SUPPLEMENTARY MATERIAL

Content

Supplementary Methods

RePORT Brazil

RePORT-Brazil study sites are located in Manaus (Amazonas state, Northern region), Salvador (Bahia state, Northeastern region), and Rio de Janeiro (Rio de Janeiro state, Southeastern region), with a total of five health units: Instituto Nacional de Infectologia Evandro Chagas, Clínica da Familia Rinaldo Delamare, and Secretaria de Saúde de Duque de Caxias (Rio de Janeiro), Instituto Brasileiro para Investigação da Tuberculose (Bahia), and Fundação de Medicina Tropical Doutor Heitor Vieira Dourado (Amazonas), representing both a heterogeneous population and the Brazilian cities with among the highest TB burden (Regional Prospective Observational Research for Tuberculosis, 2020).

SINAN

SINAN is a system for the notification and investigation of transmissible diseases that has been implemented, supported and maintained by the Brazilian Ministry of Health (Ministério da Saúde do Brasil and Secretaria de Vigilância em Saúde, 2020). Notification of these diseases, including TB, has been mandatory in Brazilian municipalities and states since 1993. For each reported case, epidemiologic and clinical data are collected (Ministério da Saúde do Brasil and Secretaria de Vigilância em Saúde, 2007). The information is provided without patient identifiers and available on the SINAN website (Ministério da Saúde do Brasil and Secretaria de Vigilância em Saúde, 2020).

Second Generation p (pδ)

Second generation p-values (pδ) are used for scientific adjustment when traditional p-values are likely affected by large sample sizes in each analytical group (example: the age distribution between RePORT and SINAN could be the same, but differ statistically (using a traditional p-value) due to the large sample size). The pδ provides more reliable inferential power by a *priori* specifying which hypotheses are more clinically significant. An interval for the null hypothesis, containing effect sizes that are indistinguishable

from the null value hypothesis. In this study, pδ identified differences that were clinically relevant.(Blume et al., 2018) For its interpretation, we considered all cases in which pδ = zero were clinically of interest, and statistically "significant" at 5% value, via classical p-values. On the contrary, when pδ = 1, the data affirmed only the effects that were null or almost null and that had little clinical interest, which would confirm the lack of association. When pδ = 0.5, then the data were inconclusive.(Blume et al., 2018) In case of pδ = zero, the delta-gap (Δ) was used, which is defined as the distance between the intervals in δ units. The delta-gap value was directly associated with the difference in distribution of values between the groups (i.e., the higher the delta value, the greater the effect size), as described in **Supplementary Figure 2**.

References

Blume JD, D'Agostino McGowan L, Dupont WD, Greevy RA, Jr. Second-generation p-values: Improved rigor, reproducibility, & transparency in statistical analyses. PLoS One 2018;13(3):e0188299.

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Supplementary Table 1. Definition of tuberculosis treatment outcomes

Type of outcome treatment	Outcome tuberculosis treatment	RePORT	SINAN[a]
Favorable	Cure	Resolution of symptoms consistent with TB by the end of therapy. Patients without symptoms consistent with TB at the beginning of TB treatment cannot have their clinical response evaluated.	Cure is established when pulmonary TB patients, initially sputum smear-positive, present, during treatment, with at least two negative sputum smears: one in the follow-up phase and the other at the end of treatment.
	Completed treatment	When the patient does not have treatment failure or loss to follow-up, and has received at least 90% of the total number of doses of the standard recommended anti-TB therapy by the National TB Program in a period up to one year for drug susceptible cases, and up to two years for MDR cases. For drug-susceptible TB, the drug regimen consists of isoniazid, rifampicin, pyrazinamide, and ethambutol for 2 months, followed by isoniazid and rifampin for 4 months. For drug-resistant TB, treatment is according to the presence of resistance.	Completion of treatment based on clinical criteria and radiological: (i) when the patient has not undergone sputum examination due to absence sputum and are discharged based on clinical data and complementary exams, (ii) in cases of initially negative pulmonary tuberculosis; (iii) in cases of extrapulmonary tuberculosis
Unfavorable	Loss to follow up	A participant who no longer participates in study visit follow-up or when an outcome cannot be assigned due to insufficient information.	A patient who has failed to attend the unit for more than 30 consecutive days after the expected return date. In treatment cases supervised, the period of 30 days is counted from the last date of taking the drug.
	Death	A participant who dies for any reason after consenting to participate and prior to the end of the study.	On the occasion of knowledge of the patient's death during treatment.
	Failure	Sputum smear- or culture-positive at month 5 or later during treatment.	When sputum positivity persists at the end treatment. Also classified as failure are patients who beginning of treatment are strongly positive (++ or +++) and maintain this until the fourth month, or those with initial positivity followed by negativity and new positivity for two consecutive months, from the fourth month of treatment.
	Transferred out	When the patient is transferred to another health service.	When the patient is transferred to another health service.

Table note: [a]Described in the Manual of Recommendations for the Control of TB of Brazil. Abbreviations: RePORT: Regional Prospective Observational Research for Tuberculosis. SINAN: Sistema de Informação de Agravos de Notificação. MDR: Multidrug-Resistant. TB: Tuberculosis.

