

Stop  Partnership

BANCO DE IMAGENS:

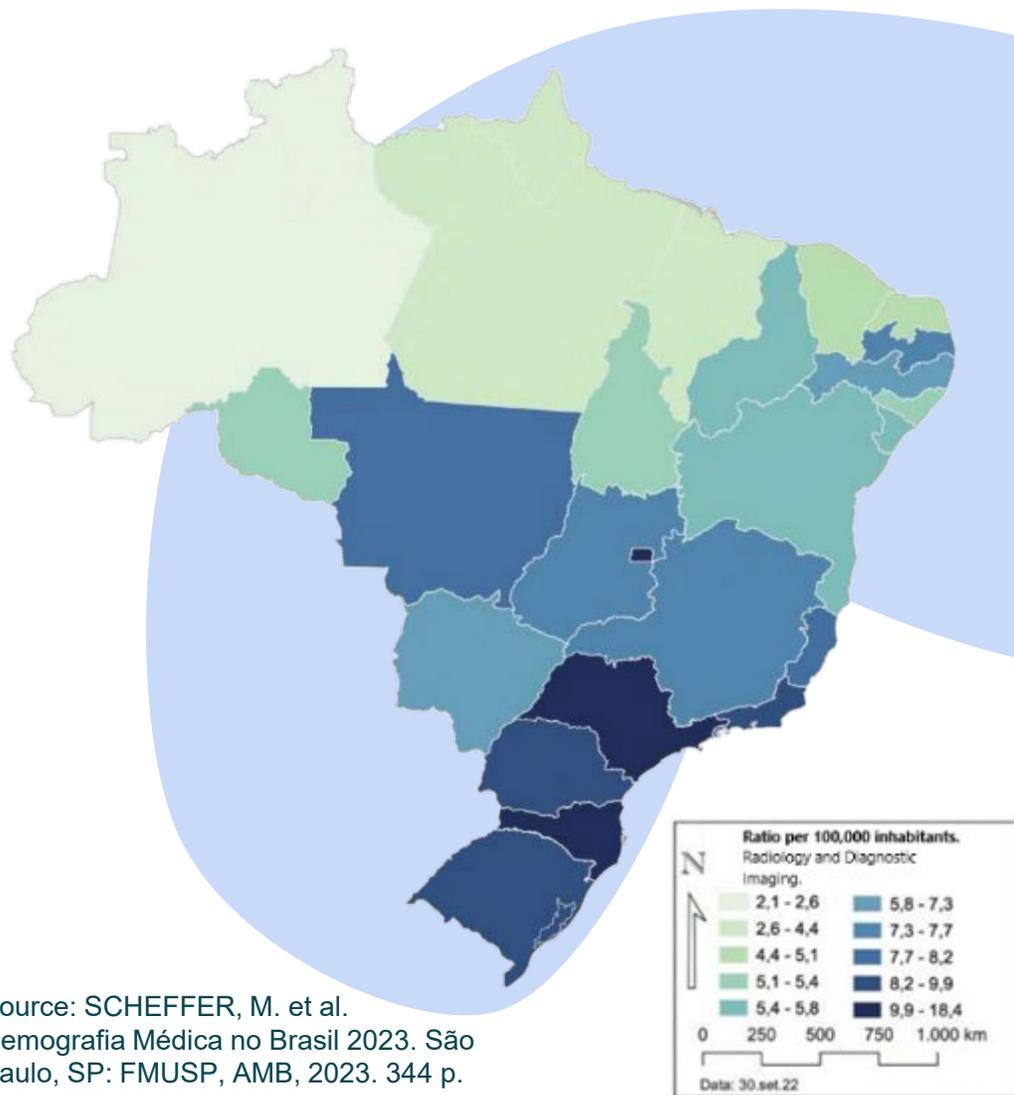
Brazilian Platform Of Medical Imaging Archive And Artificial Intelligence

Thiago Fellipe Ortiz de Camargo, Hospital Israelita
Albert Einstein.

thiago.ortiz@einstein.br

37th Board Meeting
Brasilia, Brazil
6–8 February 2024

 **END
TB**



Brazil's Unified Health System (SUS)

SUS is one of the most comprehensive and complex public health systems in the world, providing everything from basic care to organ transplants, with universal and free access. It ensures all Brazilians the right to comprehensive health care, focusing on health prevention and promotion throughout life.

Source: SCHEFFER, M. et al. Demografia Médica no Brasil 2023. São Paulo, SP: FMUSP, AMB, 2023. 344 p. ISBN: 978-65-00-60986-8



Banco de imagens

Artificial Intelligence Algorithms

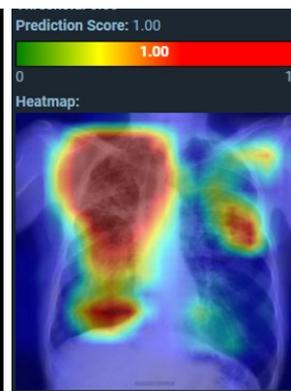
Thorax

Lung Abnormality Model



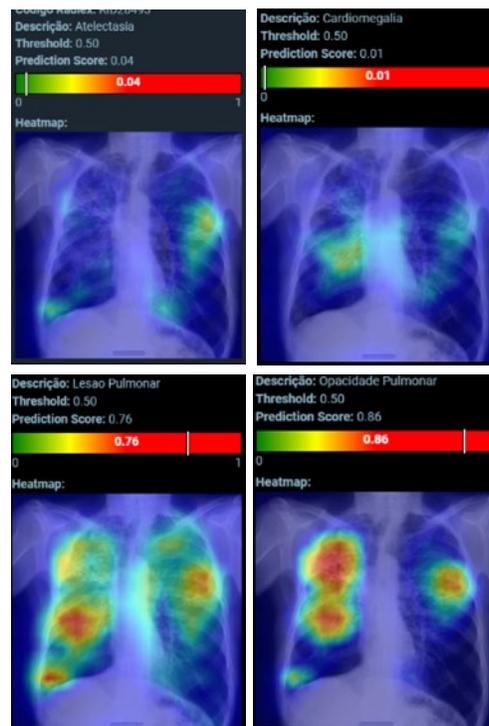
Accuracy*
of 0.89

Tuberculosis Model



Accuracy*
of 0.65

Radiological Findings Model



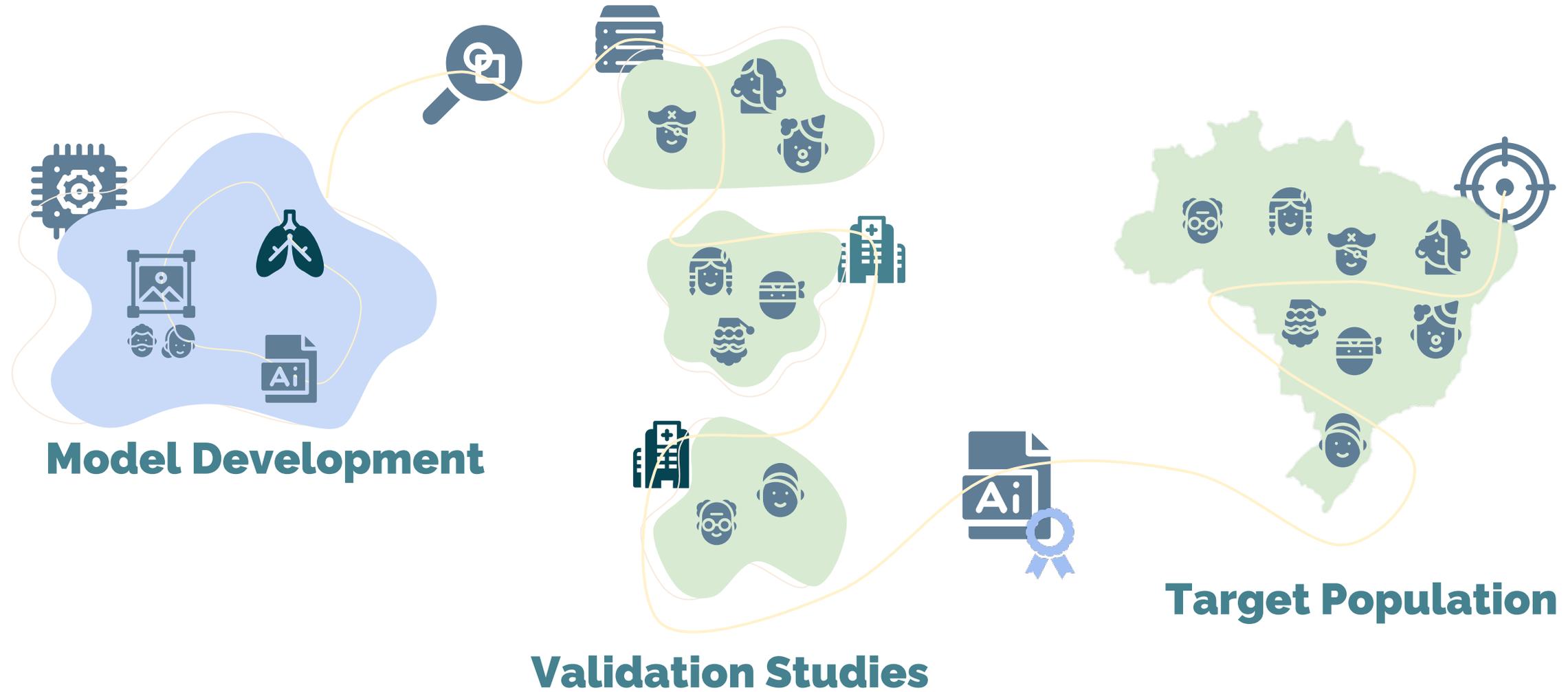
Accuracy* within
0.71 and 0.95

Partnerships



* Clinical Validation Preliminary Results

Clinical Validation



VIDEO

Become Our Partner!

Website



Thiago Ortiz (Data Scientist)
thiago.ortiz@einstein.br

Project's e-mail:
contatobancodeimagens@einstein.br

Link: <https://bancodeimagens.io>



Banco de imagens



MINISTÉRIO DA
SAÚDE



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Sesión de innovación

USO DE INTELIGENCIA ARTIFICIAL Y RADIOGRAFÍA DE TÓRAX PARA EXAMINAR EN LAS PRISIONES Y A POBLACIONES CLAVE

Dra. Valentina Alarcón Guizado

Directora Ejecutiva

Programa Nacional de Control de la Tuberculosis

Ministerio de Salud – Perú

37th Board Meeting

Brasilia, Brazil

6–8 February 2024



Estimates of TB burden by WHO
Total TB incidence: 52,000

- ✓ Población: 33'833,230 habitantes.
- ✓ Densidad poblacional: 25 hab. x km²
- ✓ 25 Regiones geográficas

Casos de TB

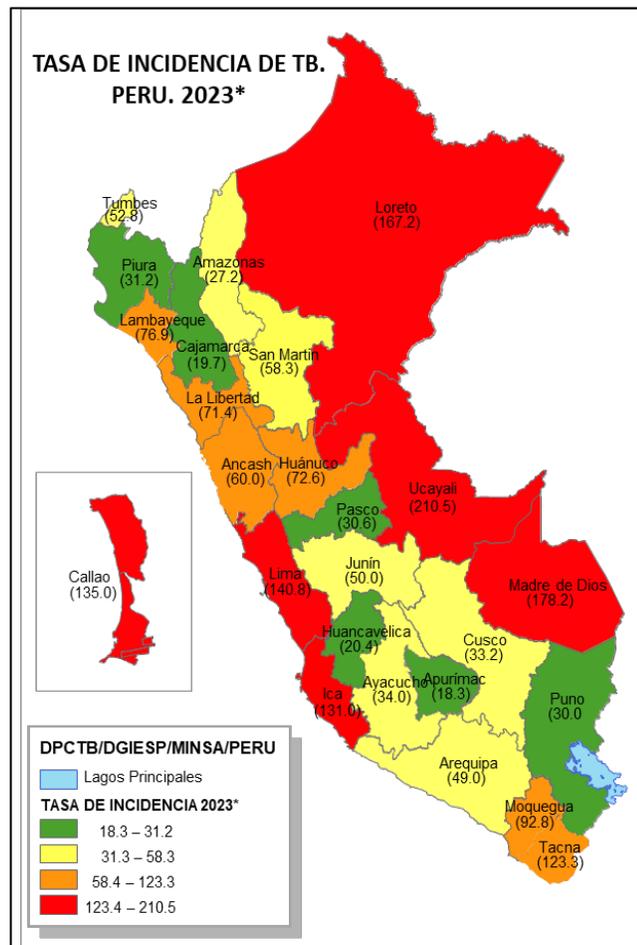
- ✓ Morbilidad de casos de TB: **32,769**
- ✓ Casos Nuevos + Recaídas de TB: **31,145**

Casos MDR/RR

- ✓ Casos TB-MDR/RR: **1,290**
- ✓ Casos TB-RR: **532**
- ✓ Casos TB-XDR: **4**

Casos en Lima

- ✓ **56.3%** (18,233)
- ✓ **78.0 %** (1001) de TB-MDR.
- ✓ **100.0 %** (4) de TB-XDR



Active TB case finding in risk groups:

- ✓ Prison population
- ✓ Educational institution
- ✓ Youth rehabilitation centers
- ✓ Hot Spot

Algorithms using artificial intelligence & rapid molecular test



CAD 4 TB

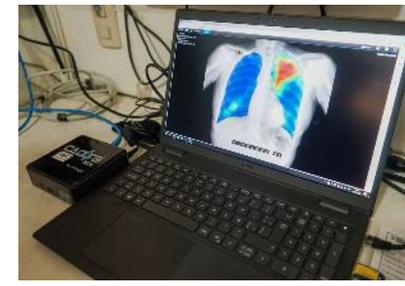


Notification Rate INPE-PERÚ 2022



PERU	INPE
Peruvian Population: 33,883,000 habitantes	Prison population: 93,523 inmates
Notification Rate of Total TB cases: 88.9 x 100,000 habitantes	Notification Rate of Total TB cases: 3138 x 100,000 hab.
Insufficient radiology equipment and radiology personnel	Insufficient radiology equipment and radiology personnel

Computer-Aided Detection for Tuberculosis software for Chest Xray analysis is very useful in this circumstance

