Leveraging the Maternal and Child Health Platform to accelerate Elimination of Infectious Diseases: EMTCT Plus for HIV, syphilis, HBV and Chagas Disease

> Massimo N Ghidinelli HIV, TB, STI and viral hepatitis

9<sup>th</sup> International Global Health Conference Miami 8 May 2019



# Outline

- MHC, ANC and EPI: an opportunity to eliminate Mother-to-child transmission of infectious diseases
- Epidemiological context and rationale to include HBV and Chagas
- $\circ$  Progress to date
- $\circ$  Way forward of the EMTCT Plus









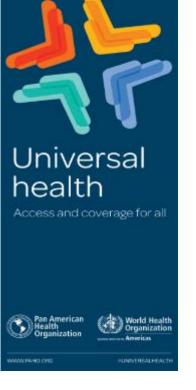
Expected

#### **Objective 3**

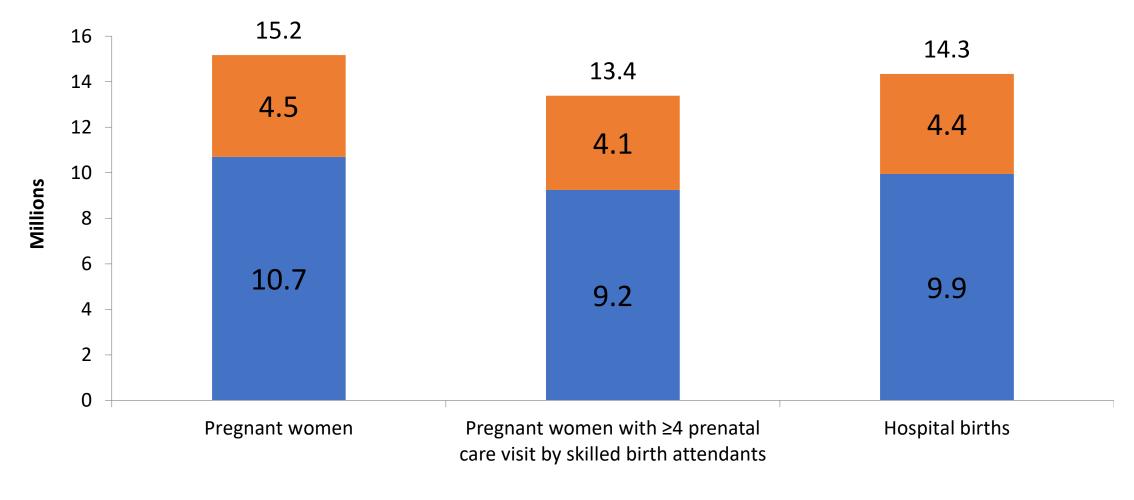
#### **Good Health and Well-Being**

By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases





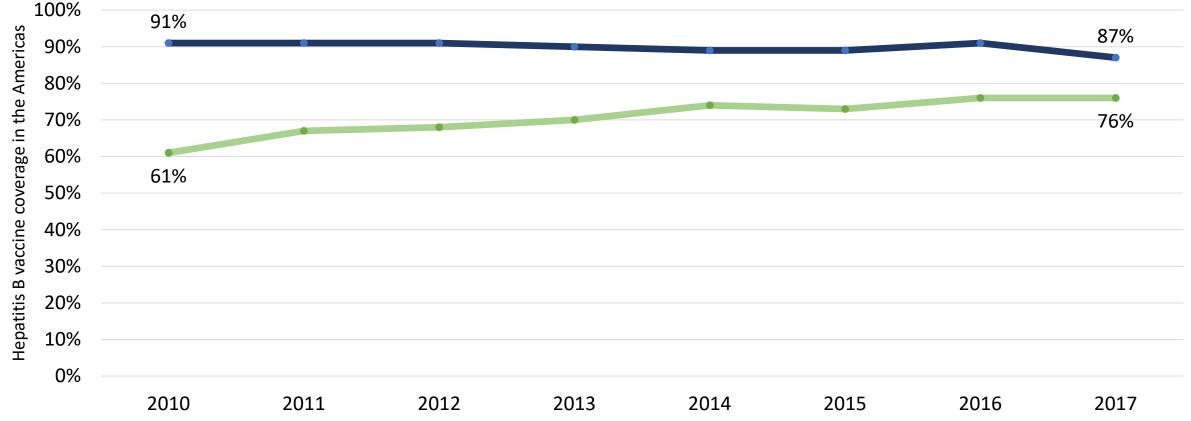
# MCH/ANC Platform in the Region of the Americas 2017