Supplementary Table 2. Total data available for Report-Brazil and SINAN bases

Characteristics	Report-Brazil (n=1060)	SINAN (n=455873)
Sex – no. (%)	1060 (100)	455842 (99·9)
Age – no. (%)	1060 (100)	455873 (100)
Race/Ethnicity – no. (%)	1059 (99·9)	420950 (92·3)
Literate– no. (%)	1059 (99·9)	307287 (67·4)
Health worker – no. (%)	1057 (99·7)	414377 (90·9)
Comorbidities[a]– no. (%)	1049 (99)	455862 (99·9)
Diabetes – no. (%)	1043 (98·4)	423153 (92·8)
HIV infection – no. (%)	1049 (99)	364432 (79·9)
Antiretroviral therapy (ART)[b] – no. (%)	216 (98·2)	49046 (13·4)
Alcohol consumption – no. (%)	1060 (100)	424267 (93·1)
Illicit drug use – no. (%)	1058 (99·8)	416647 (91·4)
Smoking – no. (%)	1060 (100)	419018 (91·9)
Prior TB – no. (%)	1051 (99·1)	454164 (99·6)
Abnormal chest x-ray – no. (%)	1060 (100)	347144 (76·1)
Type of TB[c] – no. (%)	1060 (100)	455639 (99·9)
AFB – no. (%)	1055 (99·5)	315688 (69·2)
Culture – no. (%)	1054 (99·4)	135548 (29·7)
Drug-susceptibility testing (DST) – no. (%)	1039 (98)	52941 (11·6)
Directly observed treatment (DOT) – no. (%)	1053 (99·3)	307790 (67·5)
Treatment Outcome– no. (%)	626 (59)	386135 (84·7)

Table note: Data represent no. (%)

Alcohol consumption: Past or current any consumption of alcohol. Smoking: Past or current cigarette smoker. Illicit drug use: Past or current illicit drug use (marijuana, cocaine, heroin or crack) [a] It did not include DM and HIV. [b]ART frequency was calculated among the persons living with HIV. [c]All individuals from the RePORT cohort had a diagnosis of pulmonary tuberculosis, in some cases with presence in other anatomical sites. [d]Any drug (anti-TB) resistance except rifampicin and isoniazid: Pyrazinamide, ethambutol, streptomycin, kanamycin, ethionamide. [e]In RePORT-Brazil study, the results of anti-TB treatment are recorded at the last study visit (24 months after the start of treatment). By the time the present analyses were performed, 434 participants had not yet completed the last visit, and analyzes of treatment outcomes did not include such participants.

Abbreviations: TB: Tuberculosis. SINAN - Sistema de Informação de Agravos de Notificação. (Brazilian Notification Information System). AFB: acid fast bacilli. ART: Antiretroviral therapy.

Supplementary Table 3. Characteristics of RePORT-Brazil TB cases according to anti-TB treatment outcome

Characteristics	Favorable outcome (n=435)	Unfavorable outcome (n=191)	p-value
Sex – no. (%)			<0·001
Male	262 (60·2)	144 (75·4)	
Female	173 (39·8)	47 (24·6)	
Age – median (IQR)	37 (27-50)	37 (26-49)	0·806
Race/Ethnicity – no. (%)			<0·001
White	117 (26·9)	35 (18·3)	
Black	115 (26·4)	37 (19·4)	
Asian	1 (0·2)	0 (0·0)	
Pardo	199 (45·7)	110 (57·6)	
Indigenous	3 (0·7)	9 (4·7)	
Literate– no. (%)	414 (95·2)	182 (95·3)	1·000
Health worker – no. (%)	21 (4·8)	9 (4·7)	1·000
Comorbidities[a] – no. (%)			<0·001
Cancer	7 (1·8)	3 (1·6)	
Chronic Obstructive Pulmonary Disease/Emphysema	2 (0·5)	0 (0·0)	
Kidney disease	1 (0·3)	2 (1·1)	
Hypertension	39 (10·1)	14 (7·7)	
Others	32 (8·2)	13 (7·1)	
No comorbidity	307 (79·1)	151 (82·5)	
Diabetes – no. (%)	93 (21·6)	59 (31·1)	0·015
HIV infection – no. (%)	51 (11·9)	84 (44·0)	<0·001
Antiretroviral therapy (ART)[b] – no. (%)	51(100)	72 (85·7)	0·005
Alcohol consumption – no. (%)	345 (79·3)	176 (92·1)	<0·001
Illicit drug use – no. (%)	83 (19·1)	91 (47·6)	<0·001
Smoking – no. (%)	192 (44·1)	121 (63·4)	<0·001
Prior TB – no. (%)	83 (19·2)	27 (14·3)	0·170
Abnormal chest x-ray – no. (%)	421 (96·8)	183 (95·8)	0·638
Type of TB[c] – no. (%)			0·020
Pulmonary	394 (90·6)	160 (83·8)	
Extrapulmonary	0 (0·0)	0 (0·0)	
Pulmonary and Extrapulmonary	41 (9·4)	31 (16·2)	
Positive acid-fast bacilli (AFB) – no. (%)	347 (80·0)	152 (80·4)	1·000
Positive culture – no. (%)	434 (100·0)	188 (99·5)	0·303
Drug-susceptibility testing (DST) – no. (%)			0·061
Rifampicin resistance	0 (0·0)	2 (1·1)	
Isoniazid resistance	12 (2·8)	13 (7·0)	
Rifampicin-Isoniazid resistance	5 (1·2)	10 (5·4)	
Any drug resistance[d]	47 (11·0)	11 (5·9)	
Sensitive	365 (85·1)	150 (80·6)	
Directly observed treatment (DOT) – no. (%)	242 (56·1)	102 (53·4)	0·541

Table note: Data represent no. (%) or median with Interquartile range (IQR). Favorable outcomes treatment: Bacteriological and clinical cure, Unfavorable outcomes treatment: failure, death and lost to follow-up (see details in **Supplementary Table 2**).

