

One of the Oldest Nominal Immunization Registries in the World: Uruguay

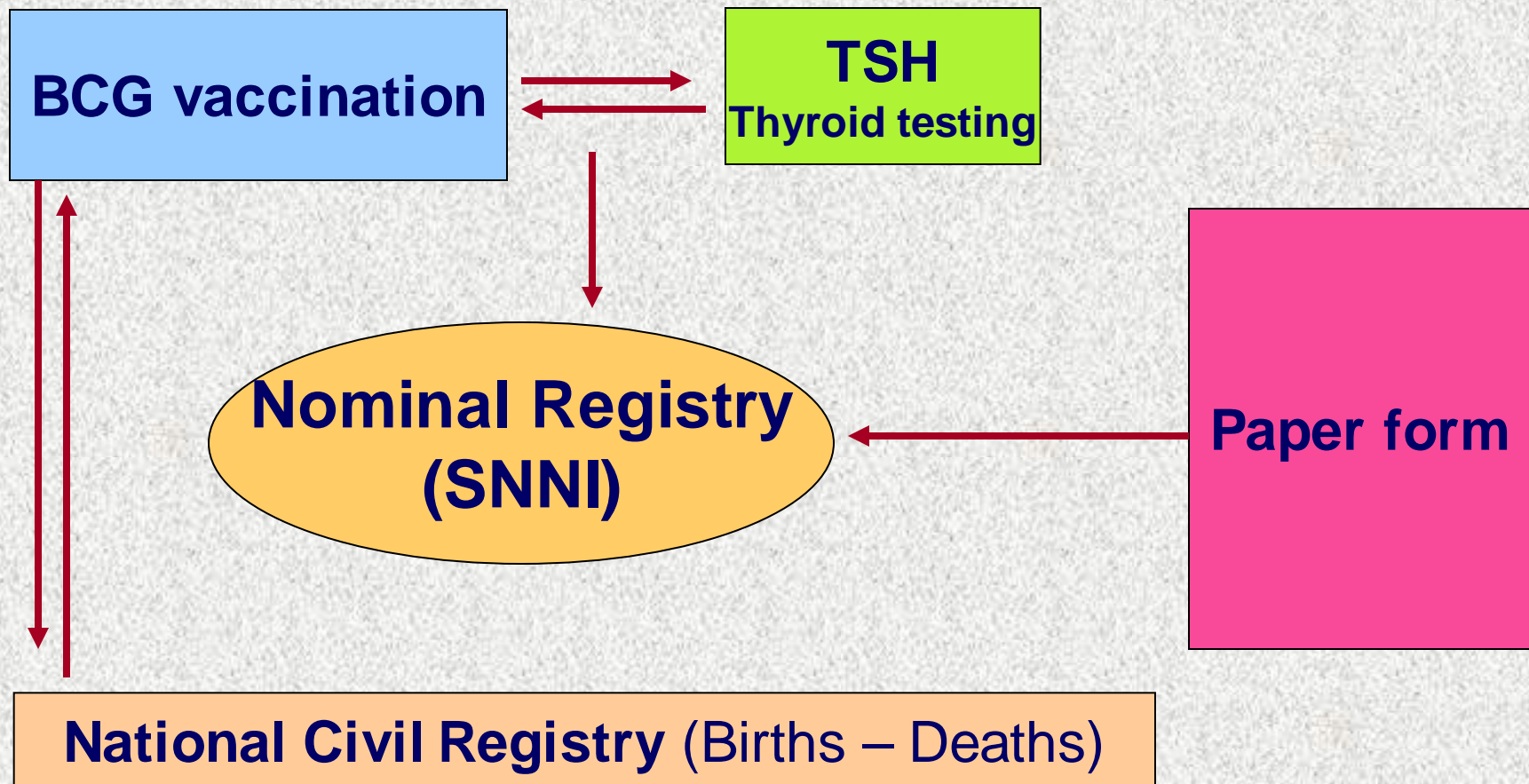


CHLA-EP


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Immunization Department CHLA-EP