Latin America and the Caribbean
North America

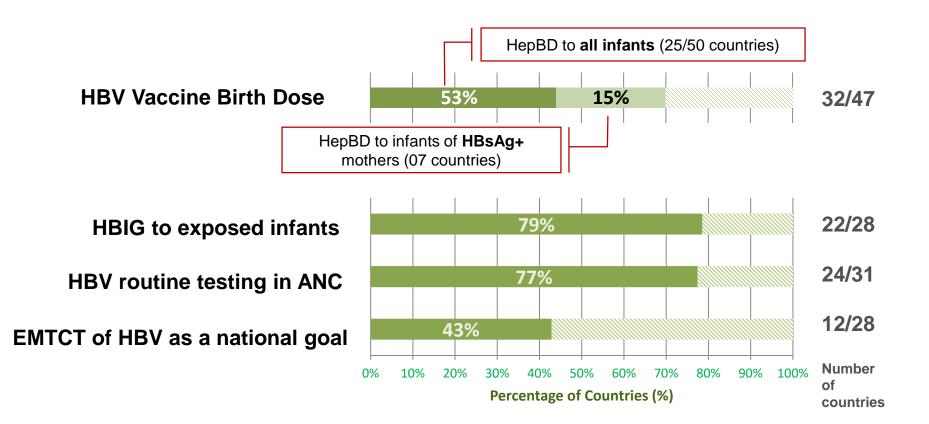
Source: PAHO Basic Indicators, 2017, Data provided by ministries of health or health agencies of countries. Washington, DC, 2016. As of 15 May 2017. UNICEF global databases, 2016, based on Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS), and other nationally representative sources.

# Hepatitis B vaccine coverage in the Region of the Americas, 2010-2017



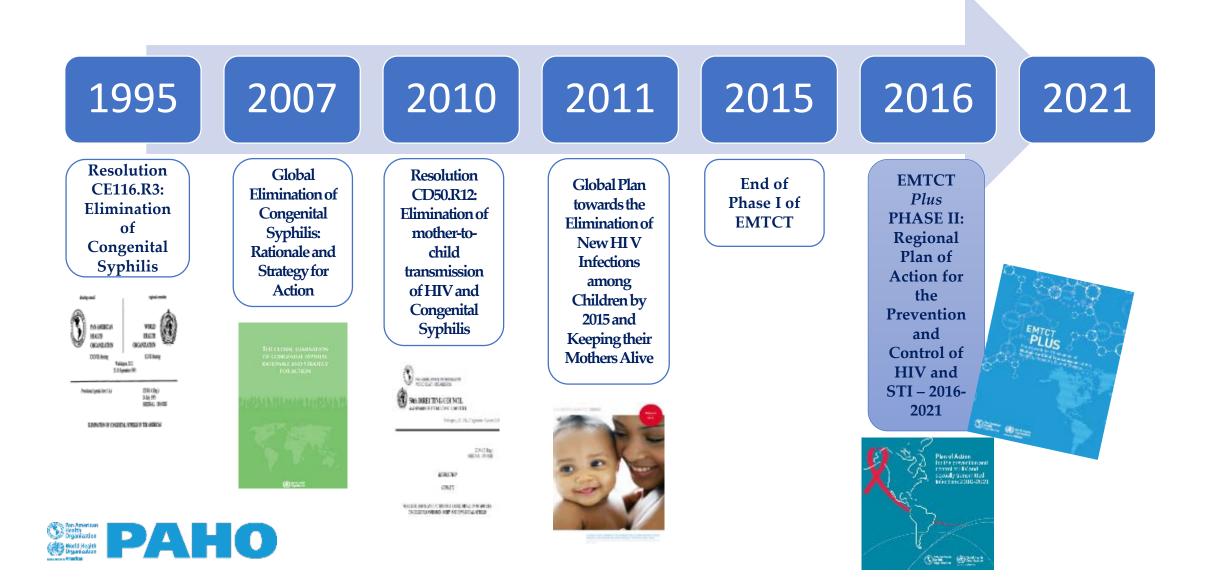
### MTCT of Hepatitis B National Policies (2017)