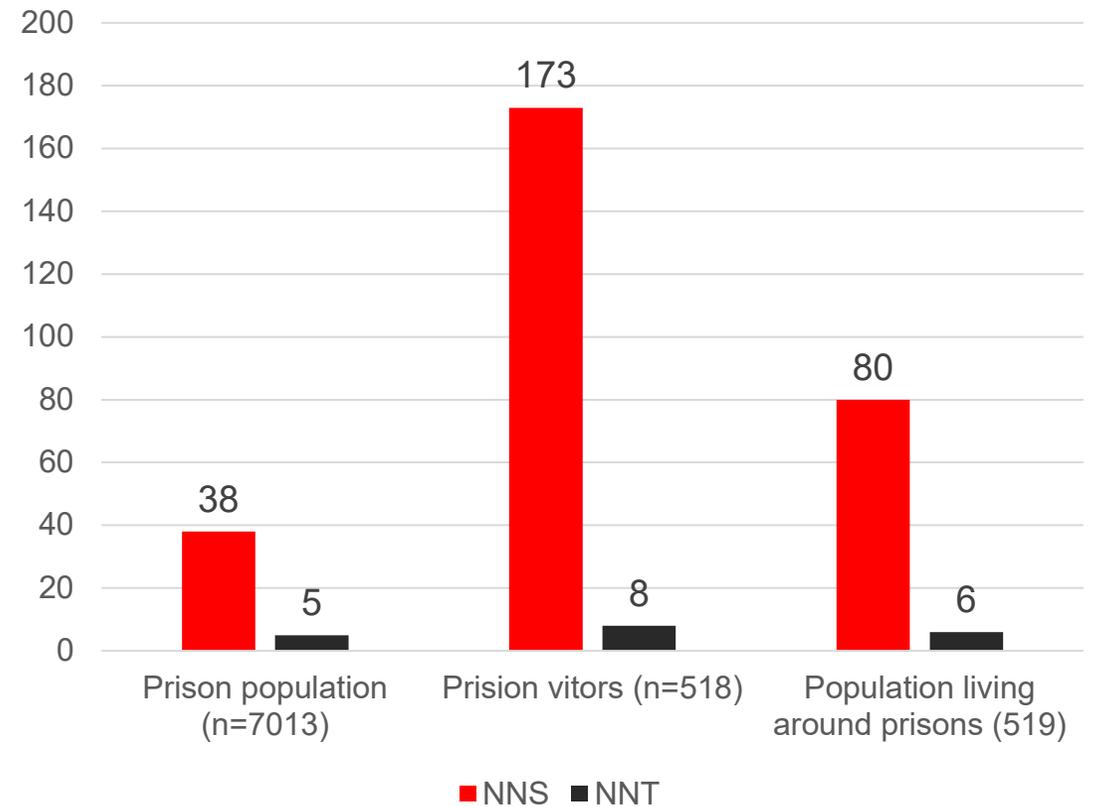


Risk Groups

	Prison population (n=7013)	INPE Workers (n=455)	Prison visitors (n=518)	Population living around prisons (n=159)
Screened	7013	455	518	159
Abnormal CXR by CAD	1129	33	42	16
Tested by Xpert Ultra	890	28	25	12
Xprt Ultra Positive	185	0	3	12
TB rate x 100 mil hab	2638	NA	579	125

54% of inmates with a positive Xpert Ultra did not have a cough

Number needed to screen & number needed to test



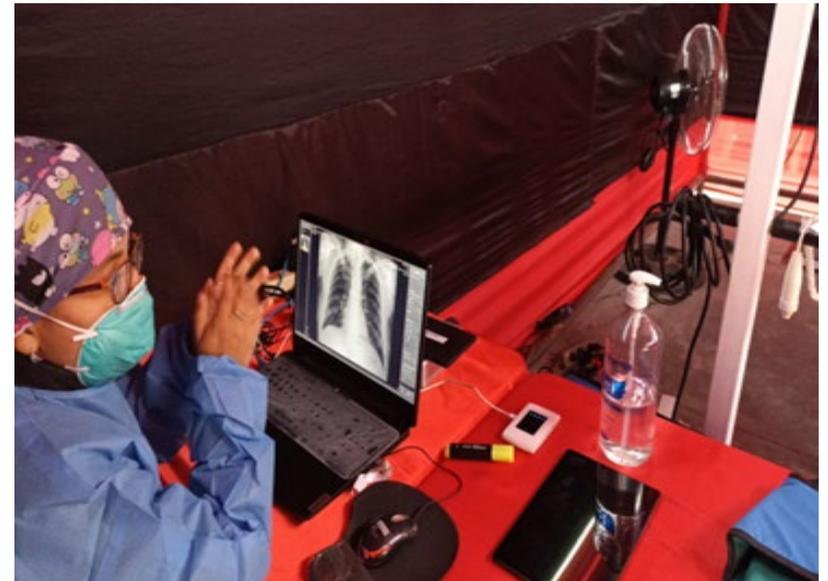
Prison population NNS 38 & NNT 5

- The use of these tools could be implemented in places with difficult access such as prisons
- 16% of the inmates screened presented a suspected TB case, 7% the INPE staff, 8% the inmates' visitors and 10% the population living around the prisons
- 54% of inmates with a positive Xpert Ultra did not have a cough



IN THE FUTURE

There are plans to introduce 26 digital chest X-ray (dCXR) computer-aided detection (CAD) technology in Lima at the primary level care and later implement it in the rest of the country in 2024



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Sesión de innovación

PARAGUAY



Dra. Sarita Aguirre
Directora

Programa Nacional de Control de la Tuberculosis

37th Board Meeting
Brasilia, Brazil
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TB en PARAGUAY

- ✓ Incidencia TB - 3,100 en 2022
- ✓ Número de casos TB DR – 19 en 2022
- ✓ Pruebas rápidas moleculares (Xpert) introducidas en 2013 con 2 maquinas.
- ✓ OMS recomienda que sea primera prueba diagnostica
- ✓ En 2017, solo 4 de 17 departamentos tenían GeneXpert

2018:

Conformación del Frente Parlamentario contra la TB en Paraguay

2019

Abogacía y sensibilización para aumentar el presupuesto nacional de adquisición de insumos para el Dx



INCORPORACIÓN DE EQUIPOS DE GENEXPERT POR DEPARTAMENTO. PARAGUAY 2013 - 2023



2 equipos

7 equipos

19 equipos

36 equipos



2013



2017



2020



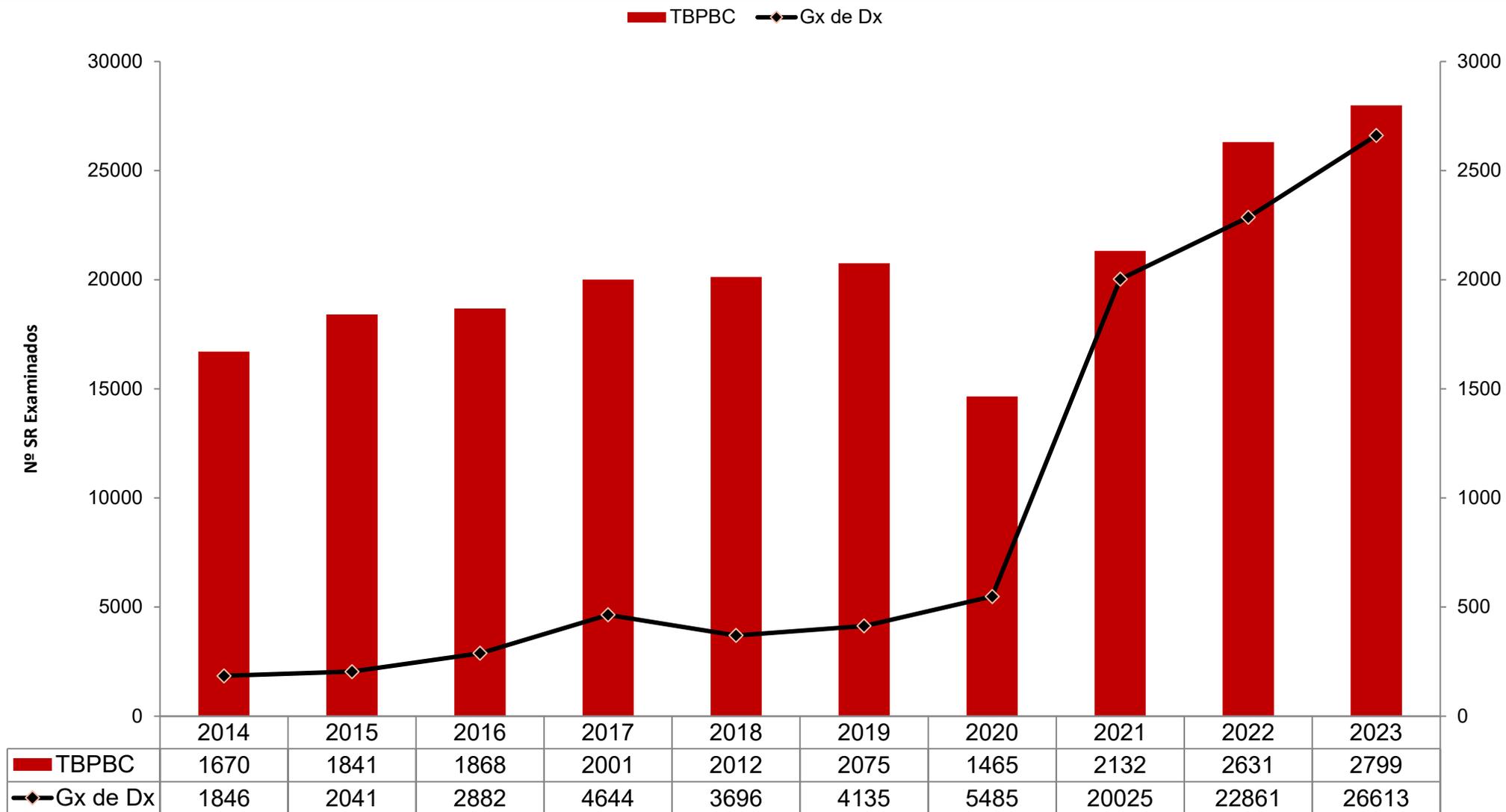
2023

(29 laboratorios)

-  Con Genexpert
-  Sin Genexpert

ACTIVIDADES DE DETECCIÓN DE CASOS. PARAGUAY, 2014-2023*

(SRE, BACTERIOLOGÍA DE DIAGNÓSTICO Y CASOS DE TB BACTERIOLÓGICAMENTE CONFIRMADOS)



Fuente: MSP y BS/PNCT

*Datos preliminares

ACTIVIDADES DE DETECCIÓN DE CASOS DE TB



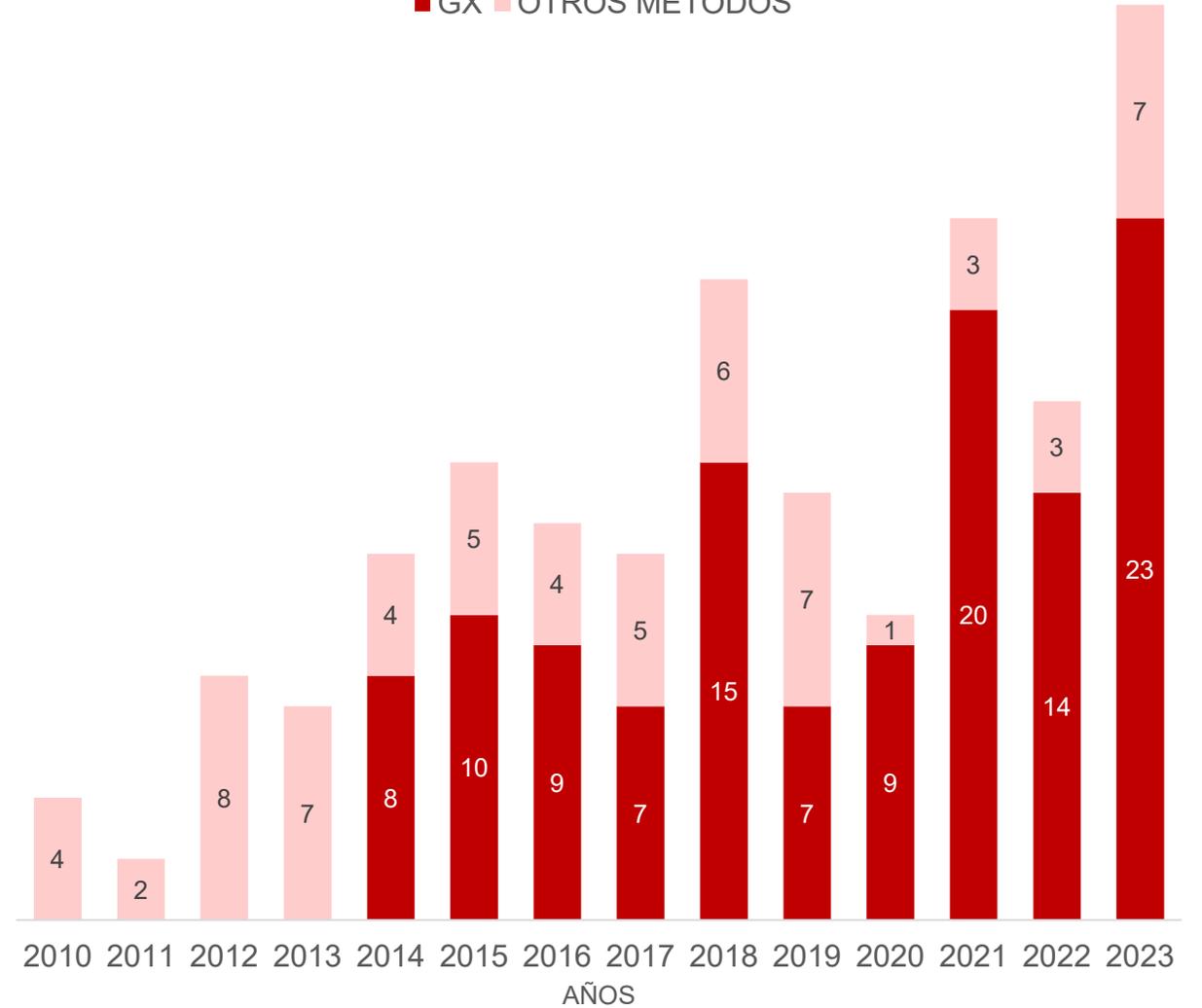
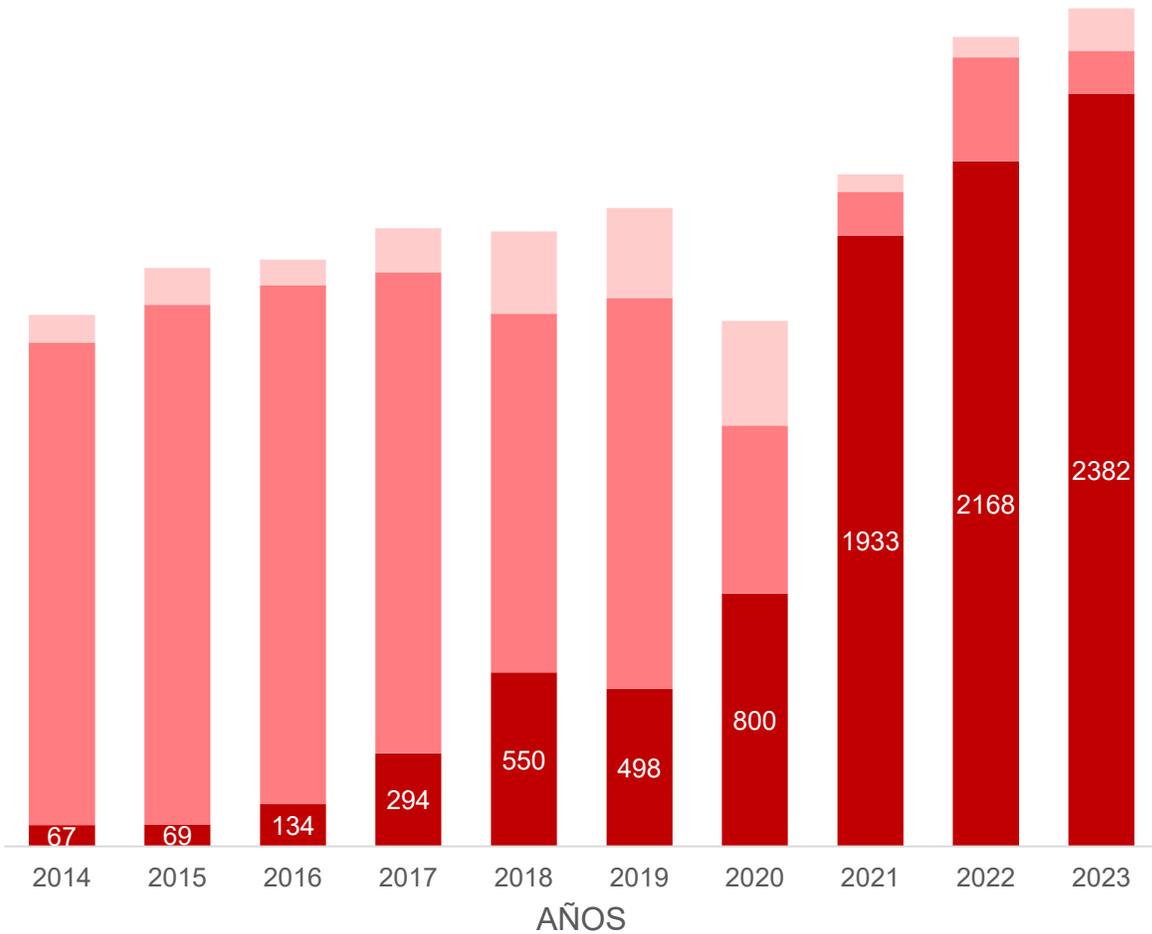
CASOS DE TUBERCULOSIS PULMONAR BACTERIOLÓGICAMENTE CONFIRMADA SEGÚN MÉTODO DE DIAGNÓSTICO. PARAGUAY, 2014 – 2023*