Uruguay's Nominal Immunization Registry



Paper form

N° DE BOLETA		M.S.P. C.H.L.A.-E.P.			PLAN NACIONAL DE VACUNACION		Nº H		CENTRO DE VACUNACION				
LUGAR DE NACIMIENTO		FECHA DE NACIMIENTO		CEDULA DE IDENTIDAD				SEXO		Nº DE FUNCIONARIO			
<div style="display: flex; justify-content: space-between;"> 1er. NOMBRE 2do. NOMBRE 1er. APELLIDO 2do. APELLIDO </div>													
<div style="display: flex; justify-content: space-between;"> VACUNA DOSIS FECHA </div>			<div style="display: flex; justify-content: space-between;"> VACUNA DOSIS FECHA </div>			<div style="text-align: center; margin-bottom: 10px;"> MOTIVO DE NO VACUNACION <input style="width: 50px; height: 20px; margin: 5px auto;" type="text"/> </div> <div style="font-size: 0.8em;"> 1 - CONTRAINDICACIÓN TRANSITORIA 2 - CONTRAINDICACIÓN DEFINITIVA 3 - FALTA VACUNA 4 - SE NIEGA 5 - OTROS </div>				<div style="text-align: center; margin-bottom: 10px;"> USUARIO DE SERVICIO DE SALUD <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input style="width: 30px; height: 20px;" type="text"/> <input style="width: 30px; height: 20px;" type="text"/> <input style="width: 30px; height: 20px;" type="text"/> <input style="width: 30px; height: 20px;" type="text"/> </div> </div> <div style="text-align: center; margin-bottom: 10px;"> CONTROL PEDIATRICO <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input style="width: 30px; height: 20px;" type="text"/> <input style="width: 30px; height: 20px;" type="text"/> </div> </div> <div style="display: flex; justify-content: space-around; font-size: 0.8em;"> COMPLETO INCOMPLETO </div>			
BCG 0,20			D P T										
D P T/HB - Hib			S R P										
POLIO			H B										
S R P + VAR			d T										
HEPATITIS A			NEUMOCOCO										
DOMICILIO: CALLE y N° ESQ. TEL.: SECC. POLIC. N° LOCALIDAD DEPARTAMENTO													
NOMBRE DE LA MADRE:													
DOMICILIO DE ALTERNATIVA: CALLE y N° TEL.: LOCALIDAD DEPARTAMENTO													



Vaccination
Center
(Public or
Private)



Paper form



Departmental Centers
CHLA-EP
(database level)



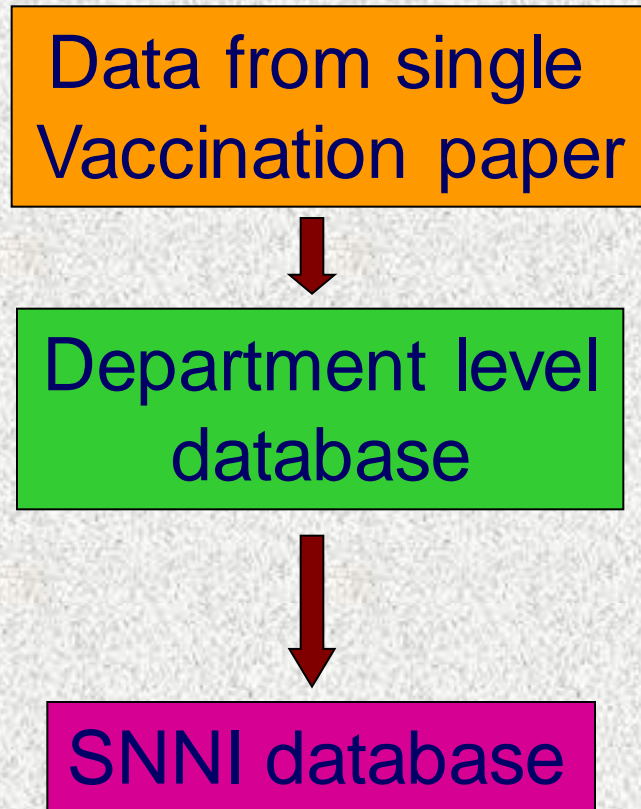
CHLA-EP Montevideo
(SNNI database)