Hepatitis B vaccination included in childhood immunization schedule in all LAC countries



Source: WHO/PAHO Country Response Profile Survey, 2017; Hepatitis B and C in the Spotlight report 2016

## **EMTCT** Regional and Global Commitments



## EMTCT Phase 1: Lessons learned

- Regional dual elimination: HIV as a leverage to congenital syphilis
- Strong political commitment at the highest levels, robust inter-programmatic implementation
- A **public-health approach**: simplification, standardization, decentralization, integration, qualityassured services, equity, patient and community participation
- Guided by human rights and gender equality principles in service delivery
- EMTCT strengthening MCH and perceived as a quality marker
- However, last steps are the hardest to reach and maintain...



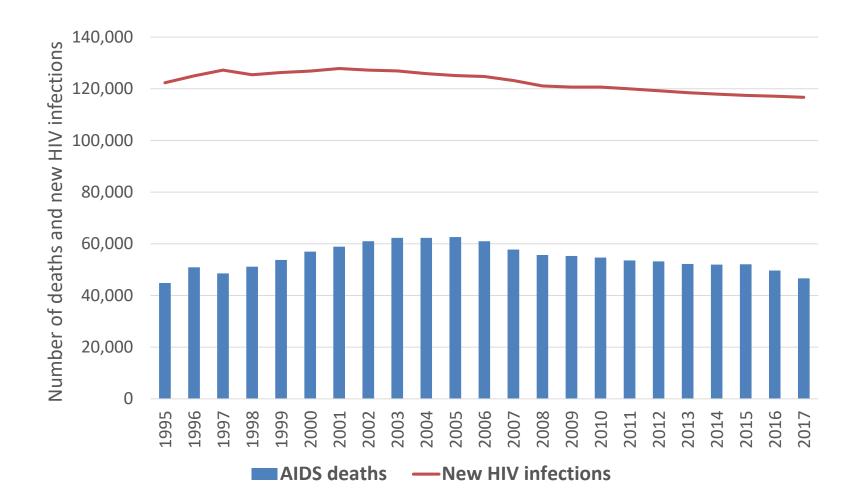
# Using the EMTCT Platform for the Elimination of Hepatitis B in children and MTCT of Chagas Disease

- EMTCT as a "milestone" for the elimination of HBV as a public health problem by 2030, as endorsed by WHA in 2016
- HBV: Building on progress of the vaccination campaigns in the Americas, including birth dose and HBV screening in ANC, AV and IgG
- Chagas: Successful vector control and blood safety make MTCT proportionally more relevant