Alcohol consumption: Past or current any consumption of alcohol. Smoking: Past or current cigarette smoker. Illicit drug use: Past or current illicit drug use (marijuana, cocaine, heroin or crack)

[a]It did not include DM and HIV. [b]ART frequency was calculated among the persons living with HIV. [c]All individuals from the RePORT cohort had a diagnosis of pulmonary tuberculosis, in some cases with presence in other anatomical sites. [d]Any drug (anti-TB) resistance except rifampicin and isoniazid: Pyrazinamide, ethambutol, streptomycin, kanamycin, ethionamide.

Abbreviations: RePORT: Regional Prospective Observational Research for Tuberculosis. SINAN: Sistema de Informação de Agravos de Notificação. TB: Tuberculosis.

Supplementary Table 4. Characteristics of the SINAN patients according to anti-TB treatment outcome

Characteristics	Favorable outcome (n=258,355)	Unfavorable outcome (n=127,780)	p-value
Sex – no. (%)			<0·001
Male	175583 (68·0)	92379 (72·3)	
Female	82757 (32·0)	35393 (27·7)	
Age – median (IQR)	37 (26-51)	39 (28-53)	<0·001
Race/Ethnicity – no. (%)			<0·001
White	82457 (34·4)	35295 (30·0)	
Black	30777 (12·8)	18083 (15·4)	
Asian	1923 (0·8)	851 (0·7)	
Pardo	121438 (50·7)	62451 (53·0)	
Indigenous	3040 (1·3)	1112 (0·9)	
Literate– no. (%)	152793 (83·8)	63689 (80·4)	<0·001
Health worker – no. (%)	3771 (1·6)	919 (0·8)	<0·001
Comorbidities[a] – no. (%)			<0·001
Cancer	2106 (0·8)	1299 (1·0)	
Chronic Obstructive Pulmonary Disease/Emphysema	261 (0·1)	309 (0·2)	
Kidney disease	112 (0·0)	173 (0·1)	
Hypertension	25517 (9·9)	14573 (11·4)	
Others	39189 (15·2)	17002 (13·3)	
No comorbidity	191165 (74·0)	94422 (73·9)	
Diabetes – no. (%)	19724 (8·1)	9024 (7·8)	0·001
HIV infection – no. (%)	18769 (8·6)	23951 (24·9)	<0·001
Antiretroviral therapy (ART)[b] – no. (%)	7261 (38·7)	7128 (29·8)	<0·001
Alcohol consumption – no. (%)	38796 (15·8)	32216 (27·6)	<0·001
Illicit drug use – no. (%)	28545 (11·8)	26604 (23·3)	<0·001
Smoking – no. (%)	51842 (21·4)	34726 (30·2)	<0·001
Prior TB – no. (%)	36620 (14·2)	38724 (30·5)	<0·001
Abnormal chest x-ray – no. (%)	183227 (93·3)	92648 (93·8)	<0·001
Type of TB[c] – no. (%)			<0·001
Pulmonary	218993 (84·8)	107214 (83·9)	
Extrapulmonary	32970 (12·8)	15163 (11·9)	
Pulmonary and Extrapulmonary	6384 (2·5)	5388 (4·2)	
Positive acid-fast bacilli (AFB) – no. (%)	135107 (69·7)	58448 (64·5)	<0·001
Positive culture – no. (%)	58663 (68·1)	25162 (69·9)	<0·001
Drug-susceptibility testing (DST) – no. (%)			<0·001
Rifampicin resistance	129 (0·4)	498 (3·4)	
Isoniazid resistance	357 (1·0)	1351 (9·3)	
Rifampicin-Isoniazid resistance	106 (0·3)	1119 (7·7)	
Any drug resistance[d]	652 (1·9)	673 (4·7)	
Sensitive	32822 (96·3)	10823 (74·8)	
Directly observed treatment (DOT) – no. (%)	110588 (54·2)	27661 (36·9)	<0·001

Table note: Data represent no. (%) or median with Interquartile range (IQR). Favorable outcomes treatment: Bacteriological and clinical cure, Unfavorable outcomes treatment: failure, death and lost to follow-up (see details in **Supplementary Table 2**).

Alcohol consumption: Past or current any consumption of alcohol. Smoking: Past or current cigarette smoker. Illicit drug use: Past or current illicit drug use (marijuana, cocaine, heroin or crack)

[a]It did not include DM and HIV. [b]ART frequency was calculated among the persons living with HIV. [c]All individuals from the RePORT cohort had a diagnosis of pulmonary tuberculosis, in some cases with presence in other anatomical sites. [d]Any drug (anti-TB) resistance except rifampicin and isoniazid: Pyrazinamide, ethambutol, streptomycin, kanamycin, ethionamide.