Reports



**SNNI:
Information
flow**

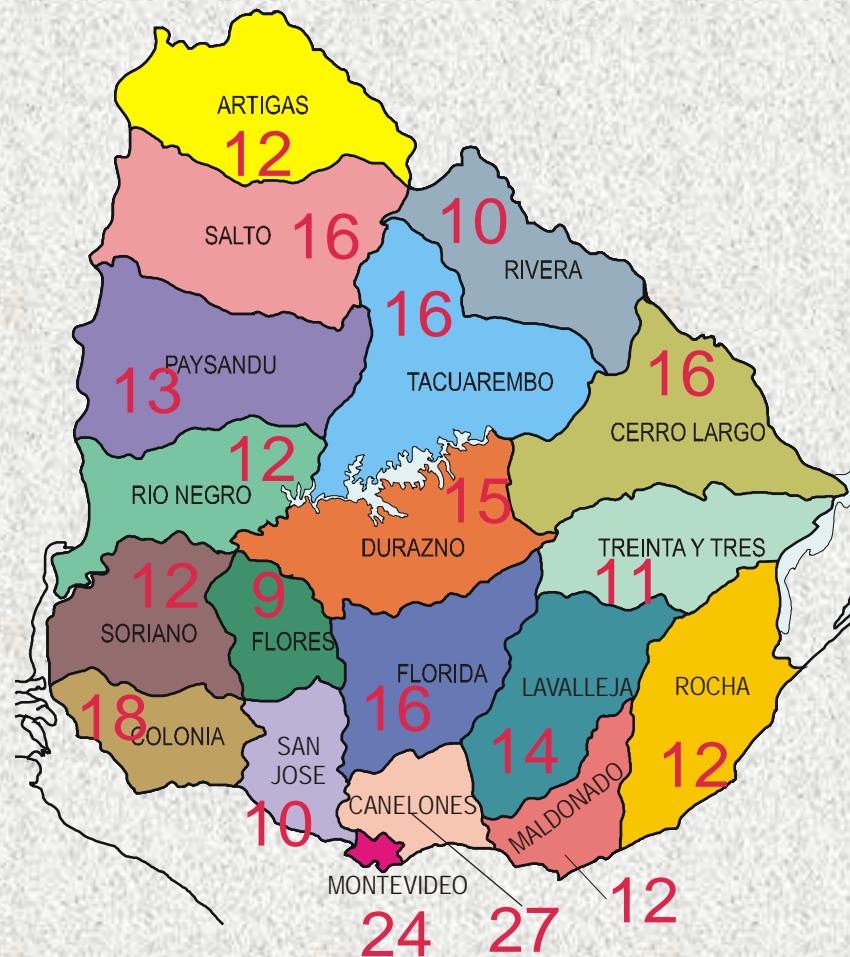
Information flow



For children born outside the department where they received their vaccination, the paper form is sent to their department of birth, where it is then entered into the department level database.

SNNI Geographic Information:

19 departments – 275 police districts



SNNI includes:

- Basic childhood vaccination data beginning with the 1987 birth cohort.
- Vaccines given at age 5 beginning with the 2000 birth cohort.
- Vaccines given at age 12 beginning with the 1995 birth cohort.

SNNI allows:

- Knowing vaccination history of children born after 1987.
- Knowing actual vaccination coverage (for the country, each department, each police district, each cohort and each vaccine).
- Design strategies for the control of vaccine-preventable diseases .

SNNI allows:

Coverage

- Birth cohort
- Vaccine
- Each dose of vaccine
- Country
- Department
- Police district

➤ Defaulters

- Birth cohort
- Department
- Police district
- Send reminder letters

Letter

Sra.....
Domicilio.....
Barrio.....
Departamento.....

Teléfono.....

Seccional Policial:.....

M.S.P.

COMISION HONORARIA PARA LA LUCHA ANTITUBERCULOSA

Programa Nacional de Vacunaciones

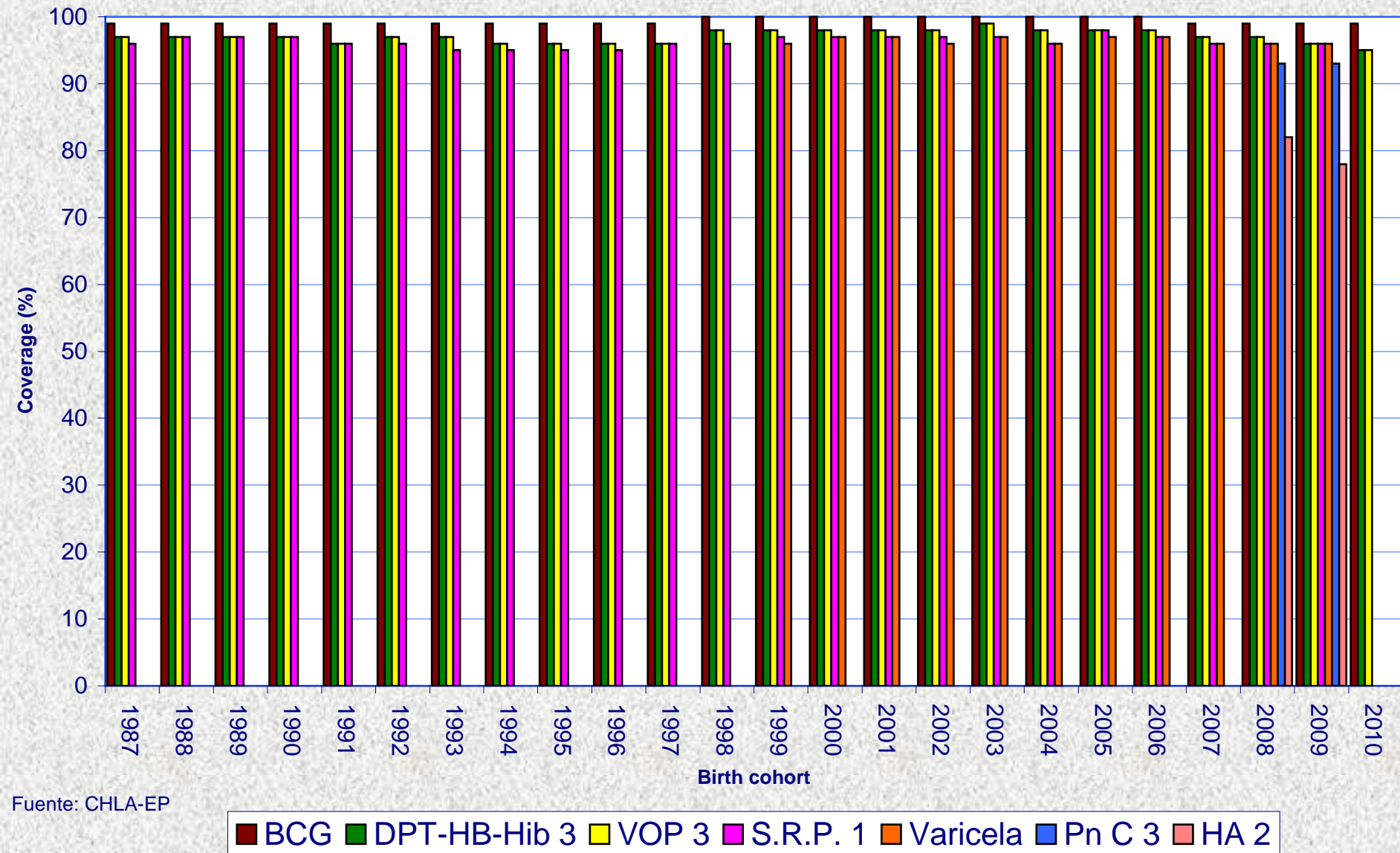
El niño.....
nacido el día.....debe recibir las siguientes vacunas para evitar enfermar
de:

<u>Dosis</u>	<u>Vacuna</u>	<u>Enfermedad</u>
3	POLIO	Poliomielitis
3	PENTA	Difteria, Tétanos, Tos convulsa, Hepatitis B, Enf. por H. Influenza

Le agradecemos concurrir al puesto de vacunación mas próximo a su domicilio o
consultar por el teléfono 24031974 posibles diferencias con su carné.

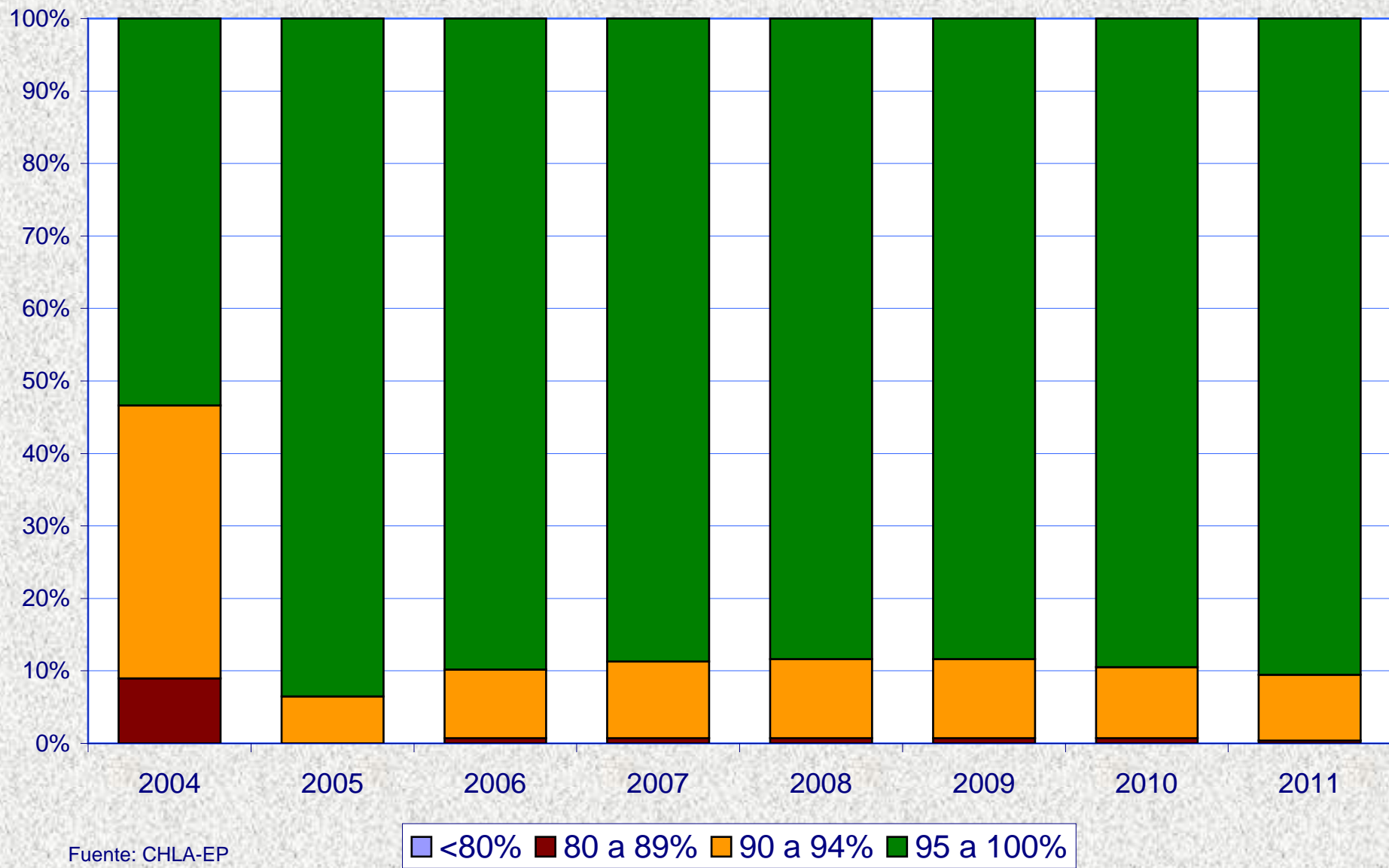
Uruguay: Immunization Coverage

Birth Cohorts 1987-2010

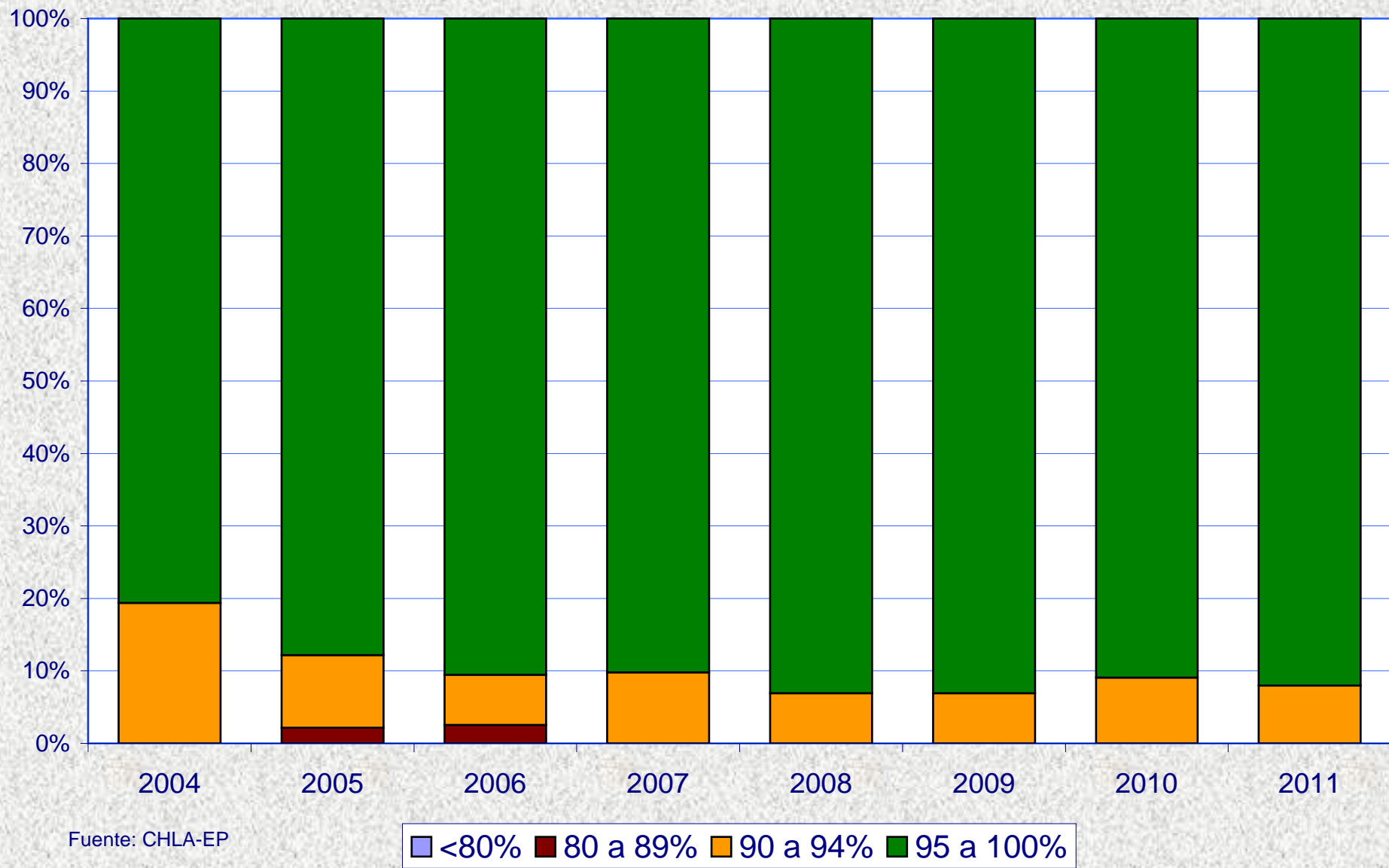


Fuente: CHLA-EP

Uruguay: Immunization coverage with DPT-HB-Hib 3 and OPV 3 by police districts, PAHO report.



Uruguay: Immunization coverage with MMR 1 by police districts, PAHO report.



PAHO: EPI Evaluation in Uruguay

November 2006

The evaluation was conducted following the international multidisciplinary EPI evaluation methodology, which consisted of a qualitative and quantitative assessment that incorporated interviews with key individuals at the political, managerial, and operational levels.

This multidisciplinary approach allows for a thorough review of the different components of the immunization program.