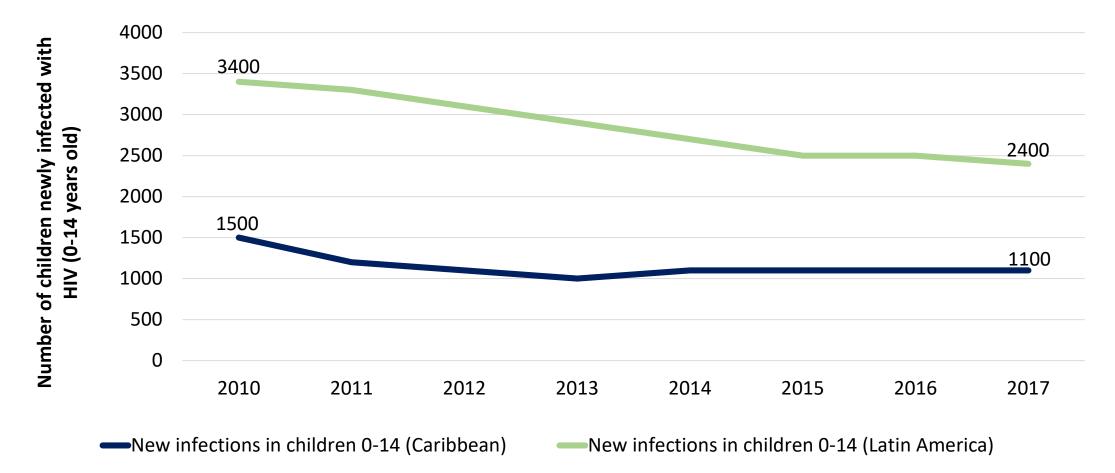


#### New HIV infections and AIDS deaths Latin America and the Caribbean, 1990-2017



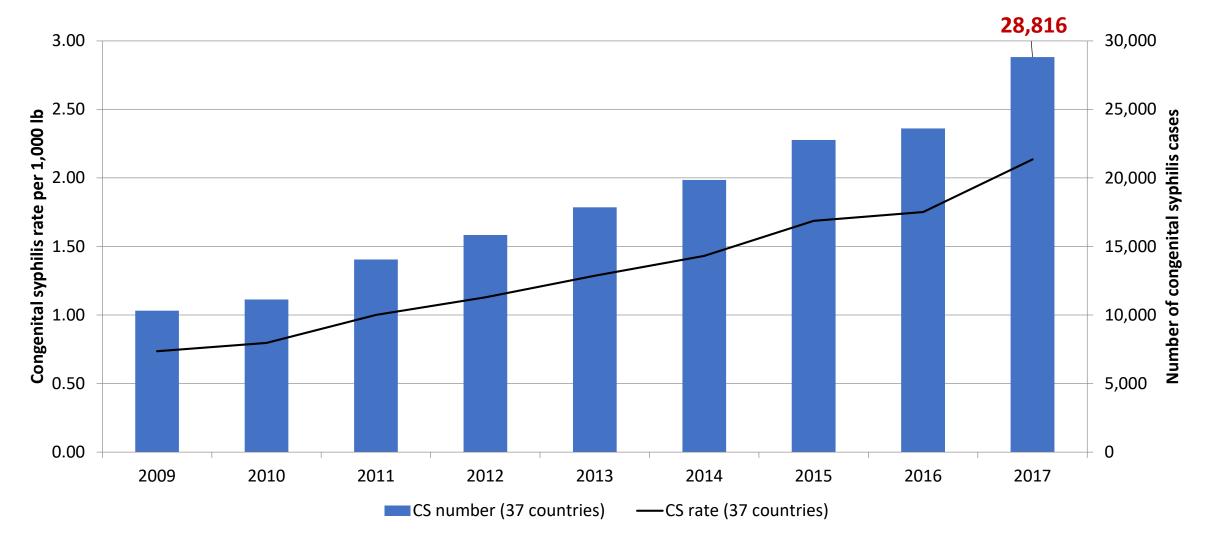
# Mother-to-Child transmission of HIV

Estimated number of children 0-14 years of age newly infected with HIV in Latin America and the Caribbean, 2010-2017



# Congenital Syphilis

Estimated number and incidence rate per 1,000 live birth of congenital syphilis cases in the Americas, 2009-2017



Source: UNAIDS and WHO. 2018 Global AIDS Monitoring Online Reporting Tool; EMTCT country reports submitted to the Pan American Health Organization; Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance, 2017.

# Chagas Disease

- 21 endemic countries (2016)
- 5.7 million people chronically infected (estimates 2010)
- Successful vector control and blood safety make MTCT proportionally more relevant

#### Vector transmission (2014)



# Chagas Disease

- 1,1 million women of child-bearing age infected (estimates 2010)
- 9,000 cases of congenital infection annually (estimates 2010)
- Only **280 cases** of congenital infection reported to PAHO in 2017





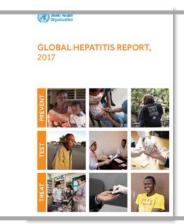
Source: Polaris Observatory (http://www.polarisobservatory.com/)