CASOS DE TUBERCULOSIS RR-MDR DETECTADOS A TRAVÉS PARAGUAY 2010 – 2023*

IR.T.

■ GX ■ BK ■ CULTIVO

■ GX ■ OTROS MÉTODOS



Fuente: MSP y BS/PNCT

*Datos preliminares

Logros

- ✓ 560% increase in Xpert testing in 6 years
- ✓ 90% of people tested for TB receive Xpert as first test
- ✓ 2023 TB notifications 3679 are more than current estimates (3,100)
- ✓ 73% of notifications are bacteriologically confirmed
- ✓ 30 people diagnosed with DR-TB in 2023 (WHO estimate 19) 250% increase since 2017
- ✓ All domestically funded through parliamentary TB caucus advocacy

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ExpandTPT

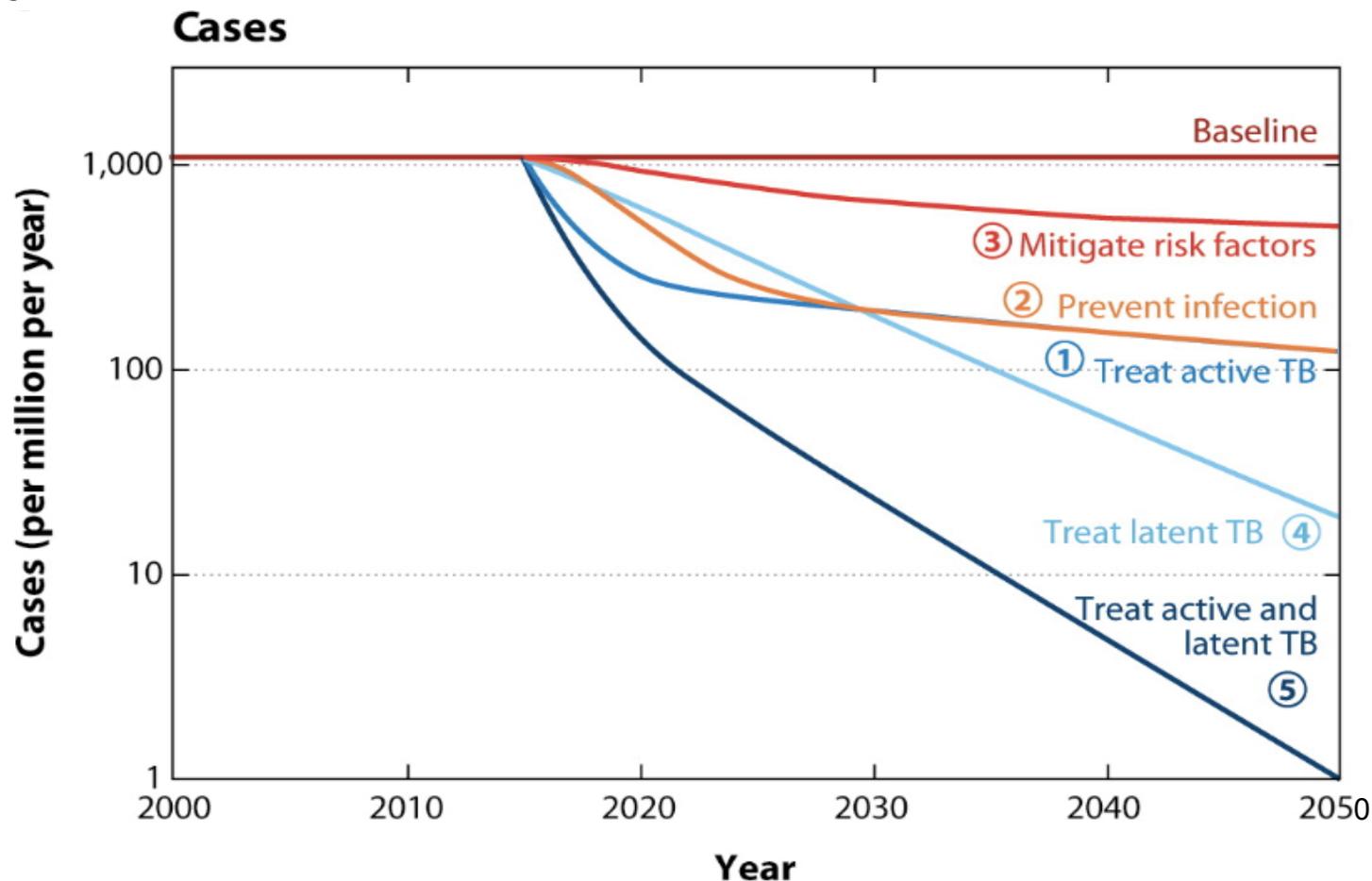
Expanding Tuberculosis Preventive Treatment
(TPT) in 5 Brazilian cities

Anete Trajman, UFRJ, Rede-TB

37th Board Meeting
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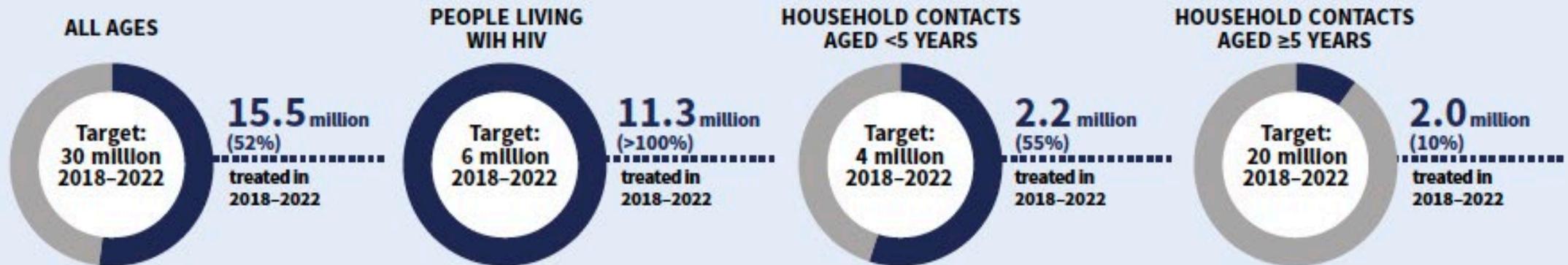
TB preventive treatment (TPT) is the most effective strategy for TB elimination



High level meeting NY 2023: offer 45 million TPT

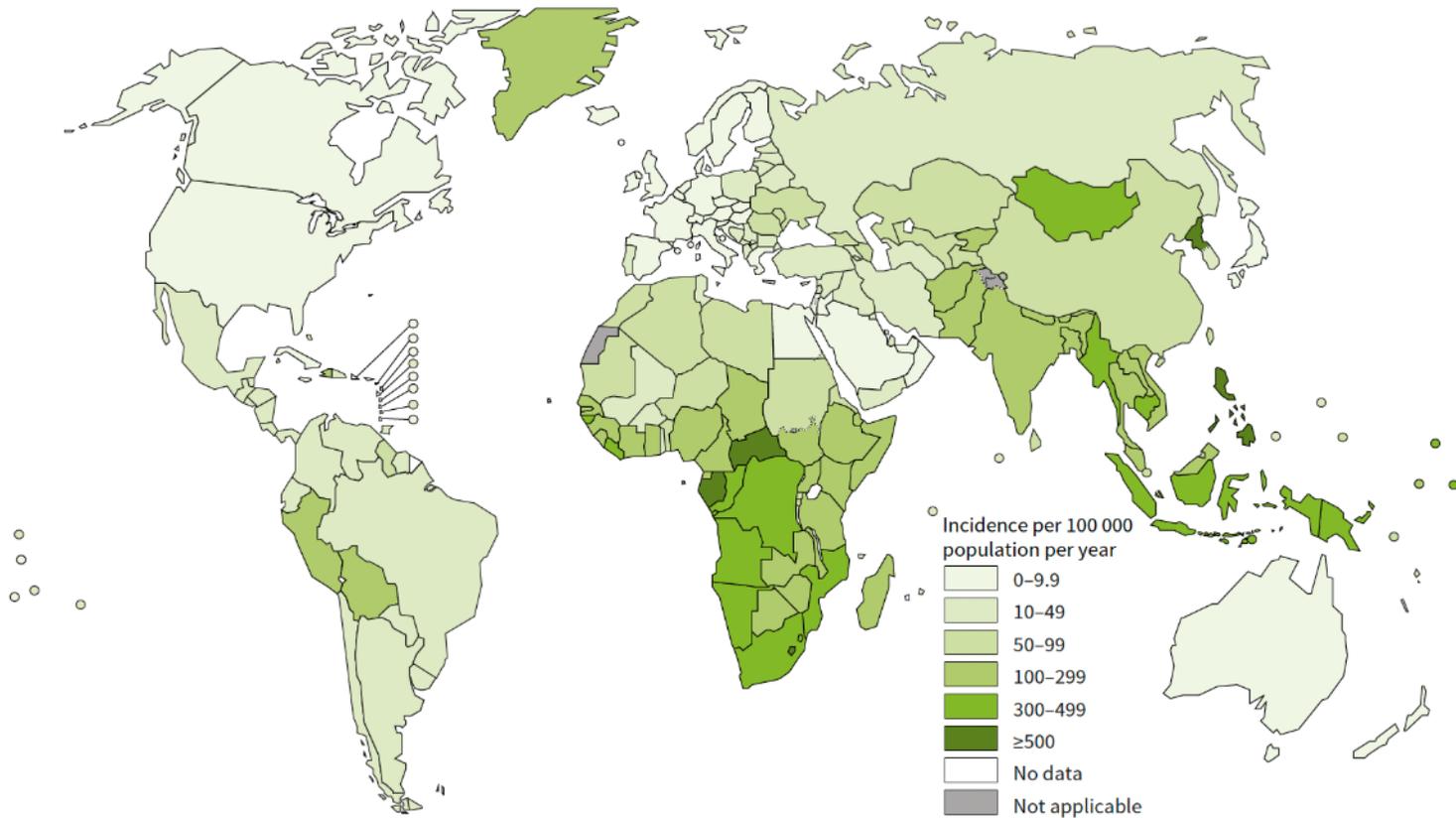
- We did not do a good job 2018-2022 (30 million), especially in contacts > 5 years of age

