Establecimiento de un registro

nominal de vacunación electrónico

ación, se presentan las principales fases y actividades involucradas en la implementación del SIV en Unuquey

LA PLANIFICACIÓN PRECISA ES CRUCIAL PARA EVITAR LIMITACIENES DE COSTOS Y DE TIEMPO, incluyendo el adecue financiamiento, las proyecciones defalladas en el cronograma y necesidades técnicas.

✓ LA IMPORTANCIA DE INVOLUCIAR TODOS LOS ACTORES RELEVANTES EN TODO EL PROCESO, inclujendo en la adapta: SISTEMA U SU MINJORA CONTINUA, PARA SIAN MINJORA TEGISTIMINICIA ATA GOCCISIÓN DE IMPRIENCIANA EL NACIONAL Y SUBMACIONAL. Y SUBMACIONAL INCLUDA EL SERVICIA EL NACIONAL DE LAS PARTES INTERESADAS A NIVEL NACIONAL Y SUBMACIONAL. INCLUDA EL NACIONAL DE LAS PARTES INTERESADAS A NIVEL NACIONAL Y SUBMACIONAL. y comunicación abierta y aumentar la aceptabilidad del sistema.



Regional Meeting on Digital Transformation of the Health Sector

# Data quality assessment, Grenada Participants sharing experiences with EIR systems in Chile, August 2017. Credit: PAHO/WHO

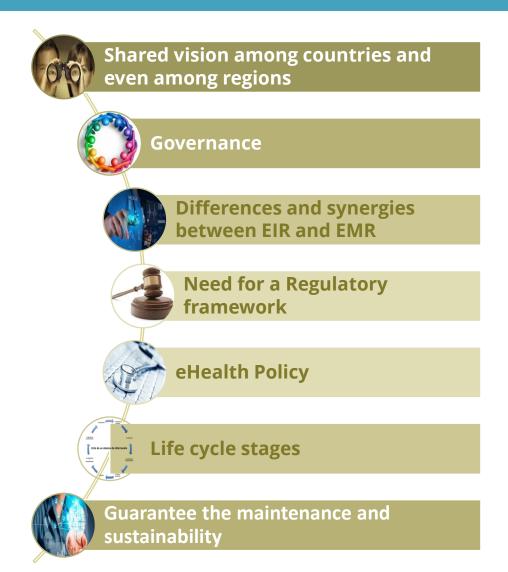
LA IMPLEMENTACIÓN DE UN RNYE NACIONAL ES UN PROCESO DE MÚLTIPLES FASES A LARGO PLAZO que implica un consideración cuidadosa del contexto del país. las brechas del sistema de información y los requisitos del RNVe, recursos humano interdisciplinarios dedicados y supervisión continua y monitoreo de datos.

₩ LA PLANIFICACIÓN PRECISA, INCLUIDA LA PREVISIÓN PRESUPUESTARIA INTEGRAL Y LAS PROYECCIONES DETALLADAS DEL CRONDGRAMA, ES CRUCIAL para anticipar las limitaciones de costos y el espaciamiento de las actividades del proyecto.

establecimiento de un Comité Directivo u procedimientos de rendición de cuentas, es importante para la comunicación abierta

## Important factors to have in mind







# Considerations





### Challenges





Better and more homogeneous coverage



Reducing inequities



Improve program management



Better data quality



Better access to data



Better vaccine inventory management



Confidence in vaccination



Infrastructure limitations: internet, electricity



Governance and regulation



Digital literacy



Deployments without indepth review or pilots / evaluation.



Integration Training



Implementation of interventions without considering end users and / or health impact.



Inequalities



# Thank You!

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