## Chronic hepatitis B in the Americas, 2016

- 3.9 (2.7-6.4) million people chronically infected (2016)
  - 0.4% prevalence (0.3-0.6%) among general population
  - Most areas: low endemicity
    - Caribe: intermediate endemicity
    - Subnational zones in the Amazon Basin: high endemicity

### 10,000 new chronic infections in 2016

- 56% perinatal transmission
- Prevalence among 5 years old: 0.04%-0.1%

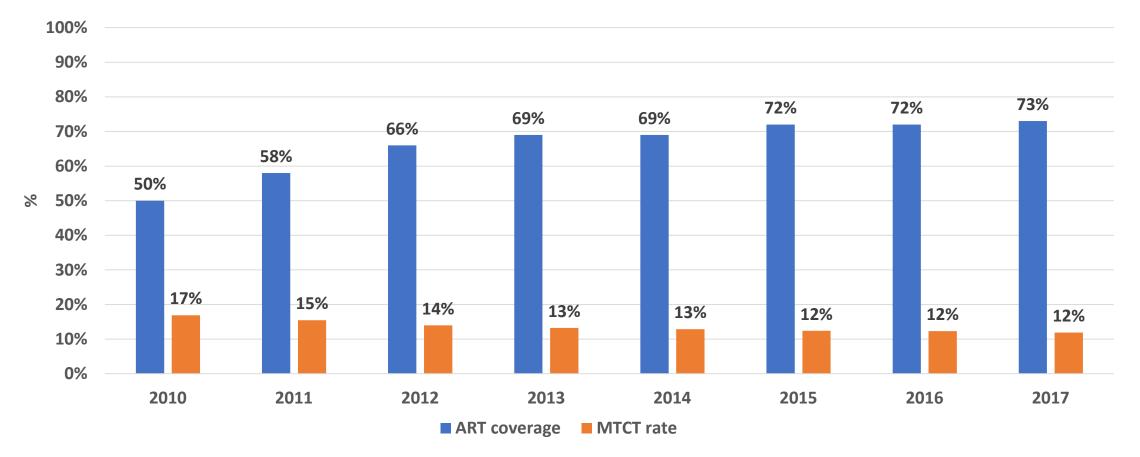


WHO Global Hepatitis Report – 2017\* London School of Hygiene & Tropical Medicine

Americas Region: 6.6 (4.2-15.6) million people infected

Prevalence: General population: **0.7% (0.4-1.6%)** <5 years old: **0.2% (0.1-0.5%)** 

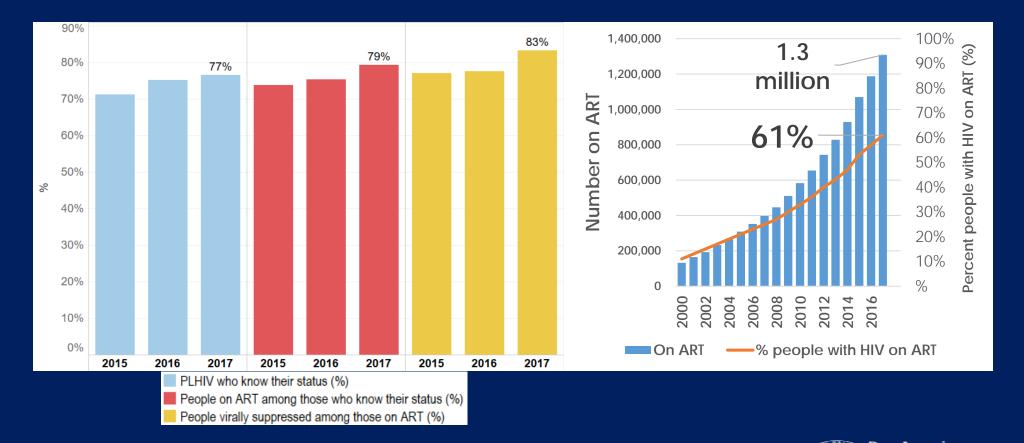
### Estimated ARV therapy coverage among pregnant women and MTCT rate in Latin America and the Caribbean 2010-2017