Pan American Health Organization. Summary of EPI evaluation in Uruguay, 2006. Immun Newsl. 2007;29(2):16.

Immunization Program Information System

- The coverage component of the Immunization Program Information System was assessed through an evaluation process complementary to the traditional PAHO EPI evaluation methodology.
- The functionality of the information system was evaluated (at the national, departmental, and operational levels), the accuracy of both the denominator and numerator were determined, and Rapid Coverage Monitoring (RCM) was conducted to validate coverage at the local level.

Findings

The computerized registry of all children allows generating information on coverage by birth cohort and conducting individualized monitoring activities to locate defaulter children.

Uruguay's registry system for coverage monitoring is very reliable, both in the registration of doses and the integrity of the denominator.

Coverage levels for vaccination of adolescents and adults are not monitored.

Recommendations

Use the registry system for monitoring vaccinated children as a model for other countries in the Region of the Americas.

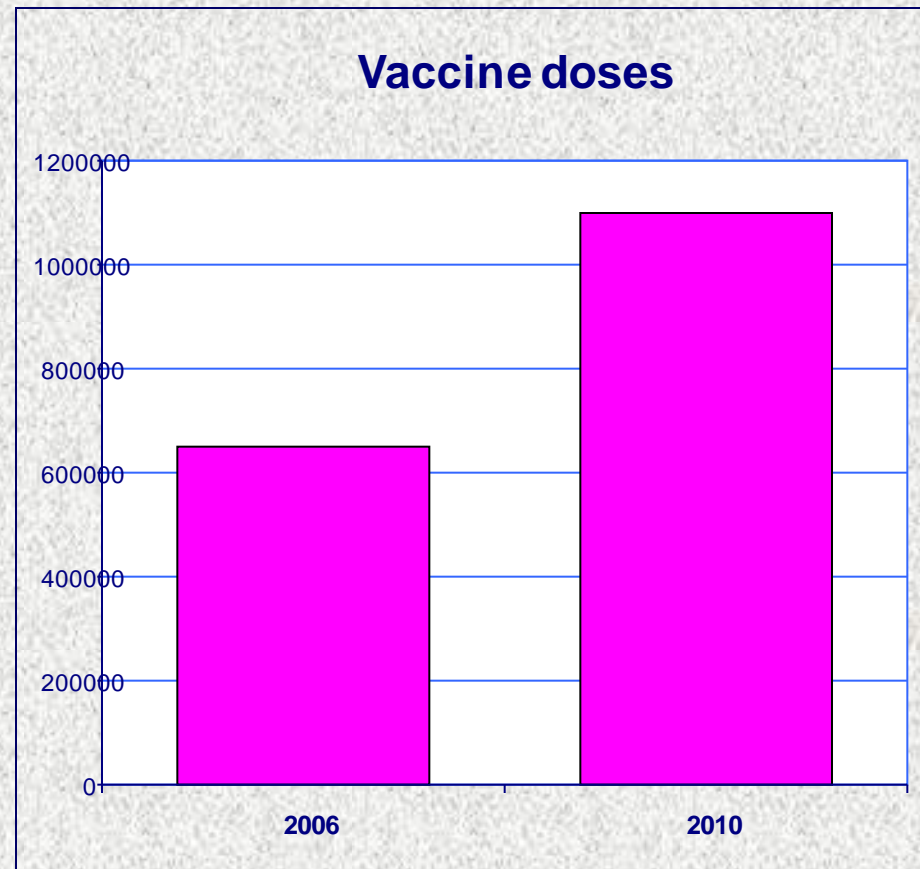
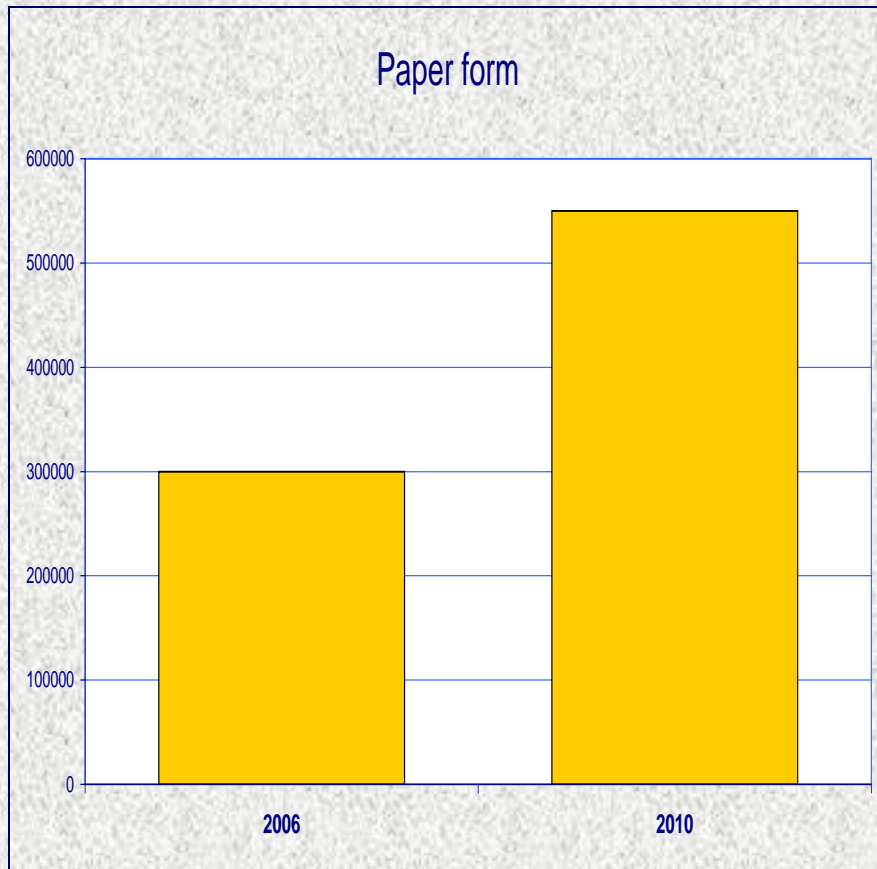
Expand the registry of vaccinated individuals and measure coverage of vaccines not included in the current system (for example dT and influenza).