Abbreviations: RePORT: Regional Prospective Observational Research for Tuberculosis. SINAN: Sistema de Informação de Agravos de Notificação. TB: Tuberculosis.

Supplementary Table 5. Characteristics of TB patients from Duque de Caxias city

Characteristics	RePORT-Brazil (n=196)	SINAN (n=4302)	p-value	pδ-value
Sex – no. (%)			0.107	0.38
Male	124 (63.3)	2957 (68.7)		
Female	72 (36.7)	1345 (31.3)		
Age – median (IQR)	39 (27-53)	37 (25-52)		1
Race/Ethnicity – no. (%)			<0.001	0.14
White	23 (11.7)	997 (27.1)		
Black	66 (33.7)	892(24.2)		
Asian	1 (0.5)	47 (1.3)		
Pardo	103 (52.6)	1739 (47.3)		
Indigenous	3 (1.5)	5 (0.1)		
Literate– no. (%)	187 (95.4)	2115 (82.0)	<0.001	0 (Δ=7.84)
Health worker – no. (%)	8 (4.1)	37 (1.1)	<0.001	0 (Δ=4.60)
Comorbidities[a] – no. (%)			<0.001	1
Cancer	0 (0.0)	17 (0.4)		
Chronic Obstructive Pulmonary Disease/Emphysema	3 (1.7)	4 (0.1)		
Kidney disease	1 (0.6)	4 (0.1)		
Hypertension	21 (12.0)	83 (1.9)		
Others	13 (7.4)	94 (2.2)		
No comorbidity	137 (78.3)	4100 (95.3)		
Diabetes – no. (%)	41 (21.1)	366 (9.8)	<0.001	0 (Δ=4.73)
HIV infection – no. (%)	8 (4.3)	482 (13.3)	<0.001	0 (Δ=4.47)
Antiretroviral therapy (ART)[b] – no. (%)	1 (12.5)	125 (29.9)	0.285	0.5
Alcohol consumption – no. (%)	163 (83.2)	715 (18.6)	<0.001	0 (Δ=27.45)
Illicit drug use – no. (%)	62 (31.8)	645 (17.1)	<0.001	0 (Δ=4.27)
Smoking – no. (%)	123 (62.8)	921 (24.2)	<0.001	0 (Δ=13.30)
Prior TB – no. (%)	32 (16.5)	1019 (23.8)	0.019	0.06
Abnormal chest x-ray – no. (%)	193 (98.5)	4124 (96.8)	0.181	0.5
Type of TB (Pulmonary) [c] – no. (%)	194 (99.0)	4259 (99.0)	0.997	0.5
Positive AFB – no. (%)	166 (85.6)	1262 (66.0)	<0.001	0.5
Positive culture – no. (%)	194 (100.0)	441 (60.2)	<0.001	0.5
Drug-susceptibility testing (DST) – no. (%)			0.002	0.62
Rifampicin resistance	0 (0.0)	9 (1.6)		
Isoniazid resistance	9 (4.7)	24 (4.3)		
Rifampicin-Isoniazid resistance	1 (0.5)	19 (3.4)		
Any drug resistance[d]	20 (10.5)	24 (4.3)		
Sensitive	161 (84.3)	488 (86.5)		
Directly observed treatment (DOT) – no. (%)	123 (64.1)	1478 (45.4)	<0.001	0 (Δ=3.83)
Treatment Outcome[e]– no. (%)			<0.001	0.62
Cure	109 (91.6)	2264 (66.2)		
Failure	2 (1.7)	3 (0.1)		
Relapse	0 (0.0)	63 (1.8)		
Death	7 (5.9)	286 (8.4)		
Lost to follow-up	0 (0.0)	529 (15.5)		
Transferred out	1 (0.8)	236 (6.9)		

Table note: Data represent no. (%) or median with Interquartile range (IQR). pδ-value: second-generation p-value. Δ= delta-gap. See the Supplemental Figure 2 for interpretation of the pδ-value. Details of the total data available in the re Report-Brazil and SINAN bases in the **Supplementary Table 2**.

Alcohol consumption: Past or current any consumption of alcohol. Smoking: Past or current cigarette smoker. Illicit drug use: Past or current illicit drug use (marijuana, cocaine, heroin or crack)

[a] It did not include DM and HIV. [b]ART frequency was calculated among the persons living with HIV. [c]All individuals from the RePORT cohort had a diagnosis of pulmonary tuberculosis, in some cases with presence in other anatomical sites. [d]Any drug (anti-TB) resistance except rifampicin and isoniazid: Pyrazinamide, ethambutol, streptomycin, kanamycin, ethionamide. [e]In RePORT-Brazil study, the results of anti-TB treatment are recorded at the last study visit (24 months after the start of treatment).

Abbreviations: TB: Tuberculosis. SINAN - Sistema de Informação de Agravos de Notificação. (Brazilian Notification Information System). AFB: acid fast bacilli. ART: Antiretroviral therapy.