Source: UNAIDS. 2017 estimates using PPE-Spectrum. AIDSinfo database (http://aidsinfo.unaids.org) Note: Estimates are rounded

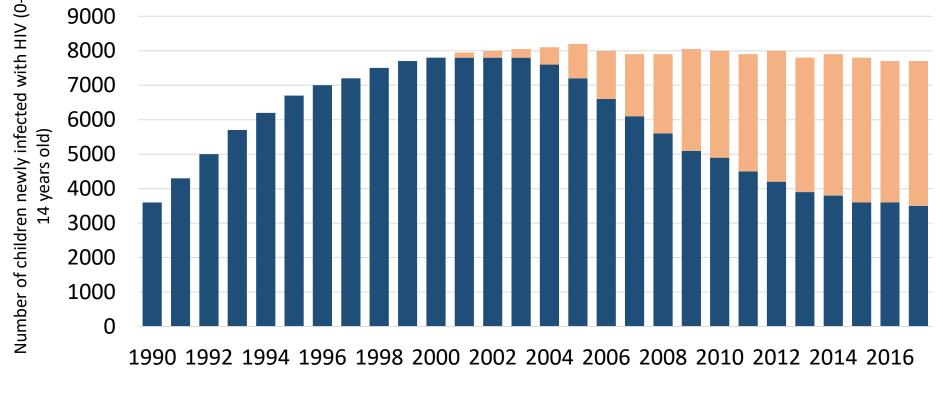


### 90-90-90, and ART coverage Latin America and the Caribbean



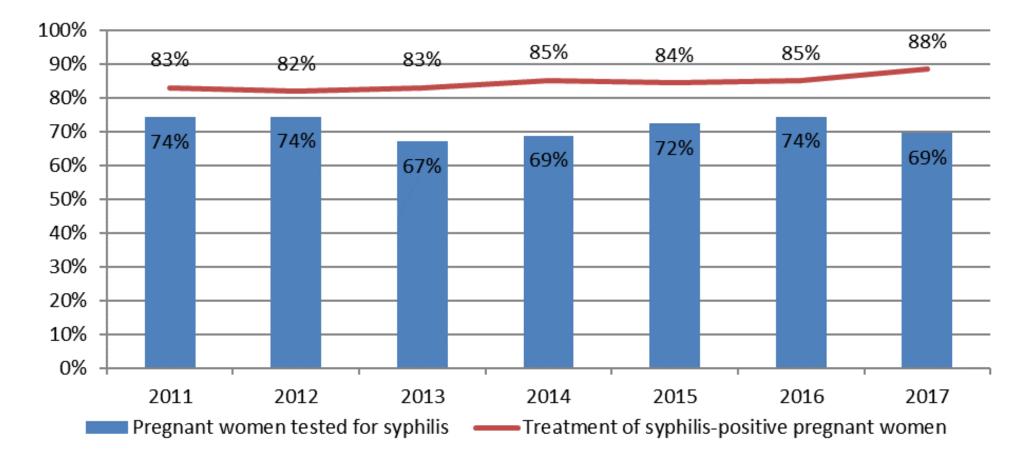


# Estimated number of children 0-14 years of age newly infected with HIV, and HIV infections averted due to the PMTCT in Latin America and the Caribbean, 2010-2017



New HIV infections in children (0-14)
HIV infections averted due to PMTCT

#### Pregnant women tested for syphilis and treatment coverage of those seroreactive in Latin America and the Caribbean, 2011–2017



Source: UNAIDS and WHO 2017 Global AIDS Monitoring Online Reporting Tool; PAHO Country reports on the elimination of MTCT. Regional syphilis screening and treatment were based on data from 24 and 21 countries, respectively.