2018 UN high-level meeting on TB: TB preventive treatment targets



We need to scale-up TPT in Latin America

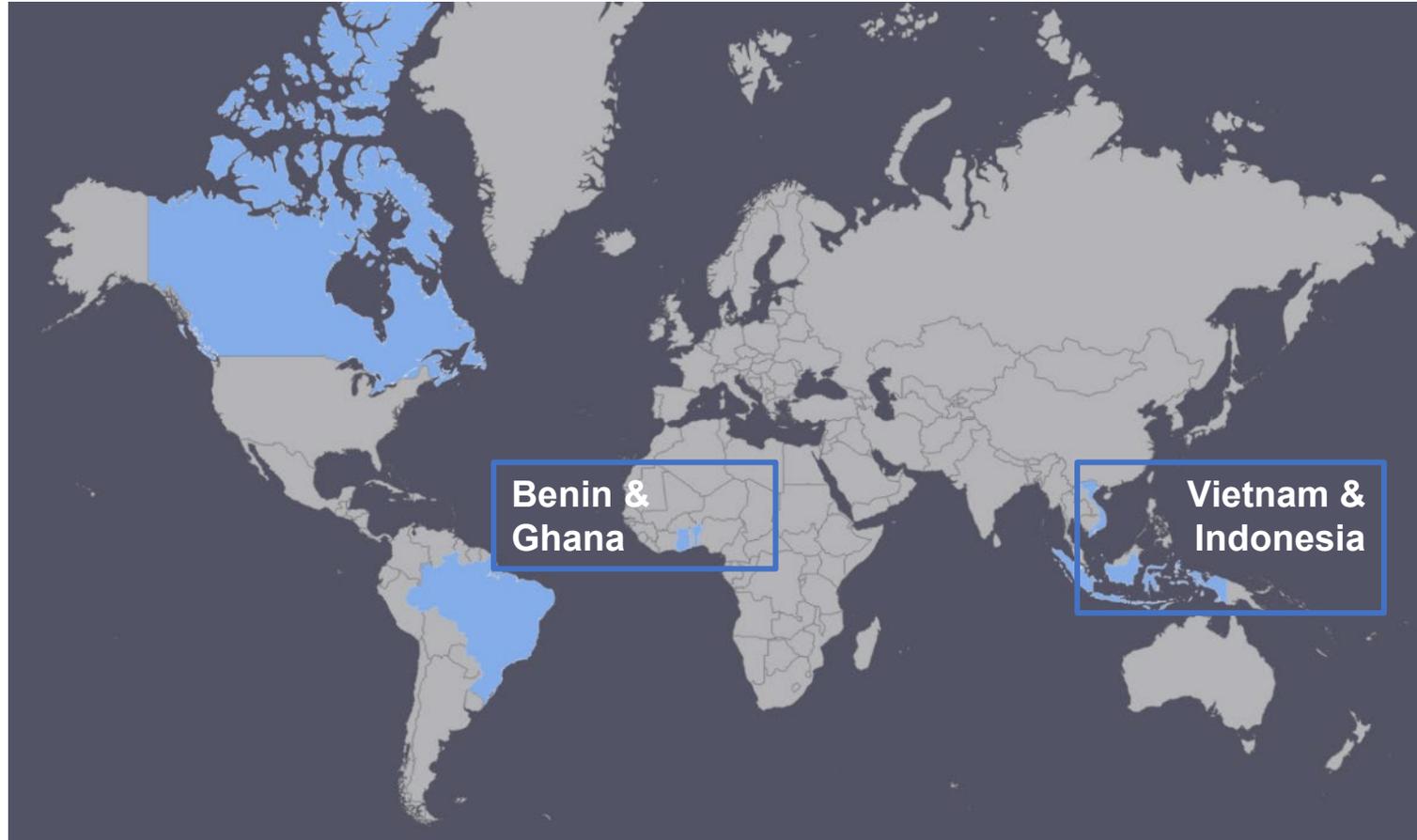
Estimated TB incidence rates, 2022



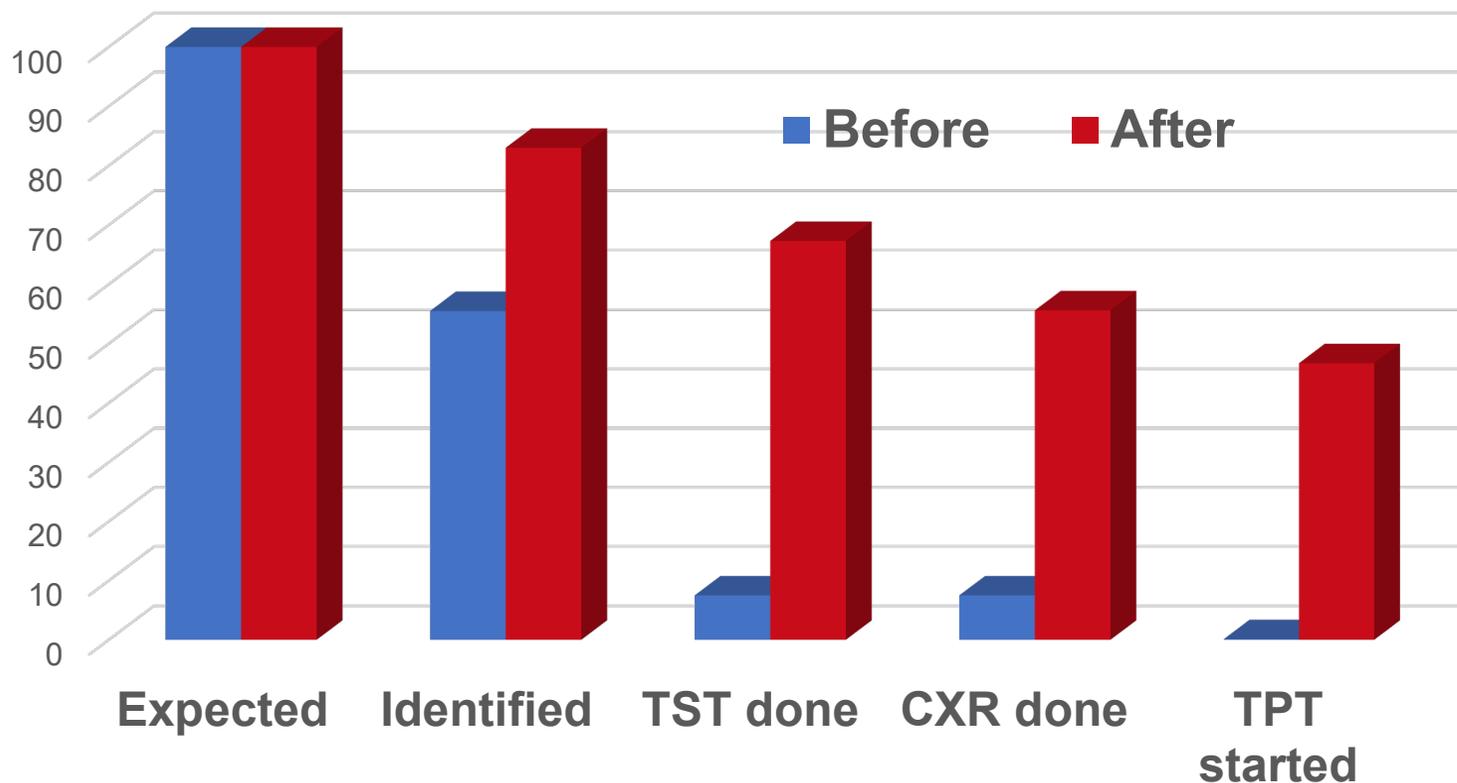
This is the objective of the ExpandTPT program



The program is based on the ACT-4 study



With simple solutions, TPT started raised from <1% to 47%



Innovations in training



GUIA D@S ACS PARA TPT

Identificação, avaliação e tratamento preventivo dos contatos de pessoas com tuberculose pulmonar



Partial results: health system strengthening

Training of over 15,000 HCW in the National guidelines

Training of 400 HCW for the use of a contact registry book

Training of 100 HCW on TST application and reading

Technical visits with the NTP to the 5 cities

Detailed diagnosis of 400 participating clinics' obstacles

Main bottlenecks

- PPD stock out May-September 2023
- MD resistance
- CXR reports are delayed

Solutions

- Donation of TBST (Cy-T)
- RN now authorized to prescribed
- CAD



We have received additional funding from the MoH for the expansion and for Cy-TB evaluation



Obrigada! Thank you!

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Sesión de Innovación

Abordaje en Poblaciones Vulnerables
Argentina

Dr Santiago Jimenez
Casa Masantonio

37th Board Meeting
Brasilia, Brazil
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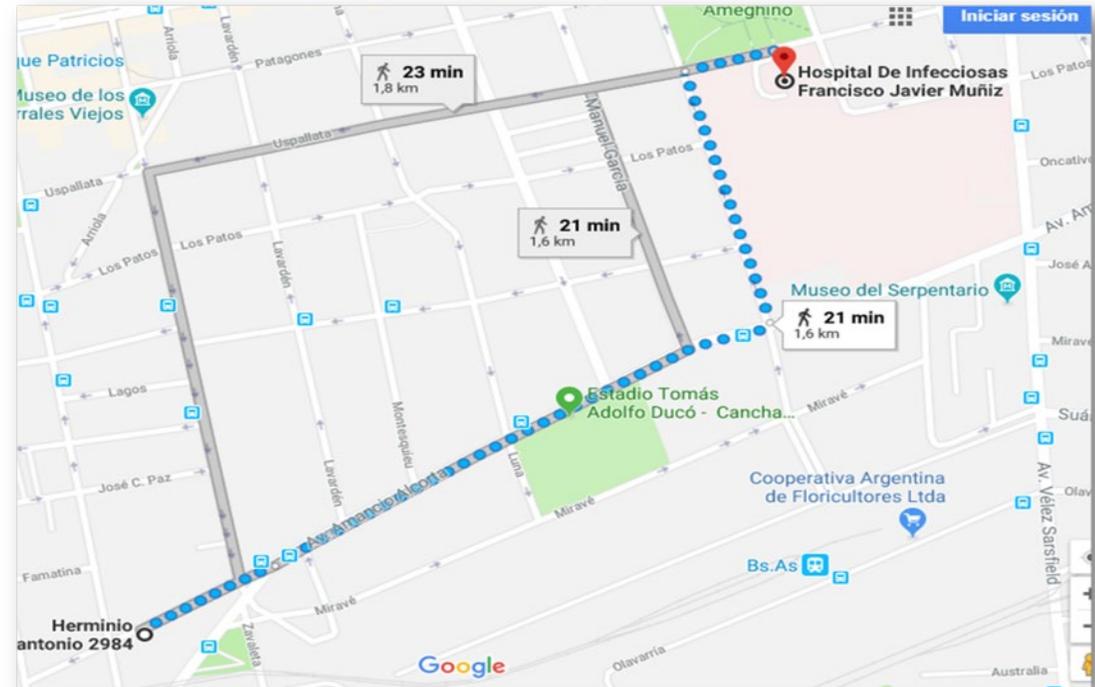




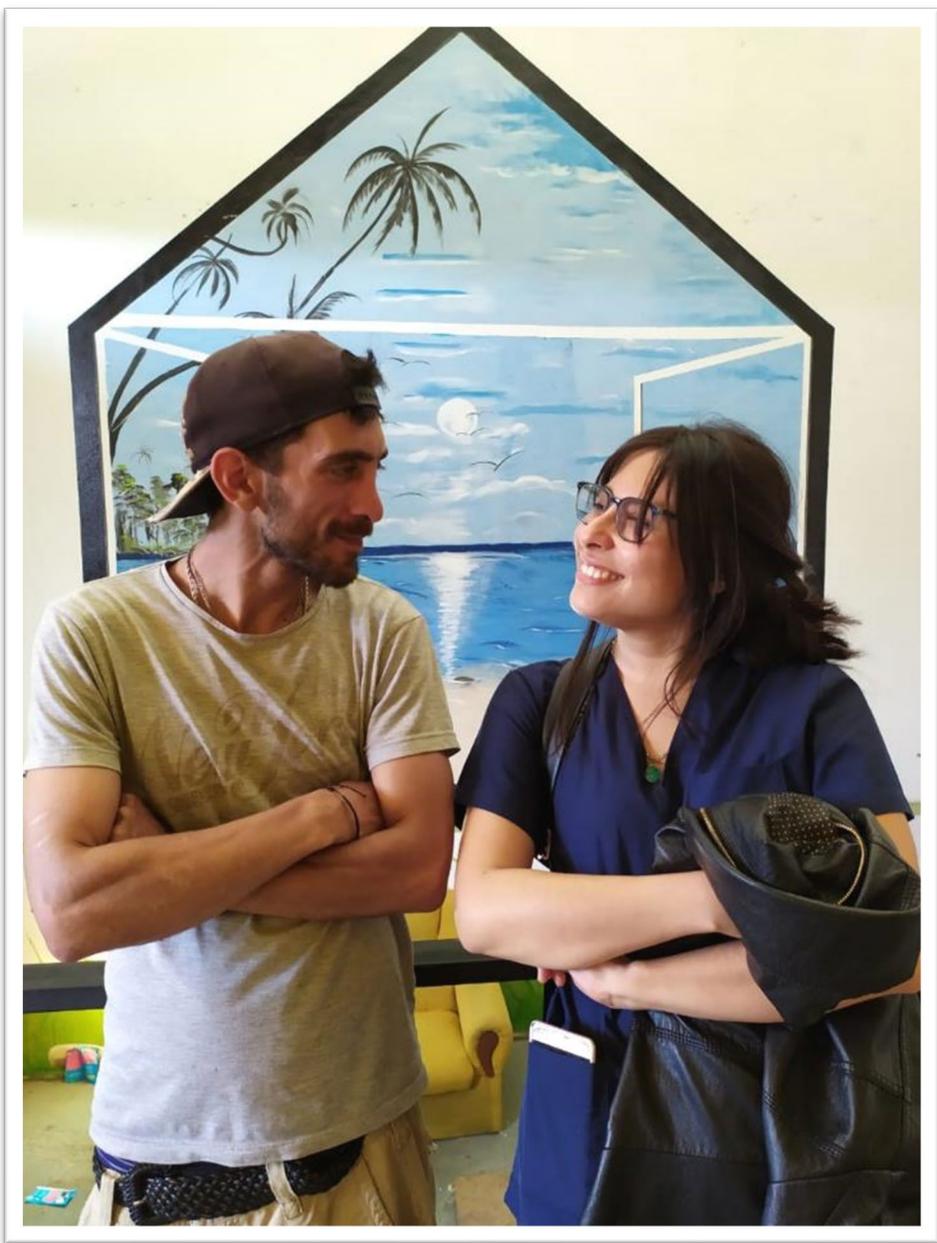
Dispositivo de atención diferenciada



A screenshot of a social media profile page, likely from Facebook, displayed within a circular frame. The page features a grid of numerous small profile pictures of various individuals. At the top, there is a header with a profile picture and some text. The grid is organized into several rows and columns, with some photos showing people in different settings or activities. The overall layout is clean and typical of a social media profile.











COLABORÁ



info@hogardecristo.org.ar

LA FEDERACIÓN ▾

CENTROS BARRIALES ▾

ESCUELA ▾

BIBLIOTECA ▾

NOTAS

EVENTOS / CALENDARIO

CONTACTO ▾



Map Locations

- Dispositivos con trabajo en territorio en Villa 31 / Villa 1-11-14/ Villa 21-24/ Villa 15
- Mas de 500 personas en extrema vulnerabilidad acompañadas
- 63% personas en situación de calle
- 42% coinfección VIH
- 83% Formas TB pulmonares 17% Formas Extrapulmonares
- 92% Multisensible 8% MDR
- **93% Éxito de tratamiento (tratamientos completos + Criterios de curación)**



OPS/OMS Argentina - PAHO/WHO Argentina
1 de noviembre de 2010

Casa Masantonio es un dispositivo de contención y tratamiento contra la tuberculosis que, con un sistema innovador de acompañamiento, abarca poblaciones vulnerables de Buenos Aires. Conocélo: <https://bit.ly/2zphdK3>





Siempre parece
IMPOSIBLE
hasta que se hace

RECIBIRSE



Muchas Gracias por su atención



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Person-centered strategies using CAD software to interpret CXR during active case finding for tuberculosis in groups with high tuberculosis burdens that have difficult access to the health system

Marco Tovar, Medical Director, Socios en Salud, Perú

37th Board Meeting

Brasilia, Brazil

6–8 February 2024



A big problem to address is fighting against indifference and discrimination (drug abusers or transgenders).