Supplementary Table 6. Characteristics of TB patients from Manaus city

Characteristics	RePORT-Brazil (n=321)	SINAN (n=13561)	p-value	pδ-value
Sex – no. (%)			<0.001	0 (Δ=1.32)
Male	236 (73.5)	8597 (63.4)		
Female	85 (26.5)	4964 (36.6)		
Age – median (IQR)	34 (25-42)	36 (25-51)	0.787	1
Race/Ethnicity – no. (%)			<0.001	0.859
White	34 (10.6)	1528(11.7)		
Black	17 (5.3)	438 (3.3)		
Asian	2 (0.6)	71 (0.5)		
Pardo	256 (80)	10948 (83.5)		
Indigenous	11 (3.4)	125 (1.0)		
Literate– no. (%)	310 (96.9)	9097 (87.4)	<0.001	0 (Δ=8.08)
Health worker – no. (%)	13 (4.1)	186 (1.5)	<0.001	0 (Δ=4.09)
Comorbidities[a] – no. (%)			<0.001	1
Cancer	2 (0.7)	47 (0.3)		
Chronic Obstructive Pulmonary Disease/Emphysema	0 (0.0)	8 (0.1)		
Kidney disease	0 (0.0)	43 (0.3)		
Hypertension	18 (5.9)	235 (1.7)		
Others	13 (4.3)	334 (2.5)		
No comorbidity	272 (89.2)	12892 (95.1)		
Diabetes – no. (%)	107 (33.3)	1428 (11.0)	<0.001	0 (Δ=11.11)
HIV infection – no. (%)	163 (50.8)	2337 (22.8)	<0.001	0 (Δ=9.77)
Antiretroviral therapy (ART)[b] – no. (%)	50 (45.5)	1295 (70.3)	<0.001	0 (Δ=5.90)
Alcohol consumption – no. (%)	294 (91.6)	1893 (14.7)	<0.001	0 (Δ=38.37)
Illicit drug use – no. (%)	165 (51.4)	1297 (10.2)	<0.001	0 (Δ=20.04)
Smoking – no. (%)	195 (60.7)	1885 (14.8)	<0.001	0 (Δ=19.55)
Prior TB – no. (%)	40 (12.5)	2545 (18.8)	0.005	0 (Δ=0.50)
Abnormal chest x-ray – no. (%)	304 (94.7)	12567 (95.3)	0.602	0.5
Type of TB[c] – no. (%)	249 (77.6)	13311 (98.2)	<0.001	0 (Δ=24.63)
Positive AFB – no. (%)	239 (74.9)	3696 (54.5)	<0.001	0.5
Positive culture – no. (%)	318 (99.7)	2942 (56.5)	<0.001	0 (Δ=36.12)
Drug-susceptibility testing (DST) – no. (%)			0.015	0.31
Rifampicin resistance	3 (1.0)	22 (1.4)		
Isoniazid resistance	24 (7.6)	60 (3.8)		
Rifampicin-Isoniazid resistance	6 (1.9)	33 (2.1)		
Any drug resistance[d]	13 (4.1)	41 (2.6)		
Sensitive	268 (85.4)	1439 (90.2)		
Directly observed treatment (DOT) – no. (%)	237 (73.8)	1118 (17.4)	<0.001	0 (Δ=23.50)
Treatment Outcome[e]– no. (%)			<0.001	1
Cure	44 (27.8)	7543 (66.1)		
Failure	12 (7.6)	2 (0.0)		
Relapse	5 (3.2)	296 (2.6)		
Death	33 (20.9)	1064 (9.3)		
Lost to follow-up	56 (35.4)	1880 (16.5)		
Transferred out	8 (5.1)	425 (3.7)		

Table note: Data represent no. (%) or median with Interquartile range (IQR). pδ-value: second-generation p-value. Δ= delta-gap. See the Supplemental Figure 2 for interpretation of the pδ-value. Details of the total data available in the re Report-Brazil and SINAN bases in the **Supplementary Table 2.**

Alcohol consumption: Past or current any consumption of alcohol. Smoking: Past or current cigarette smoker. Illicit drug use: Past or current illicit drug use (marijuana, cocaine, heroin or crack)