## Validation of EMTCT of HIV and syphilis



#### **Countries validated by 2017**

Anguilla Antigua and Barbuda Bermuda Cayman Islands Cuba Montserrat St. Kitts and Nevis Moving toward a generation free of HIV and syphilis in the Caribbean

Pan American Health Organization

unicef 🕙 🛞 UNAIDS 🚺

Validation Ceremony for the Achievement of Elimination of Mother-to-Child Transmission of HIV and Syphilis



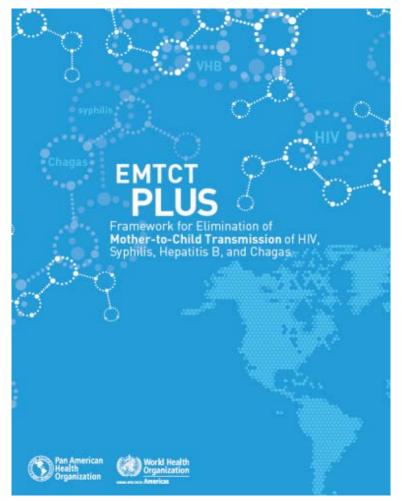
## EMTCT Plus: HIV, syphilis, Chagas, HBV

#### Objective

Achieve and sustain elimination of mother-to-child transmission of HIV, syphilis, Chagas and perinatal hepatitis B in the Americas by 2020

#### Impact Targets

- □ ≤2% MTCT of HIV
- □ ≤0.5 congenital syphilis cases per 1,000 lb
- □ <0.1% HBsAg prevalence among 4-6 y/old
- □ ≥90% of children cured of Chagas infection with post-treatment negative serology



## Programmatic Objectives



For all	<ul> <li>≥95% coverage of ANC and hospital deliveries</li> <li>≤10% of unmet family planning needs among women (15-49 years-old)</li> </ul>			
HIV	≥95% coverage of <b>HIV testing</b> of pregnant women			
	▶ ≥95% ART coverage in pregnant women			
Synhilic	▶ ≥95% coverage of syphilis testing of pregnant women			
Syphilis	≥95% coverage of adequate syphilis treatment in pregnant women			
	▶ ≥95% coverage of HBV Birth Dose (<24 hours)			
Hepatitis B	≥95% coverage of <b>HBV Third Dose</b> in the first year			
	≥85% coverage of birth and third dose in all provinces [supporting target – country level]			
	≥80% coverage of HBsAg testing of pregnant women [supporting target – country level]			
	≥80% coverage of HBIG to exposed neonates [supporting target – country level]			
	▶ ≥90% testing of pregnant women			
Chagas	≥90% testing of neonates to seropositive mothers			
	≥90% treatment of seropositive mothers			



#### AN INTEGRATED SUSTAINABLE APPROACH TOWARDS ENDING COMMUNICABLE DISEASES AND RELATED CONDITIONS IN THE AMERICAS





PAHO/WHO

### 37 Diseases and related conditions candidates for elimination by 2030

Elimination as a public health problem			Elimination of transmission	
	2020	Congenital Chagas Congenital Syphilis	2020	Hepatitis B, mother-to-child and early childhood transmission
	2022	HIV (mother-to-child-transmission) Echinococcosis/hydatidosis	2022	Chagas disease Onchocerciasis (river blindness)
		Fascioliasis		Rabies, dog-mediated
		Leishmaniasis, cutaneous/mucocutaneous	2030	Malaria (P. falciparum and P. vivax), and malaria epidemics
		Leishmaniasis, visceral	Maintain	Congenital Rubella
		Leprosy		Measles
		Lymphatic filariasis		Poliomyelitis
		Plague		Rubella
		Soil-transmitted helminthiasis (ascariasis, trichuriasis and hookworm)		Urban Yellow Fever reoccurrence
		Taeniasis/cysticercosis(caused by Taenia solium)	-	Diphtheria
		Trachoma		
		Schistosomiasis		Eradication
		Cervical Cancer	2020 Maintain	Foot-and-mouth-disease in domestic bovids
	2030	Cholera		Yaws (Endemic treponematoses)
		Hepatitis B and C infection and related liver cancer/cirrhosis		
		HIV		Elimination as a public health problem
		STI: Syphilis and gonorrhea, non-drug resistant		Environmental determinants of health
	2025	TB/AIDS epidemics	2030	Open defecation
	2035	Tuberculosis, non-drug resistant		
	Maintain	Neonatal tetanus	2030	Polluting biomass cooking fuels