Dirección Epidemiología

CRONOGRAMA OFICIAL DE VACUNACION
según edades de aplicación recomendadas

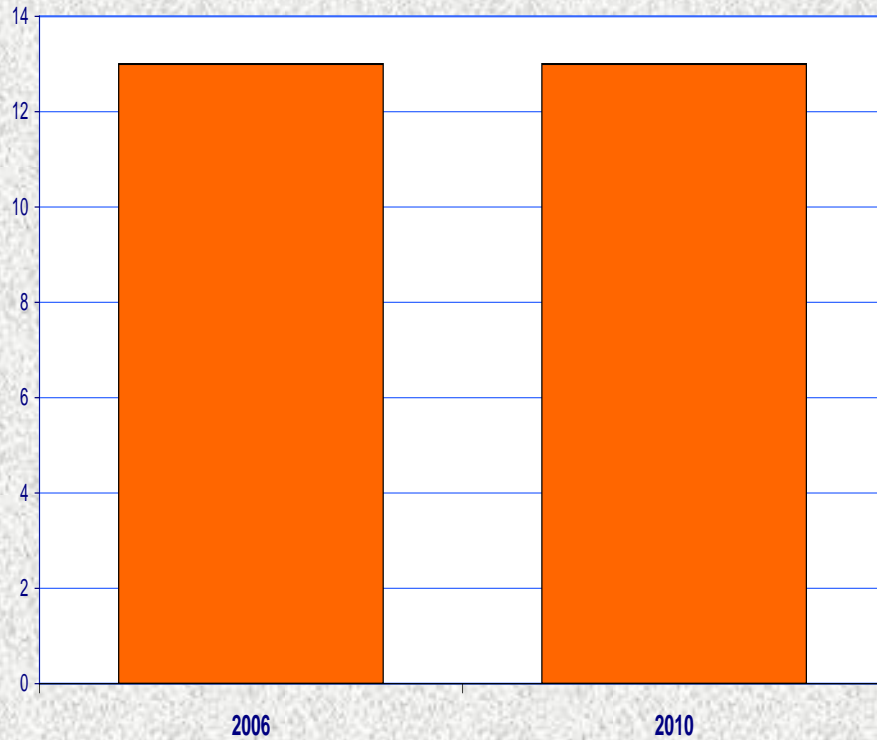
VACUNAS	E D A D E S									
	M E S E S						A Ñ O S			
	0	2	4	6	12	15	21	5	12	C' 10a.
B.C.G.										
D.P.T.-HB/Hib										
PVI										
S.R.P.										
VARICELA										
NEUMOCOCO 13 V										
HEPATITIS A										
D.P.T.										
dp _a T										
dT										