And for other populations such as the riverside communities in Loreto, the difficulty of geographic access only through the Amazon river.

Youth Rehabilitation Centers



More than 85% of rehabilitation centers for people suffering from addictions are informal

Communities on the Banks of the Jungle Rivers



98% of health facilities are first level care centers, of which 60% are level I-1 health posts that are basically attended by technical personnel

Transgender Women



“Many of us die because we don't go to hospitals, because we don't go to health centers. (...) You are in pain, you go and they say 'sir', you complain and they say 'here you are a man', then they are mistreating you. All of this means that you do not return to the health center,” says Dania.

Many difficulties in accessing health care

Youth Rehabilitation Centers



Communities on the Banks of the Jungle Rivers

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Transgender Women



Trans-led organizations

Youth Rehabilitation Centers

❖ **2,469** cases of active TB per 100 thousand screened

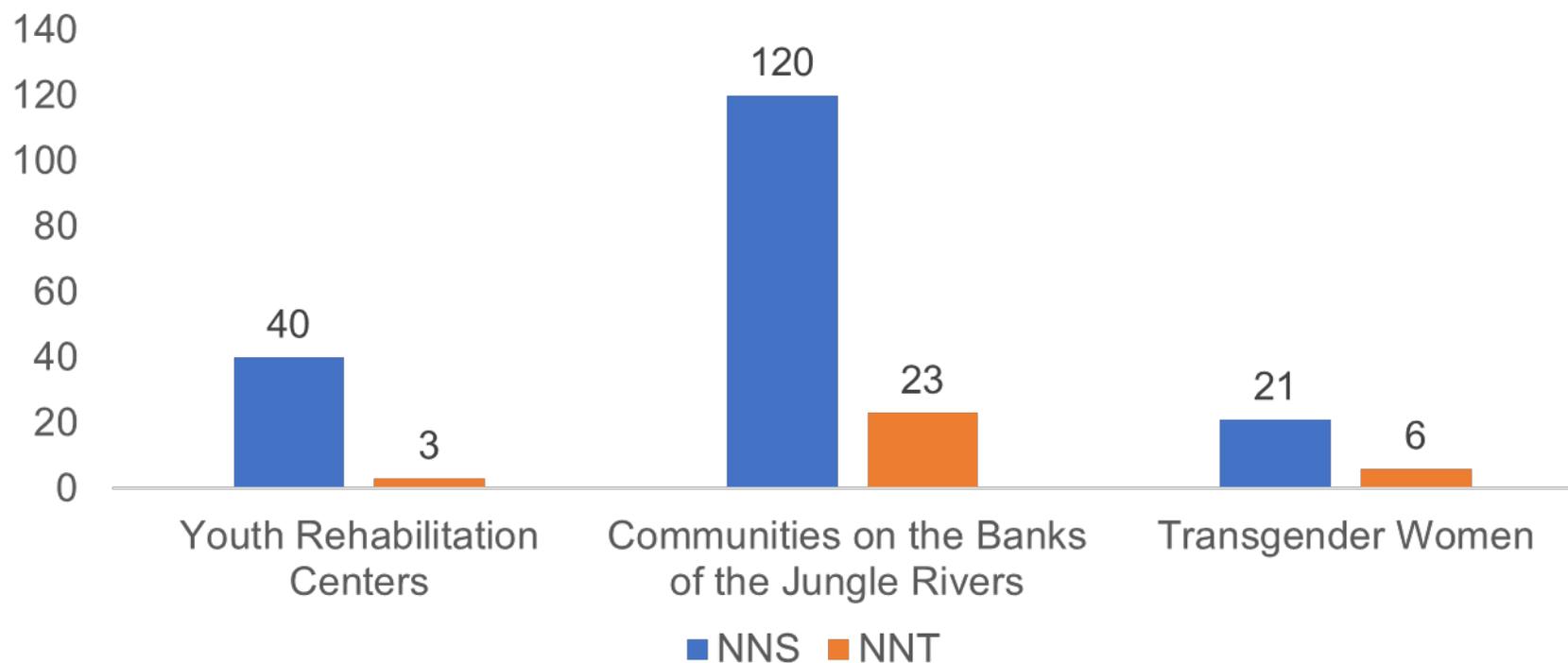
Communities on the Banks of the Jungle Rivers

❖ **831** cases of active TB per 100 thousand screened

Transgender Women

❖ **4,900** cases of active TB per 100 thousand screened

Number needed to screen & Number needed to test



For the future, we expect to acquire

- ❖ New X-Ray machines with more electrical autonomy (longer lasting batteries)
- ❖ New mWRDs for the detection of TB that are easier to transport to hard-to-reach places & more electrical autonomy (longer lasting batteries)

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Results Based Financing in the TB Response

Dra. Clara de la Cruz
NTP - Republica Dominicana

37th Board Meeting
Brasilia, Brazil
6–8 February 2024



Context: Political Declaration of the United Nations General Assembly NY, USA. 2018

Commitments Assumed by the Dominican Republic:

1. Increase in the national budget for TB.
2. Inclusion of patients in government social policies.
3. Replacement of diagnostic smear microscopy with rapid molecular tests.
4. Expansion of the use of new drugs and shortened treatment for TB and DR-TB.

POSICIÓN DE REPÚBLICA DOMINICANA

Gracias Señor Presidente:

La Tuberculosis representa un serio problema para la salud, causando la muerte de cerca de dos millones de personas a nivel mundial. Los decesos que provoca la tuberculosis no se distribuyen por igual entre la población y que los pobres son los más afectados directamente por la enfermedad, el VIH/sida, la falta de acceso a servicios de salud, a nutrición adecuada y por la carga estigmatizante que aún en el siglo XXI prevalece en muchos lugares del mundo.

Esta realidad, junto a los reportes que dan cuenta que 4 millones de personas aún no han sido detectadas, manteniendo la transmisión de la enfermedad en la comunidad, indican que no estamos teniendo el impacto esperado y que se requiere acelerar los esfuerzos para eliminar la Tuberculosis.

El compromiso político es la pieza clave para lograrlo: garantizar el financiamiento sostenido para mejorar el acceso a pruebas diagnósticas rápidas y a nuevos medicamentos; abordar la resistencia a fármacos, la coinfección TB/VIH y trabajar con los grupos poblacionales que concentran la mayor incidencia de la enfermedad: *Las personas viviendo en extrema pobreza.*

República Dominicana, implementa la Estrategia Fin de la Tuberculosis, en el reporte de la OMS se evidencia una tendencia a la reducción de la TB, de 60 a 45 por 100,000 habitantes, producto del compromiso político con la eliminación de esta enfermedad: Actualizamos nuestra planificación estratégica, hemos incrementado el presupuesto para la respuesta a esta enfermedad, se han introducido las pruebas moleculares rápidas y los nuevos medicamentos. Documentamos el efecto catastrófico de la tuberculosis, las personas que enferman de tuberculosis, pasan de 9% a 56% por debajo de la línea de pobreza. Por esta razón los afectados de TB ingresan a los planes sociales, a través del Programa Progresando con Solidaridad el 30% y al Seguro Nacional de Salud el 70%.

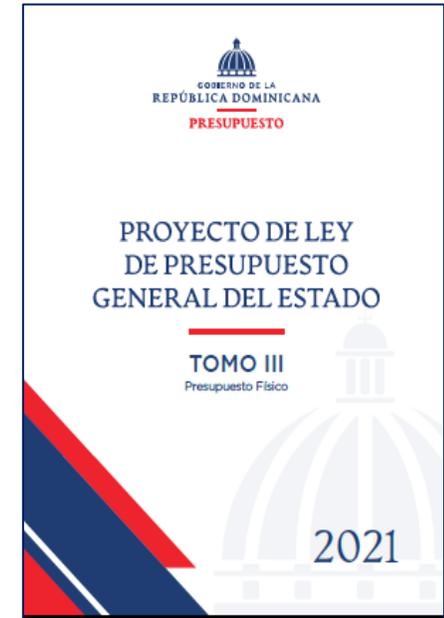
República Dominicana, ratifica el compromiso con El Fin de la Tuberculosis y el gobierno se compromete a continuar incrementando el presupuesto multisectorial que garantice la Respuesta Nacional a la Tuberculosis.

Luchar contra la tuberculosis es luchar contra la pobreza.

Muchas Gracias.

After Meeting UNLHM

- 2018:
 - Socialization of the meeting commitments.
 - Implementation of the Global Fund financing transition plan (2019-2021) to domestic funds.
- **Resource mobilization**
- Meeting of the Minister of Health with the National Budget Director, high-level commitments, transition plan.
- 2020: Tuberculosis Program is included in the Programs with Results-Oriented Budgets. period 2020-2025
- Surveillance Appropriate use of the Budget



Results Oriented Budgeting (PoR)

- Is a technique that links the use of state resources with the required results focuses on the comprehensive management of public resources.
- For To achieve these results, it is necessary to identify the problems and their causes, investigate the best interventions based on evidence to solve them, and the resources necessary to be included in the General State Budget.

Tabla 11. Costeo del programa de Prevención y Atención de la Tuberculosis en el Ministerio de Salud Pública y Asistencia Social (MSP) para el periodo 2020-2023

Capítulo/Subcapítulo/Programa/Producto/Objeto del Gasto/Denominación	Valores en Millones de RD\$			
	2020	2021	2022	2023
0207 - Ministerio de Salud Pública y Asistencia Social				
01 - Ministerio de Salud Pública y Asistencia Social				
41-Prevención y atención de la tuberculosis	161.56	175.83	187.69	202.00
01-Acciones comunes	16.87	17.52	18.19	18.89
2.1-Remuneraciones y Contribuciones	0.69	0.69	0.69	0.69
2.2-Contratación de Servicios	8.55	8.89	9.25	9.62
2.3-Materiales y Suministros	5.59	5.82	6.05	6.29
2.4-Transferencias Corrientes	1.40	1.46	1.51	1.57
2.6-Bienes Muebles, Inmuebles e Intangibles	0.63	0.66	0.69	0.71
02-Personas sintomáticos respiratorios detectados	59.57	61.95	64.43	67.01
2.2-Contratación de Servicios	4.15	4.32	4.49	4.67
2.3-Materiales y Suministros	53.92	56.08	58.32	60.65
2.6-Bienes Muebles, Inmuebles e Intangibles	1.50	1.56	1.62	1.69
03-Pacientes TB con factores de baja adherencia acceden a soporte nutricional en Santo Domingo y el Distrito Nacional	17.38	25.91	31.81	39.91
2.2-Contratación de Servicios	1.43	1.43	1.43	1.43
2.3-Materiales y Suministros	15.95	24.48	30.38	38.78
04-Personas contacto de casos TB investigada, evaluada y referida para tratamiento preventivo (general, migrantes y personas privadas de libertad)	12.95	13.47	14.01	14.57
2.3-Materiales y Suministros	11.95	12.43	12.92	13.44
2.6-Bienes Muebles, Inmuebles e Intangibles	1.00	1.04	1.08	1.12
05-Personas diagnosticadas con TB y TB drogo-resistente con acceso a medicamentos oportunamente	44.08	45.85	47.68	49.59
2.3-Materiales y Suministros	44.08	45.85	47.68	49.59
06-Personas con coinfección TB y VIH diagnosticada con acceso a medicamentos oportunamente	10.71	11.14	11.58	12.05
2.3-Materiales y Suministros	10.71	11.14	11.58	12.05

Nota: Las proyecciones indicativas para el periodo 2021-2023 contemplan la expansión a nivel nacional.
Fuente: Elaboración propia según datos del Sistema de Información de la Gestión Financiera (SIGEF) y Ministerio de Salud Pública y Asistencia Social

Tabla 12. Costeo del Programa de Prevención y Atención de la Tuberculosis en el Servicio Nacional de Salud (SNS) para el periodo 2020-2023

Capítulo/Subcapítulo/Programa/Producto/Objeto del Gasto/Denominación	Valores en Millones de RD\$			
	2020	2021	2022	2023
5180 - Dirección Central del Servicio Nacional de Salud				
01 - Dirección Central del Servicio Nacional de Salud				
41-Prevención y atención de la tuberculosis	55.80	80.53	94.65	81.68
01 - Acciones Comunes	8.01	11.75	20.65	8.05
2.1 - Remuneraciones y Contribuciones	3.00	4.68	4.50	4.50
2.2 - Contratación de Servicios	0.95	1.77	2.96	2.96
2.3 - Materiales y Suministros	0.13	0.28	0.59	0.59
2.6 - Bienes Muebles, Inmuebles e Intangibles	3.94	5.02	12.60	0.00
02 - Pacientes TB con factores de baja adherencia acceden a DOT domiciliar en Santo Domingo y el Distrito Nacional	38.12	52.98	56.18	56.11
2.1 - Remuneraciones y Contribuciones	22.45	34.87	37.75	37.75
2.2 - Contratación de Servicios	0.45	2.62	2.91	2.84
2.3 - Materiales y Suministros	15.22	15.49	15.52	15.52
03 - Pacientes TB reciben paquete de salud mental en Santo Domingo y el Distrito Nacional	9.66	15.80	17.82	17.52
2.1 - Remuneraciones y Contribuciones	6.53	11.31	13.05	13.05
2.2 - Contratación de Servicios	2.16	3.74	4.32	4.32
2.3 - Materiales y Suministros	0.08	0.13	0.15	0.15
2.6 - Bienes Muebles, Inmuebles e Intangibles	0.90	0.62	0.30	0.00

Nota: Las proyecciones indicativas para el periodo 2021-2023 contemplan la expansión a nivel nacional.
Fuente: Elaboración propia según datos del Sistema de Información de la Gestión Financiera (SIGEF) y Servicio Nacional de Salud.