Supplementary Table 7. Characteristics of TB patients from Salvador city

Characteristics	RePORT-Brazil (n=252)	SINAN (n=10505)	p-value	pδ-value
Sex – no. (%)			0.515	0.5
Male	165 (65.5)	6668 (63.5)		
Female	87 (34.5)	3836 (36.5)		
Age – median (IQR)	37 (26-50)	39 (28-53)		
Race/Ethnicity – no. (%)			<0.001	0 (Δ=1.39)
White	18 (7.1)	725 (8.1)		
Black	131 (52)	2568 (28.7)		
Asian	3 (1.2)	64 (0.7)		
Pardo	1 (0.4)	5585 (62.3)		
Indigenous	165 (65.5)	18 (0.2)		
Literate– no. (%)	240 (95.2)	5688 (86.4)	<0.001	0 (Δ=5.54)
Health worker – no. (%)	13 (5.2)	139 (1.4)	<0.001	0 (Δ=6.70)
Comorbidities[a] – no. (%)			0.001	1
Cancer	0 (0.0)	70 (0.7)		
Chronic Obstructive Pulmonary Disease/Emphysema	0 (0.0)	26 (0.2)		
Kidney disease	0 (0.0)	22 (0.2)		
Hypertension	18 (7.9)	310 (3.0)		
Others	7 (3.1)	469 (4.5)		
No comorbidity	204 (89.1)	9608 (91.5)		
Diabetes – no. (%)	58 (23.1)	987 (10.6)	<0.001	0 (Δ=5.65)
HIV infection – no. (%)	3 (1.2)	1119 (15.7)	<0.001	0 (Δ=15.77)
Antiretroviral therapy (ART)[b] – no. (%)	1 (50.0)	598 (60.8)	0.754	0.5
Alcohol consumption – no. (%)	225 (89.3)	2088 (22.4)	<0.001	0 (Δ=30.06)
Illicit drug use – no. (%)	57 (22.6)	1104 (12.2)	<0.001	0 (Δ=3.64)
Smoking – no. (%)	104 (41.3)	1862 (20.3)	<0.001	0 (Δ=6.93)
Prior TB – no. (%)	19 (7.6)	2881 (27.6)	<0.001	0 (Δ=10.21)
Abnormal chest x-ray – no. (%)	251 (99.6)	9623 (95.2)	0.001	0 (Δ=5.12)
Type of TB[c] – no. (%)	252 (100.0)	10397 (99.0)	0.106	0.5
Positive AFB – no. (%)	225 (89.3)	2264 (62.0)	<0.001	0.5
Positive culture – no. (%)	250 (100.0)	1599 (67.4)	<0.001	0.5
Drug-susceptibility testing (DST) – no. (%)			<0.001	0.65
Rifampicin resistance	1 (0.4)	11 (1.0)		
Isoniazid resistance	6 (2.5)	44 (3.9)		
Rifampicin-Isoniazid resistance	3 (1.2)	33 (2.9)		
Any drug resistance[d]	19 (7.8)	23 (2.0)		
Sensitive	214 (88.1)	1020 (90.2)		
Directly observed treatment (DOT) – no. (%)	148 (58.7)	343 (6.6)	<0.001	0 (Δ=27.62)
Treatment Outcome[e]– no. (%)			<0.001	1
Cure	109 (75.7)	5395 (61.2)		
Failure	10 (6.9)	4 (0.0)		
Relapse	0 (0.0)	154 (1.7)		
Death	4 (2.8)	604 (6.9)		
Lost to follow-up	19 (13.2)	1240 (14.1)		
Transferred out	2 (1.4)	1248 (14.2)		

Table note: Data represent no. (%) or median with Interquartile range (IQR). pδ-value: second-generation p-value. Δ= delta-gap. See the Supplemental Figure 2 for interpretation of the pδ-value. Details of the total data available in the re Report-Brazil and SINAN bases in the **Supplementary Table 2**.

Alcohol consumption: Past or current any consumption of alcohol. Smoking: Past or current cigarette smoker. Illicit drug use: Past or current illicit drug use (marijuana, cocaine, heroin or crack)

[a] It did not include DM and HIV. [b]ART frequency was calculated among the persons living with HIV. [c]All individuals from the RePORT cohort had a diagnosis of pulmonary tuberculosis, in some cases with presence in other anatomical sites. [d]Any drug (anti-TB) resistance except rifampicin and isoniazid: Pyrazinamide, ethambutol, streptomycin, kanamycin, ethionamide. [e]In RePORT-Brazil study, the results of anti-TB treatment are recorded at the last study visit (24 months after the start of treatment).

Abbreviations: TB: Tuberculosis. SINAN - Sistema de Informação de Agravos de Notificação. (Brazilian Notification Information System). AFB: acid fast bacilli. ART: Antiretroviral therapy.