SNNI: New reality

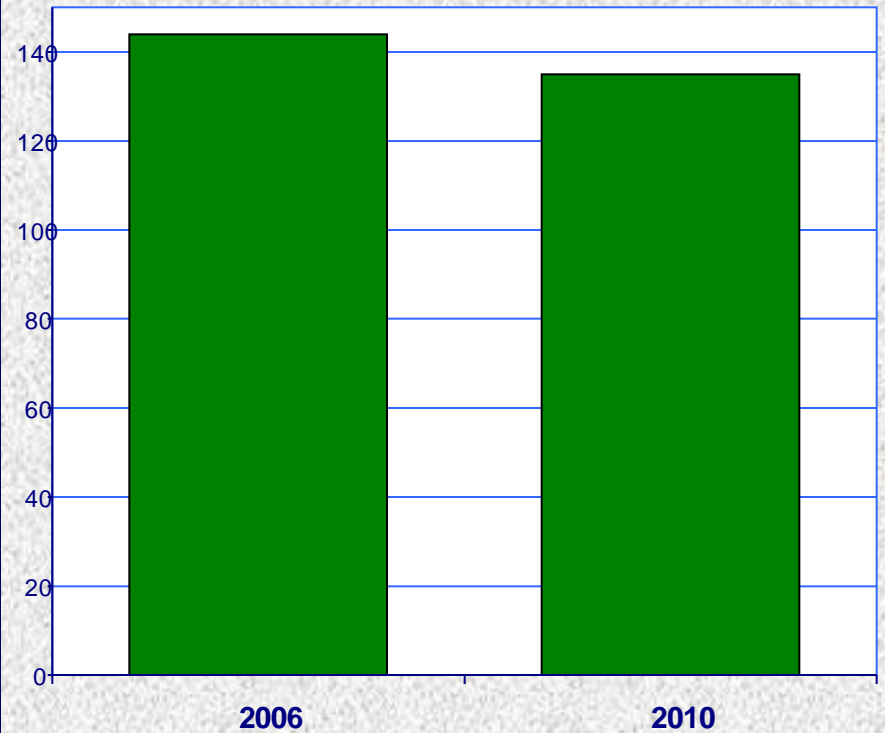


SNNI: New reality

Administrative workers



Technical workers



SNNI analysis:

❖ Strengths: Culture of recording actions

❖ Weaknesses:

- Personnel has aged
- Current software is not flexible

❖ Threats:

- Delay of information ➡ usefulness?

❖ Opportunities:

- Growing importance of NIP (authorities and public)

SNNI: Challenges

Speeding up the data entry

Paper forms are entered in the departmental database only by CHLA-EP departmental centers.

Decentralize data recording by allowing online data entry for all vaccination services.

SNNI: Challenges

Records all vaccines given

The registration system does not record the vaccination in adults (dT, influenza, Pn 23V,etc).

All vaccines given in the country to any target population, even those not yet part of the recommended immunization schedule, will be included in the new SNNI.

SNNI: Challenges

Geo-referencing users

So far the smallest unit of geo-referencing is the police district.

Access programs that work with geo-referencing units are more limited (census segment).

The New Software:

- It should allow statistical information and have interactive features: send reminder e-mail, etc.
- Secure data handling (web server with encrypted traffic) to guarantee its integrity.
- Provide information requested by the health institutions on the vaccination status of their members.

The New Software

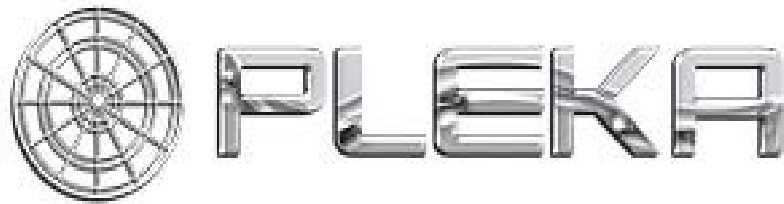


CHLA-EP Server

- OS: Linux CentOS 5.5
- Web server: Apache 2
- Database: PostgreSQL 8.4.5
- Language: php 5

CHLA-EP terminals

- OS: Windows XP
- Multiplatform environment:
Adobe Air
- Interphase: ActionScript 3



Arquitectura del Sistema

MSP

Recepción de vacunaciones, consulta de datos



CHLA

Ingreso de Boletas, análisis de información



INSTITUCION A



INSTITUCION B



Vacunatorios





[+] Boleta



Búsqueda



Vacunaciones



[+] Vacunación



Simultánea



Campaña



Monitor



Codigos

Vacunación



Vacunas



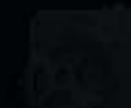
Persona



Reportes



Herramientas



Administración



Ingreso Boleta



Ingresar Persona

Datos Personales

Tipo	Documento	Primer Nombre*	Segundo Nombre	Primer Apellido*	Segundo Apellido	
CI ▼	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Sexo*	Fecha Nacim.*	Lugar Nacim.	País de Residencia	Servicio Salud	Control Pediátrico	TSH
M ▼	/ /	<input type="text"/> ?	Uruguay 🔍	<input type="text"/> ?	▼	<input type="text"/>
Dirección		Esquina		Localidad	Seccional ?	
<input type="text"/>		<input type="text"/>		<input type="text"/>	<input type="text"/>	
Departamento	Teléfono		Celular	Email		
Montevideo ▼	<input type="text"/>		<input type="text"/>	<input type="text"/>		
Datos de la madre		Domicilio Alternativo				
Documento		<input type="text"/>				
Primer Nombre	Segundo Nombre	Dirección				Teléfono
<input type="text"/>	<input type="text"/>	<input type="text"/>				<input type="text"/>
Primer Apellido	Segundo Apellido	Localidad				Departamento
<input type="text"/>	<input type="text"/>	<input type="text"/>				Montevideo ▼

✖ CANCELAR

💾 GUARDAR

Buscar Persona > **Agregar Persona** > Confirmar Datos > Editar Persona > Ingresar Boleta