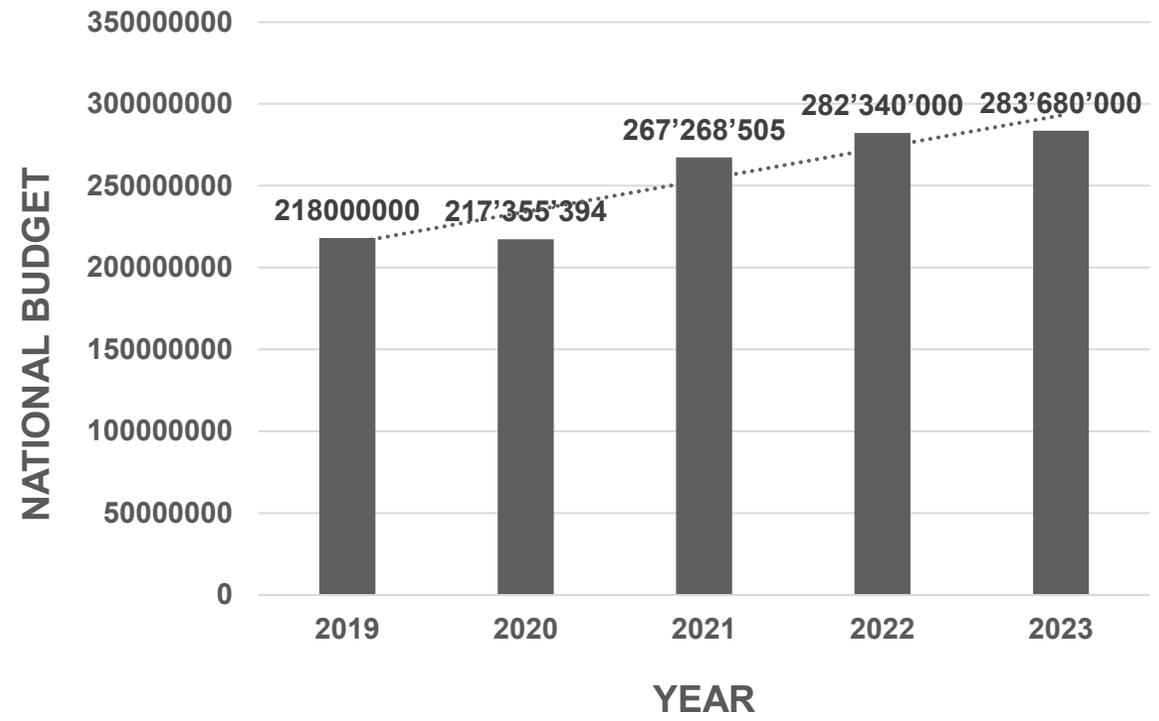
PREVENCIÓN Y ATENCIÓN A LA TUBERCULOSIS

Anexo 10: Metas e indicadores de Resultados definidos - Programa orientado a Resultados (PPOR).

Resultado	Tipo de indicador	Indicador	Línea Base (2019)	Meta			
				2022	2023	2024	2025
Disminuir la incidencia de la tuberculosis	Final	Tasa de incidencia de tuberculosis	42.0	40.0	39.0	38.0	37.0
Aumentar el éxito de tratamiento de los pacientes con TB	Intermedio	Tasa de éxito de tratamiento contra la tuberculosis	78.0	80.0	83.0	85.0	90.0
Aumentar el éxito de tratamiento de los pacientes con TB-DR			52.0	54.0	56.0	58.0	60.0
Aumentar el éxito de tratamiento de los pacientes coinfectados con TB/VIH			67.9	69.0	73.0	78.0	80.0
Disminuir los perdidos durante el tratamiento de pacientes de TB sensible	Inmediato	Tasa de perdidos durante el seguimiento	15.0	13.2	11.2	9.2	8.0
Disminuir los perdidos durante el tratamiento de pacientes de TB-MDR			29.7	25.0	20.0	15.0	10.0
Disminuir los perdidos durante el tratamiento de pacientes coinfectados con TB/VIH			20.0	17.0	14.0	11.0	8.0

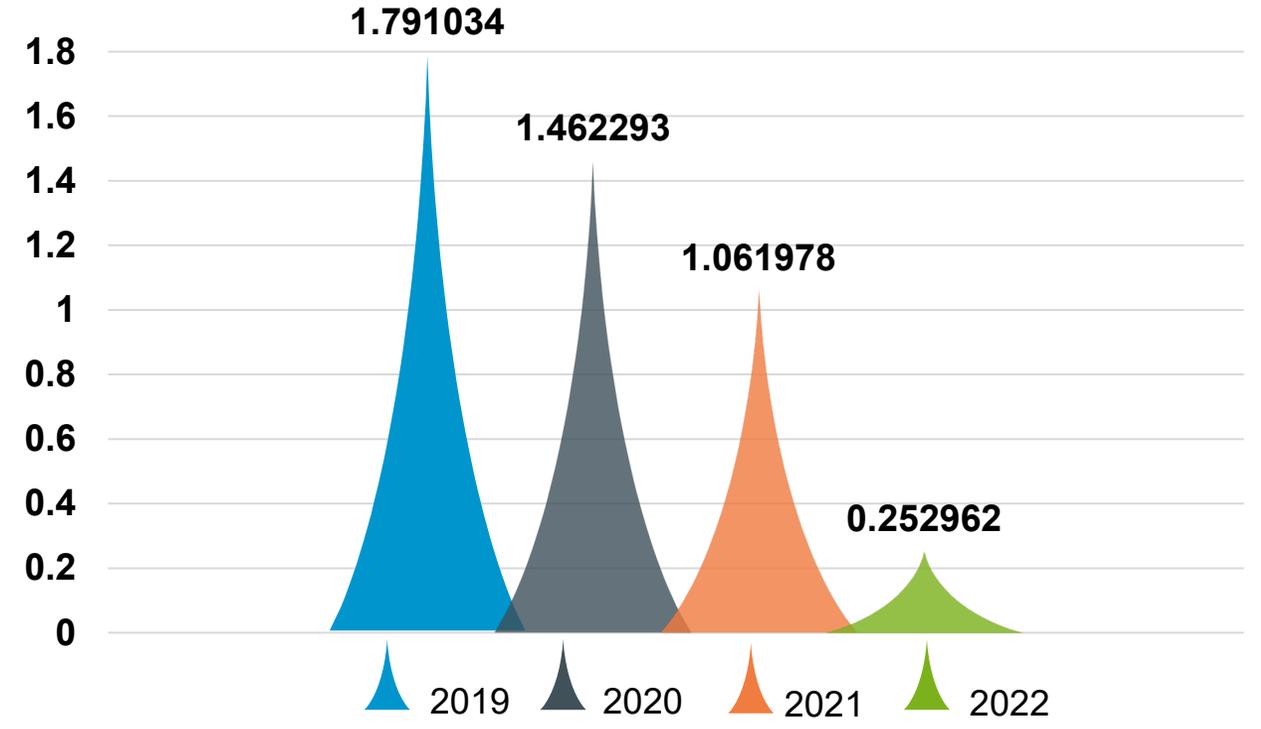
Sustainability commitment: Sufficient and Sustainable Financing, GF Transition Plan and Dominican Republic Budget, 2020-2023.

National Budget Trend for TB (RD\$), Dominican Republic, 2019-2023



30% increase in domestic funding for TB since 2019

Amount in US\$ in millions allocated per year, Global Fund for TB grant, 2019-2022



GF's 2022 contribution represents <5% of total budget needed for national TB response

2020	Cases	Rate	Gap
Incidence TB	2544	24.3	1506
Incidence TB-HIV	549	6	551
2021	Cases	Rate	Gap
Incidence TB	3326	31.6	724
Incidence TB-HIV	768	7.3	372
2022*	Cases	Rate	Gap
Incidence TB	4051	38.1	449
Incidence TB-HIV	830	7.8	370

2022 TB incidence estimates – 4,800 of which 1,100 PLWH Achievements
– 84% treatment coverage (60% increase in 2 years!)
- Death rate now at 2.6 per 100,000

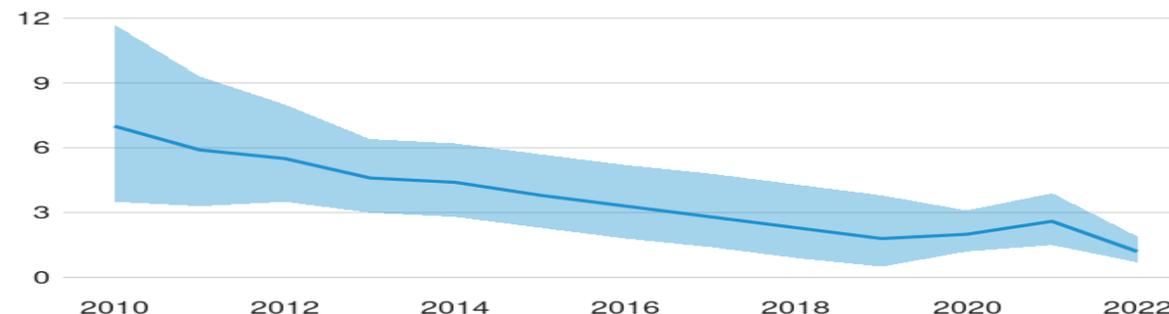
Current focus is on screening especially among PLWH and TPT to drive down incidence

- ❖ **People living with HIV (22%): administration of TPT.**
- ❖ **Persons deprived of liberty (13%): active search for cases in penitentiary centers.**
- ❖ **Migrants (12%): Search for presumptive places of greatest settlement.**
- ❖ **Population from 0 to 15 years (5%)**

Source: Operational and Epidemiological Information System (SIOE) 2023

HIV-negative TB mortality

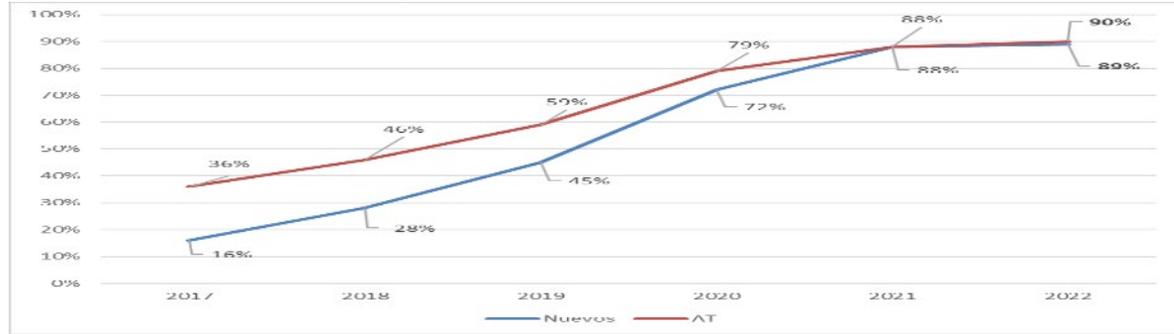
(Rate per 100 000 population per year)



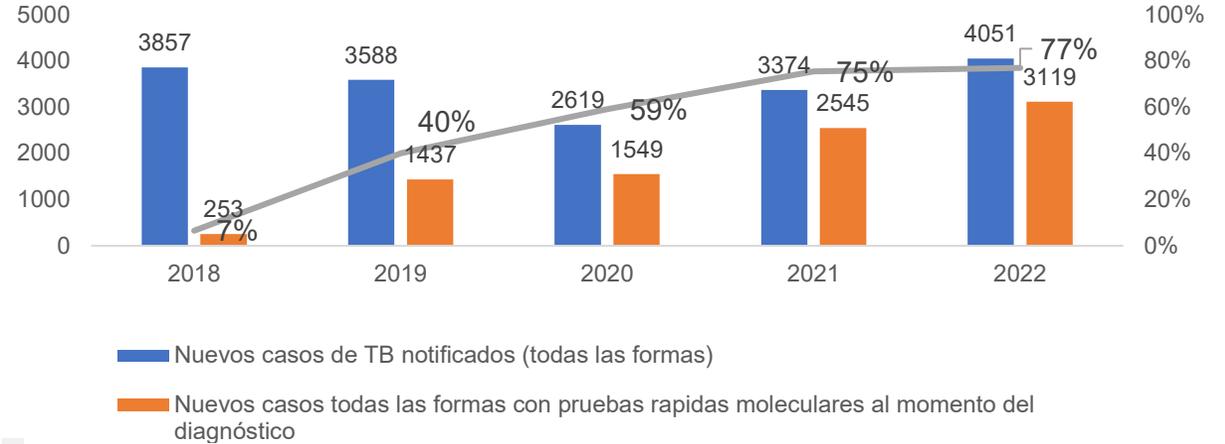
WHO: Perfil de país. Global Report 2023

Treatment outcome, and Progressive results as a result of the expansion of Rapid Molecular testing, Dom. Rep. 2017-2023.

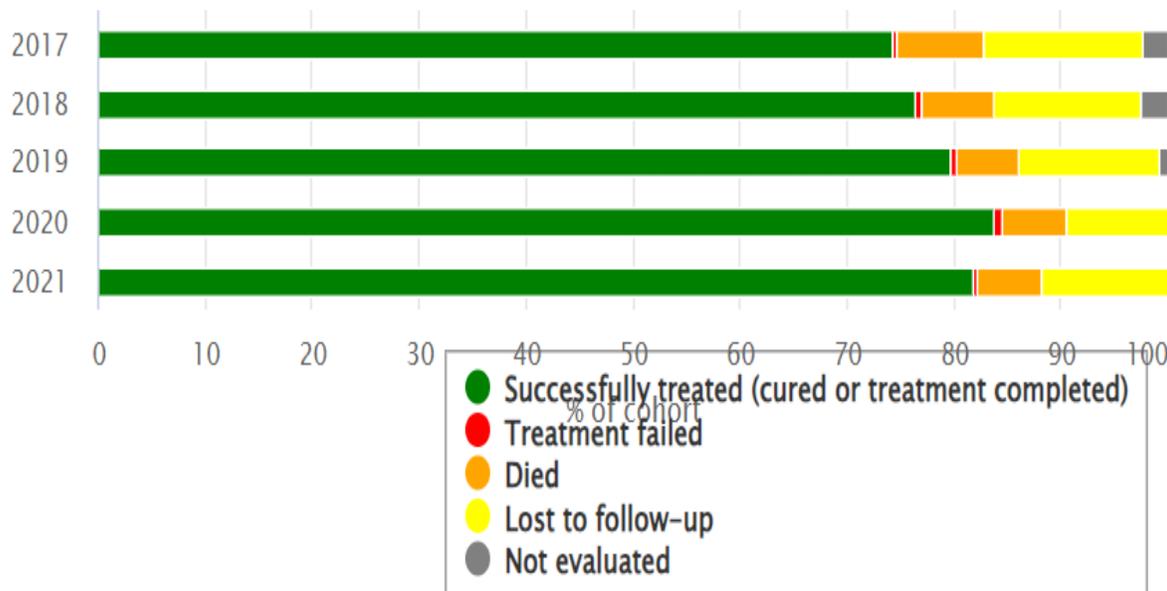
Bacteriologically Confirmed Cases with RP sensitivity testing results, Dominican Republic 2017-2022