Supplementary Table 8. Characteristics of TB patients from INI/Rocinha city

| Characteristics	RePORT-Brazil (n=291)	SINAN (n=38142)	p-value	pδ-value
Sex – no. (%)			0.007	0.01
Male	178 (61.2)	26150 (68.6)		
Female	113 (38.8)	11992 (31.4)		
Age – median (IQR)	34 (25-48)	35 (24-50)		1
Race/Ethnicity – no. (%)			<0.001	0 (Δ=0.80)
White	139 (47.8)	10575 (30.5)		
Black	58 (19.9)	7805 (22.5)		
Asian	0 (0)	339 (45.8)		
Pardo	93 (32)	60 (0.2)		
Indigenous	1 (0.3)	26150 (68.6)		
Literate– no. (%)	272 (93.5)	22508 (83.8)	<0.001	0 (Δ=4.76)
Health worker – no. (%)	11 (3.8)	575 (1.6)	0.003	0 (Δ=1.89)
Comorbidities[a] – no. (%)			<0.001	1
Cancer	8 (2.9)	244 (0.6)		
Chronic Obstructive Pulmonary Disease/Emphysema	3 (1.1)	93 (0.2)		
Kidney disease	4 (1.4)	117 (0.3)		
Hypertension	24 (8.7)	813 (2.1)		
Others	33 (11.9)	1518 (4.0)		
No comorbidity	205 (74.0)	35352 (92.7)		
Diabetes – no. (%)	44 (15.9)	2410 (7.3)	<0.001	0 (Δ=4.74)
HIV infection – no. (%)	46 (16.0)	3979 (13.0)	0.138	0.45
Antiretroviral therapy (ART)[b] – no. (%)	17 (54.8)	2257 (63.1)	0.341	0.5
Alcohol consumption – no. (%)	208 (71.5)	5269 (16.0)	<0.001	0 (Δ=23.34)
Illicit drug use – no. (%)	77 (26.6)	6240 (19.2)	0.002	0 (Δ=0.64)
Smoking – no. (%)	133 (45.7)	7772 (23.8)	<0.001	0 (Δ=6.94)
Prior TB – no. (%)	80 (27.9)	8253 (21.8)	0.013	0.07
Abnormal chest x-ray – no. (%)	279 (95.9)	35862 (95.2)	0.615	0.5
Type of TB[c] – no. (%)	242 (83.2)	37590 (98.6)	<0.001	0 (23.19)
Positive AFB – no. (%)	222 (76.6)	10530 (71.4)	0.080	0.5
Positive culture – no. (%)	291 (100.0)	9730 (77.3)	<0.001	0.5
Drug-susceptibility testing (DST) – no. (%)			<0.001	0.23
Rifampicin resistance	1 (0.3)	83 (1.6)		
Isoniazid resistance	12 (4.1)	207 (4.1)		
Rifampicin-Isoniazid resistance	16 (5.5)	143 (2.8)		
Any drug resistance[d]	46 (15.8)	200 (3.9)		
Sensitive	216 (74.2)	4446 (87.5)		
Directly observed treatment (DOT) – no. (%)	233 (80.9)	20451 (76.5)		0.34
Treatment Outcome[e]– no. (%)			<0.001	0.92
Cure	173 (84.4)	19581 (63.7)		
Failure	2 (1.0)	42 (0.1)		
Relapse	4 (2.0)	624 (2.0)		
Death	8 (3.9)	2388 (7.8)		
Lost to follow-up	17 (8.3)	4974 (16.2)		
Transferred out	1 (0.5)	2106 (6.8)		

Table note: Data represent no. (%) or median with Interquartile range (IQR). pδ-value: second-generation p-value. Δ= delta-gap. See the Supplemental Figure 2 for interpretation of the pδ-value. Details of the total data available in the re Report-Brazil and SINAN bases in the **Supplementary Table 2**.

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[a] It did not include DM and HIV. [b]ART frequency was calculated among the persons living with HIV. [c]All individuals from the RePORT cohort had a diagnosis of pulmonary tuberculosis, in some cases with presence in other anatomical sites. [d]Any drug (anti-TB) resistance except rifampicin and isoniazid: Pyrazinamide, ethambutol, streptomycin, kanamycin, ethionamide. [e]In RePORT-Brazil study, the results of anti-TB treatment are recorded at the last study visit (24 months after the start of treatment).