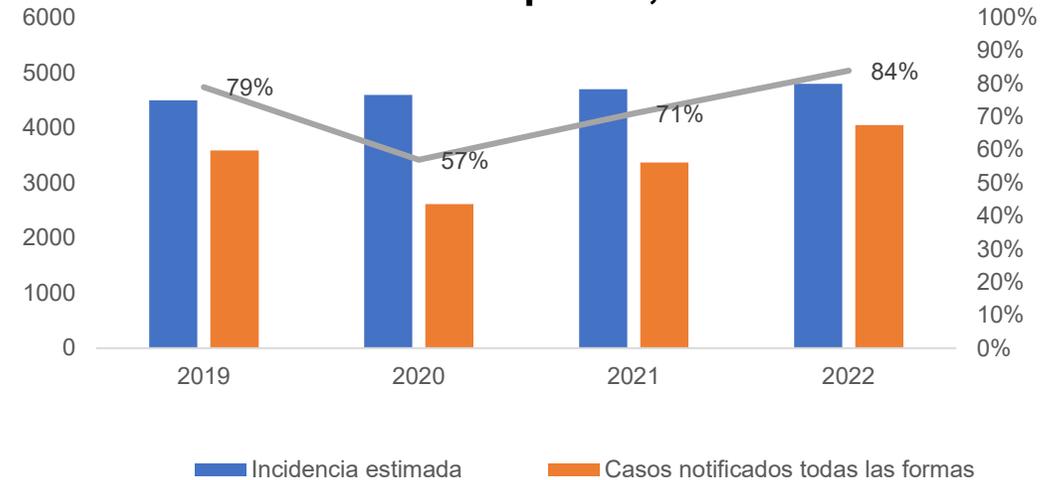
Coverage of New TB Cases with Rapid Molecular Tests at the time of diagnosis. Dominican Republic, 2018-2022



Treatment Outcome Dominican Republic 2017-2021



TB treatment coverage (susceptible TB detection rate) Dominican Republic, 2017-2022



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Social Protection and TB: the Experience of the Bolsa Familia Program

Mauro Sanchez, PhD
University of Brasilia and SPARKS Network

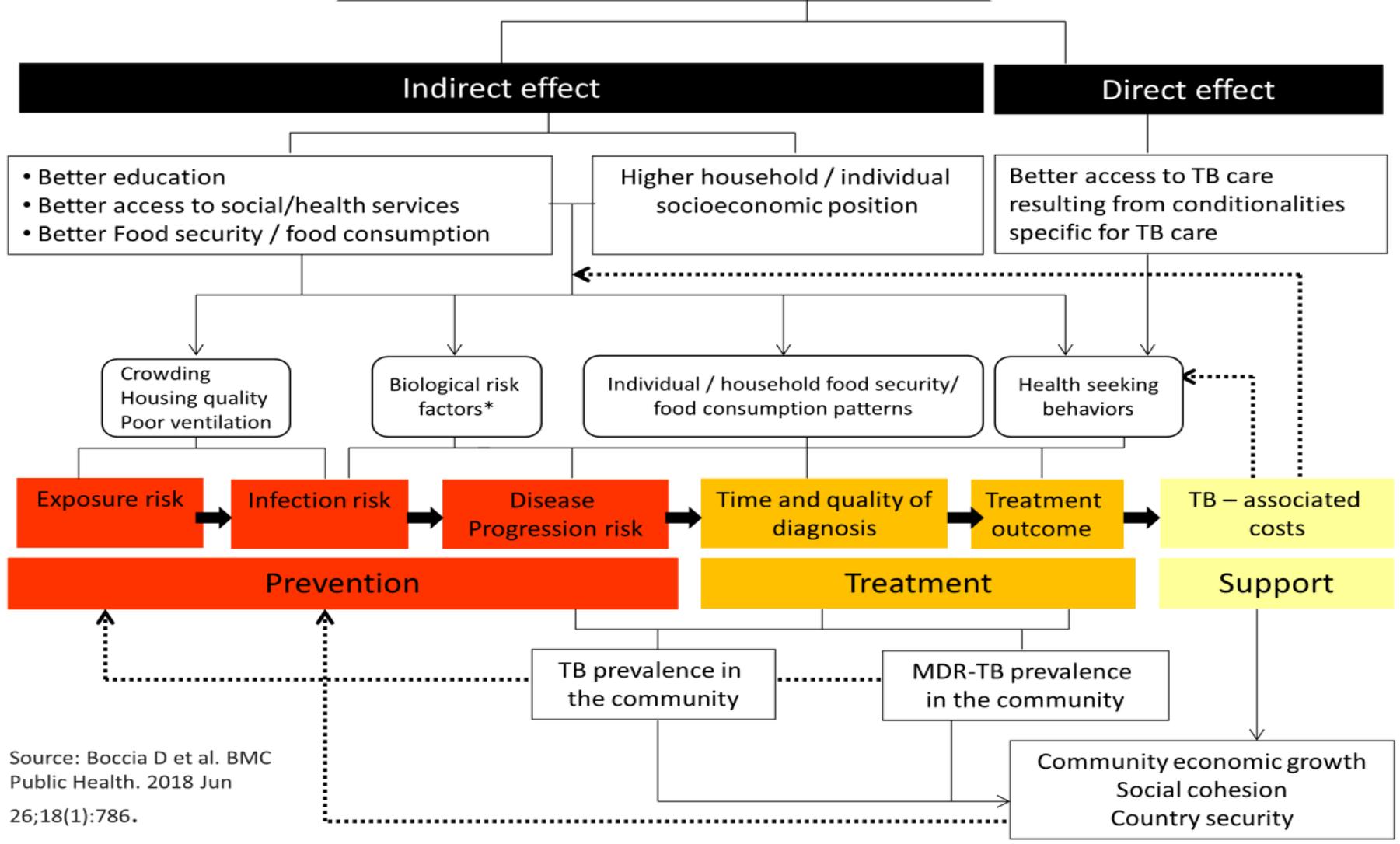
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- Social protection, or social security, is a **human right** and is defined as the set of policies and programmes designed to **reduce and prevent poverty** and vulnerability throughout the **life cycle**.
- Social protection includes benefits for children and families, maternity, unemployment, employment injury, sickness, old age, disability, survivors, as well as health protection.
- Social protection systems address all these policy areas by a mix of contributory schemes (**social insurance**), non-contributory tax-financed benefits (**social assistance**), and legislation.

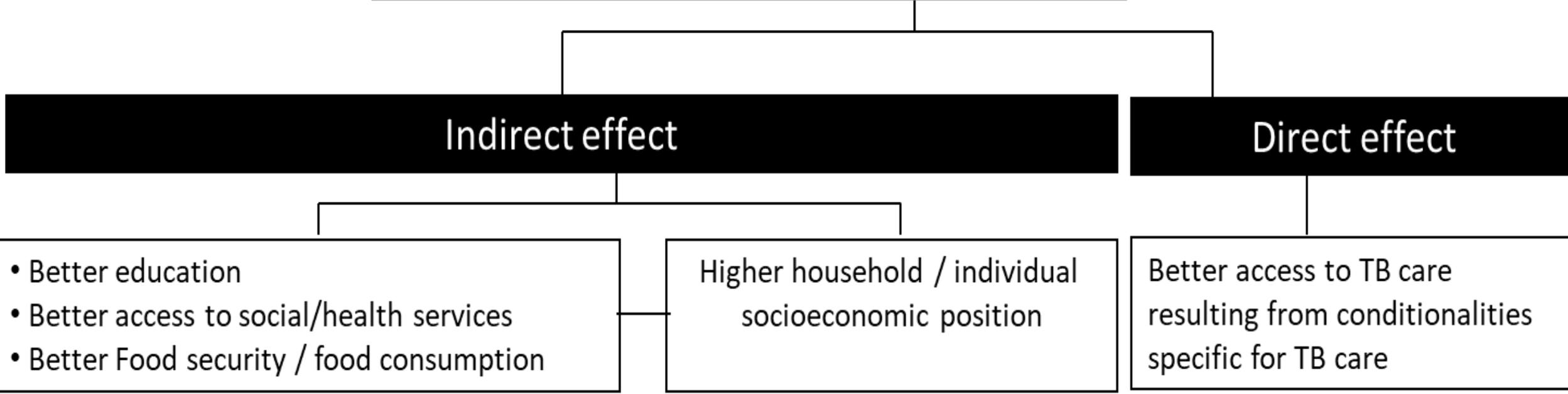
- Bolsa Família is the largest conditional cash transfer program in Brazil, internationally recognized for having saved millions of families from hunger.
- The Federal Government relaunched the program in 2023 with more protection for families, with a model that takes family size and characteristics into account.
- Conditionalities for families are: prenatal care attendance, compliance with the vaccination calendar and school attendance for those between 4-18 years old. The reference value for the benefit is R\$600.00 (~USD 122.00, may increase depending on family composition)

Social protection strategies as Bolsa Familia



Source: Boccia D et al. BMC Public Health. 2018 Jun 26;18(1):786.

Social protection strategies as Bolsa Familia



Source: Boccia D et al. BMC Public Health. 2018 Jun 26;18(1): 786

- Increase in treatment success rates (7 – 10%)
- Decrease in dropout and TB-associated mortality
- High BFP coverage associated with lower TB incidence
- CCT mitigates the effect of well documented risk factors for poor TB outcomes
- Modelling studies indicated that social protection interventions for all, such as CCTs, could reduce TB incidence by over 76% by 2035



RESEARCH ARTICLE

Tuberculosis in Brazil and cash transfer programs: A longitudinal database study of the effect of cash transfer on cure rates

Barbara Reis-Santos^{1*}, Priya Shete², Adelmo Bertolde³, Carolina M. Sales¹, Mauro N. Sanchez⁴, Denise Arakaki-Sanchez⁵, Kleydson B. Andrade⁶, M. Gabriela M. Gomes^{4,7}, Delia Boccia⁸, Christian Lienhardt^{9,10}, Ethel L. Maciel¹

1 Laboratory of Epidemiology of Federal University of Espírito Santo, Vitória/ES, Brazil, 2 Division of Pulmonary and Critical Care Medicine, University of California San Francisco, San Francisco, CA, United States of America, 3 Departamento de Estatística, Universidade Federal do Espírito Santo, Vitória/ES, Brazil, 4 Departamento de Saúde Coletiva, Universidade de Brasília: Asa Norte, Brasília/DF, Brazil, 5 Programa Nacional de Controle da Tuberculose—Ministério da Saúde, Brasília/DF, Brazil, 6 Liverpool School of Tropical Medicine, Liverpool, United Kingdom, 7 CIBIO-InfBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, Universidade do Porto, Vairão, Portugal, 8 London School of Hygiene and Tropical Medicine, Keppel St., Bloomsbury, London, United Kingdom, 9 Global TB Programme, World Health Organisation, Geneva, Switzerland, 10 Unité Mite Internationale TransVIHMI (UMI 233 IPD-U1175 INSERM—Université de Montpellier), Institut de Recherche pour le Développement, Montpellier, France



Articles

Effect of the Bolsa Familia Programme on the outcome of tuberculosis treatment: a prospective cohort study

Janaina Gomes Nascimento Olosi, Barbara Reis-Santos, Rodrigo Leite Locatelli, Carolina Maia Martins Sales, Walter Gomes da Silva Filho, Kerllen Cristina da Silva, Mauro Nickler Sanchez, Kain Viniçius Freitas de Andrade, Cleide Santos de Araújo, Priya R Shete, Susan Martins Pereira



Research

BMJ Global Health

The impact of a cash transfer programme on tuberculosis treatment success rate: a quasi-experimental study in Brazil

Daniel J Carter,^{1,2} Rhian Daniel,² Ana W Torrens,³ Mauro N Sanchez,⁴ Ethel Leonor N Maciel,⁵ Patricia Bartholomay,⁶ Draurio C Barreira,⁷ Davide Rasella,⁸ Mauricio L Barreto,^{9,10} Laura C Rodrigues,^{1,10} Delia Boccia¹

- Reinforce and expand CCT programs (Brazil has already 21 million families receiving it, a government investment of R\$ 14.5 billion in Jan 2024 - ~USD 2.8 billion)
- Translate legislation into practice regarding integration between the health and the social assistance sector
- Strengthen TB sensitive social protection initiatives, addressing barriers to access and developing effective referral models

THANK YOU

OBRIGADO

Contact: maurosanchez@unb.br

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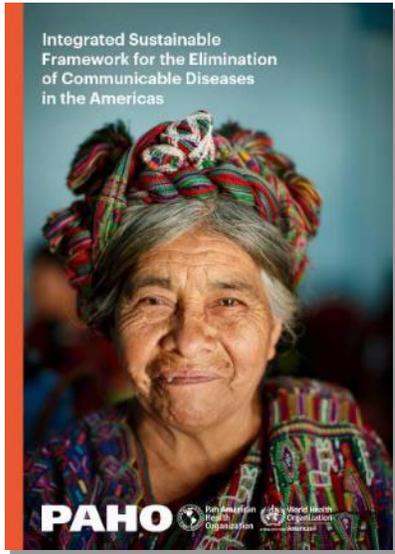
Innovations to accelerate efforts towards TB elimination in the Americas

Pedro Avedillo Jiménez
Advisor, Tuberculosis Prevention, Control and Elimination
PAHO/WHO

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Elimination Initiative Framework & Policy endorsement



1

Strengthening and integration of health systems and service delivery

2

Strengthening health surveillance and information systems

3

Addressing the environmental and social determinants of health

4

Strengthening governance, stewardship, and finance

Updated list of candidates for Elimination by 2030

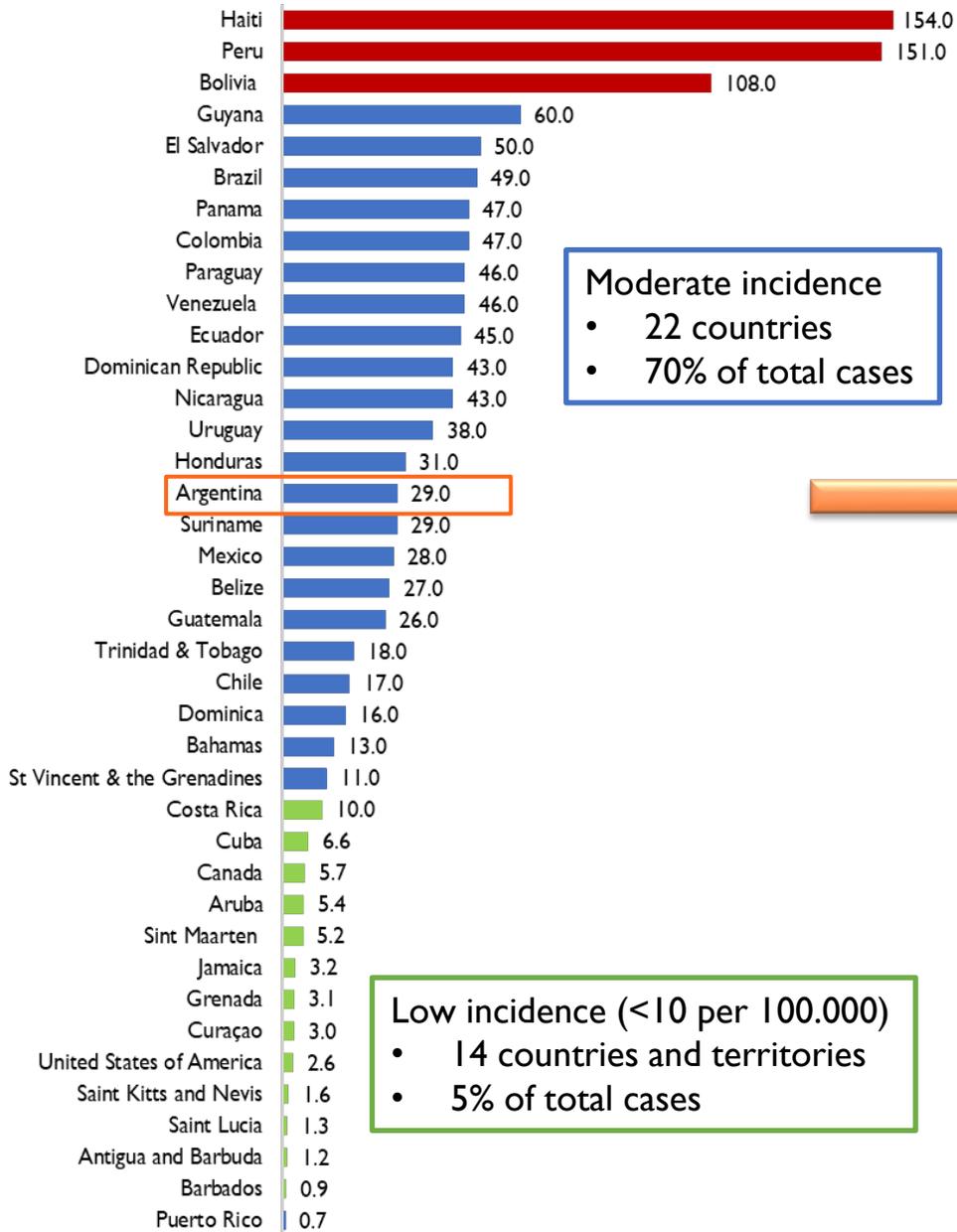
Technically and Scientifically Feasible

Elimination*
Bacterial meningitis epidemics
Cervical Cancer
Chagas disease
Cholera
Congenital Chagas
Congenital Syphilis
Cystic echinococcosis/Hydatidosis
Fascioliasis
Hepatitis B and C
Hepatitis B, mother-to-child transmission
HIV, mother-to-Child transmission
HIV/AIDS
Human rabies transmitted by dogs
Leprosy
Lymphatic filariasis
Malaria
Onchocerciasis
Plague
Schistosomiasis
Sexually Transmitted Infections
Soil-transmitted Helminthiasis
Trachoma
Tuberculosis

Elimination* of Environmental Risks
Open defecation
Polluting biomass cooking fuels
Maintain Elimination
Congenital rubella
Measles
Neonatal tetanus
Poliomyelitis
Rubella
Yellow Fever Epidemics
Eradication*
Foot-and-mouth-disease in domestic bovids
Yaws

* In general terms the SDG target date of 2030 is used; however, different target dates are used for each candidate disease / condition until 2030.

Estimated incidence of TB per 100,000 population



High incidence

- 3 countries
- 25% of cases

Moderate incidence

- 22 countries
- 70% of total cases

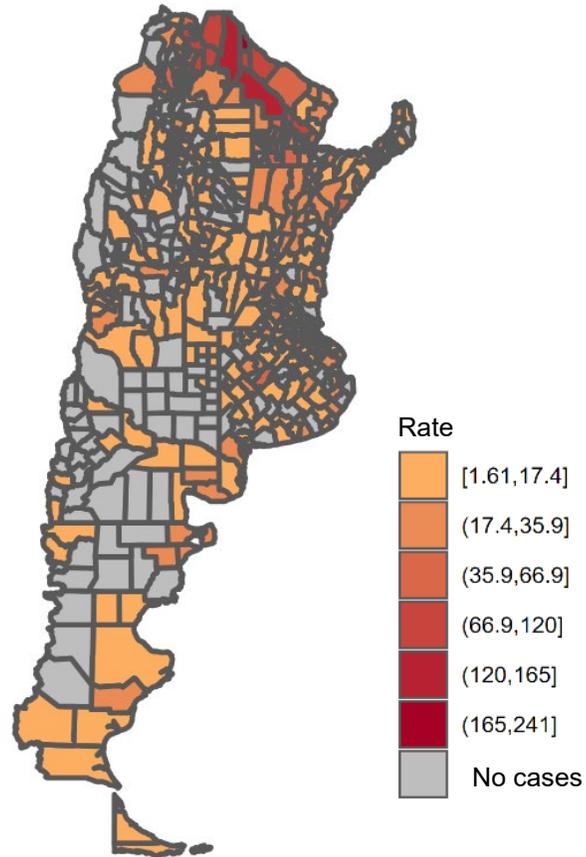
Low incidence (<10 per 100.000)

- 14 countries and territories
- 5% of total cases

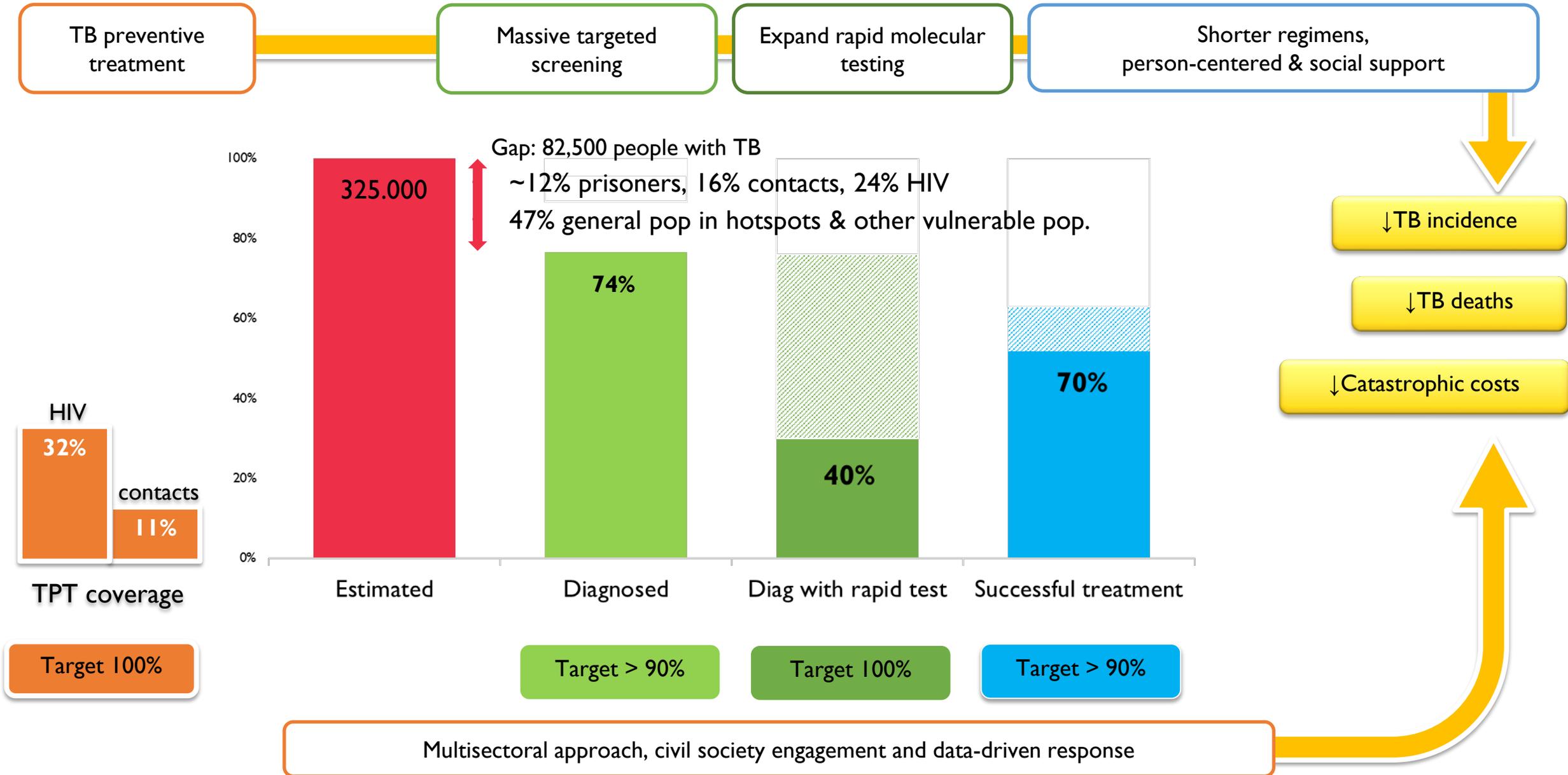
The Americas, 2022

- Estimated incidence rate of TB per 100,000 pop.: 31
- Estimated number of TB deaths: 35,000

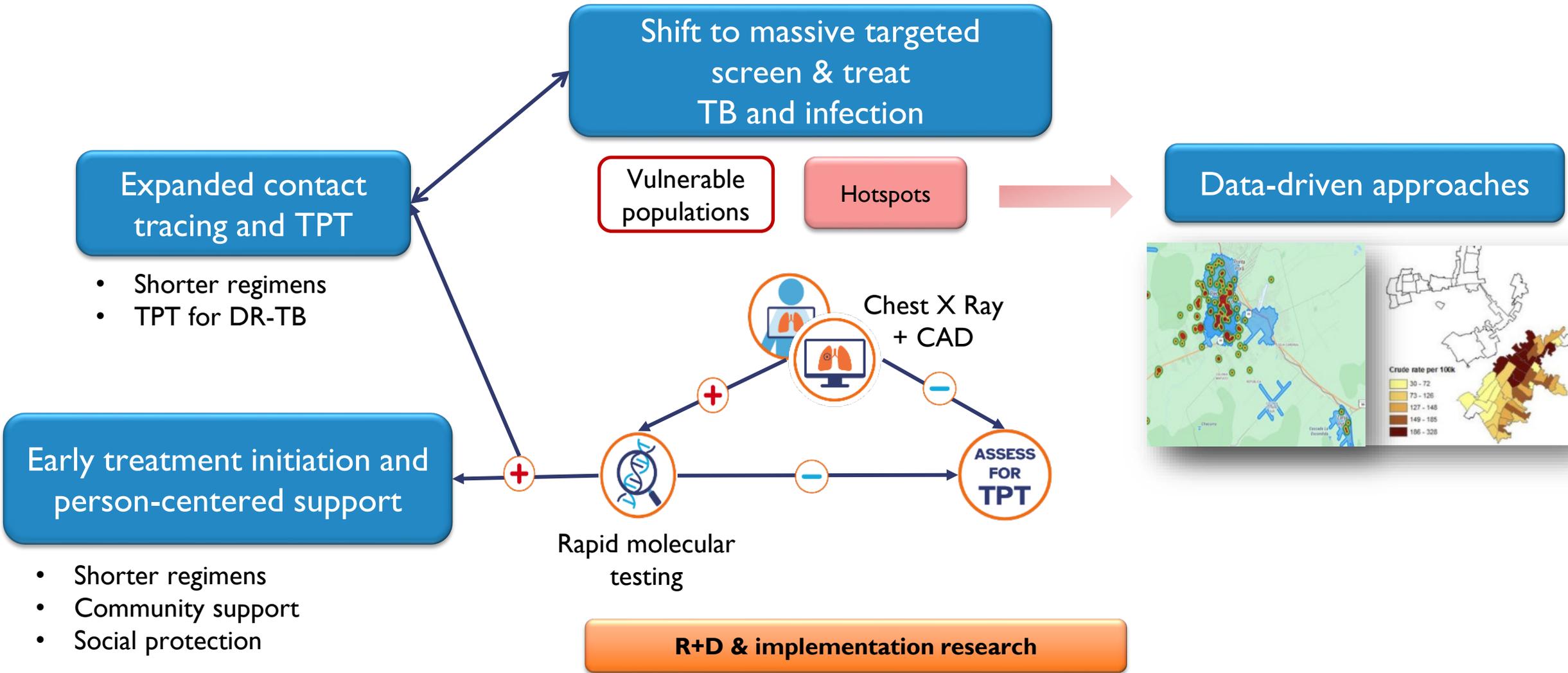
TB notification rate per 100,000 population. Argentina, jurisdictions, 2022-2023



TB care cascade in the Americas (2022), targets by 2027 and priority interventions to end TB



● ● ● Innovations to change the paradigm towards TB elimination – Screen, Cure, Prevent

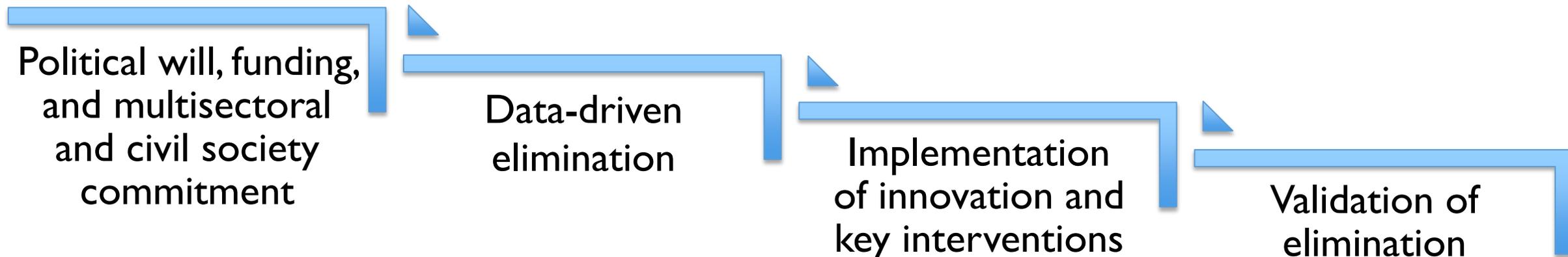


Integration of services, multisectoral approach, civil society engagement and data-driven response



Key aspects for TB elimination in the Americas

Shift from a strategy focused on control to one focused on elimination



The path to TB elimination

- Validation methodology in progress
- Partnerships and piloting the validation methodology with countries
- Implementation research



Thank you!

Pedro Avedillo
avedillop@paho.org

PAHO



Pan American
Health
Organization



World Health
Organization
REGIONAL OFFICE FOR THE Americas

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