Abbreviations: INI: Instituto Nacional de Infectologia Evandro Chagas. TB: Tuberculosis. SINAN - Sistema de Informação de Agravos de Notificação. (Brazilian Notification Information System). AFB: acid fast bacilli. ART: Antiretroviral therapy.
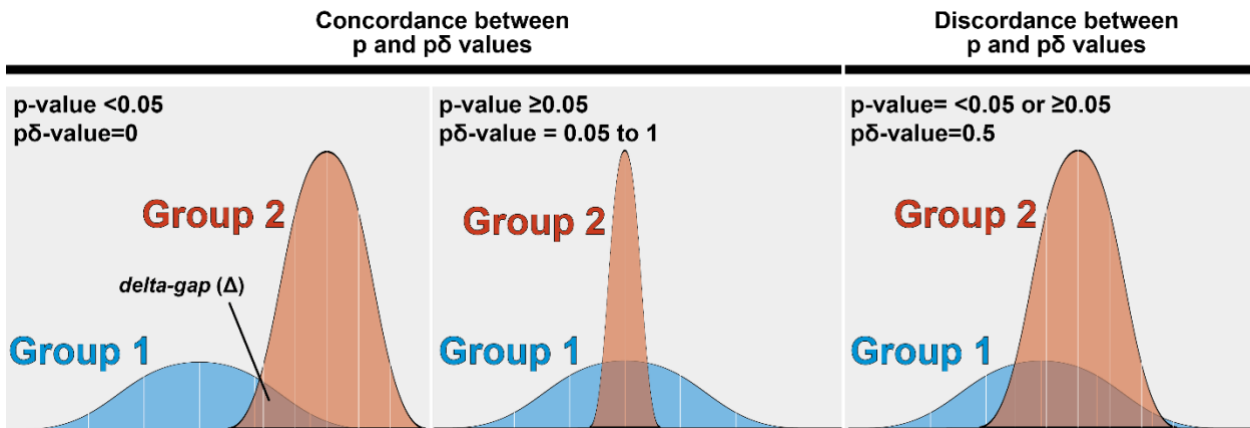
SUPPLEMENTARY FIGURE LEGENDS
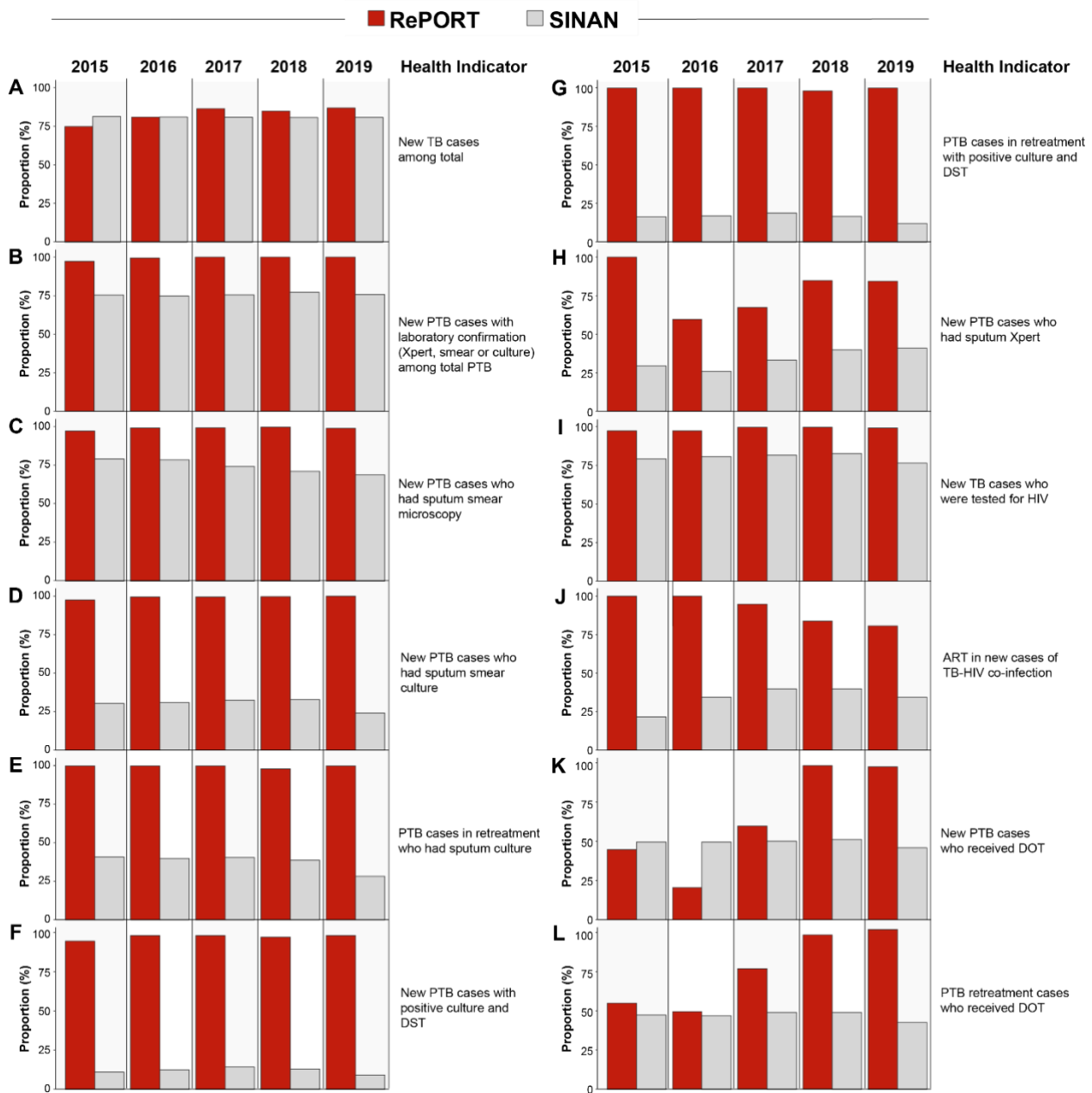
Supplementary Figure 1. Epidemiological and operational indicators of tuberculosis cases in RePORT-Brazil) and SINAN during the study period.

Main epidemiological and operational indicators were calculated per year based on data available on the Notifiable Diseases Information System for Tuberculosis (SINAN-TB) and RePORT-Brazil data.

Abbreviations: DOT: directly observed tuberculosis therapy. DST: drug sensitivity test. PTB: pulmonary tuberculosis. TB: Tuberculosis.

Supplementary Figure 2. Interpreting the p-value and the second-generation p-value.

The second-generation p-value (pδ) is the proportion of data-supported hypotheses that are also null hypotheses. As such, second-generation p-values indicate when the data are compatible with null hypotheses pδ = 1, or with alternative hypotheses pδ = 0, or when the data are inconclusive $0 < pδ < 1$. The graphs illustrate three examples on how to interpret the pδ results. The left panel shows an interval estimate (Group 2) that does not overlap with the null region (Group 1), resulting in a second-generation p-value of 0. The *delta-gap* is the distance between the intervals in $δ$ units and its value is directly associated with the difference in distribution of values between the groups (e.g. the higher the delta value, the more different the groups are). In such setting, both p-value and pδ-value indicate statistically significant differences. The middle panel displays an interval that falls entirely within the null region (with the exact mean values), so the second-generation p-value is 1. In this scenario, both p-value and pδ-value denote absence of differences statistically significant. The right panel shows an interval that includes the null region, but not entirely, resulting in a pδ-value of 0.5. In this last example, one may have a significant p-value and a nonsignificant pδ-value.