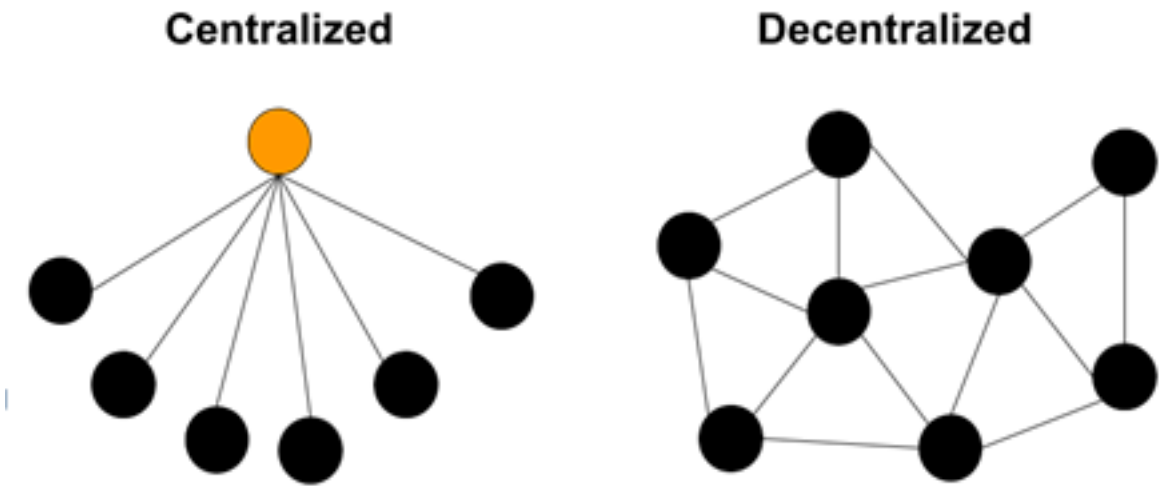
Decentralization for TB case finding and TPT in Indonesia

Trisasi Lestari

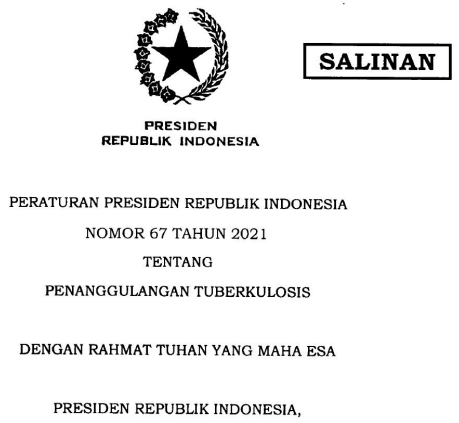
29 November 2022

Annual meeting of the Child and Adolescent TB working group

Decentralization : concept and context



- Decentralisation : greater autonomy is provided to the provincial and district government, including health facilities responsible for TB services.
- Including transfer of authority in planning, management and decision making from national to sub-national level



SALINAN

PRESIDEN
REPUBLIK INDONESIA

PERATURAN PRESIDEN REPUBLIK INDONESIA
NOMOR 67 TAHUN 2021
TENTANG
PENANGGULANGAN TUBERKULOSIS

DENGAN RAHMAT TUHAN YANG MAHA ESA

PRESIDEN REPUBLIK INDONESIA,

Presidential decree No 67 of 2021 on Tuberculosis Control

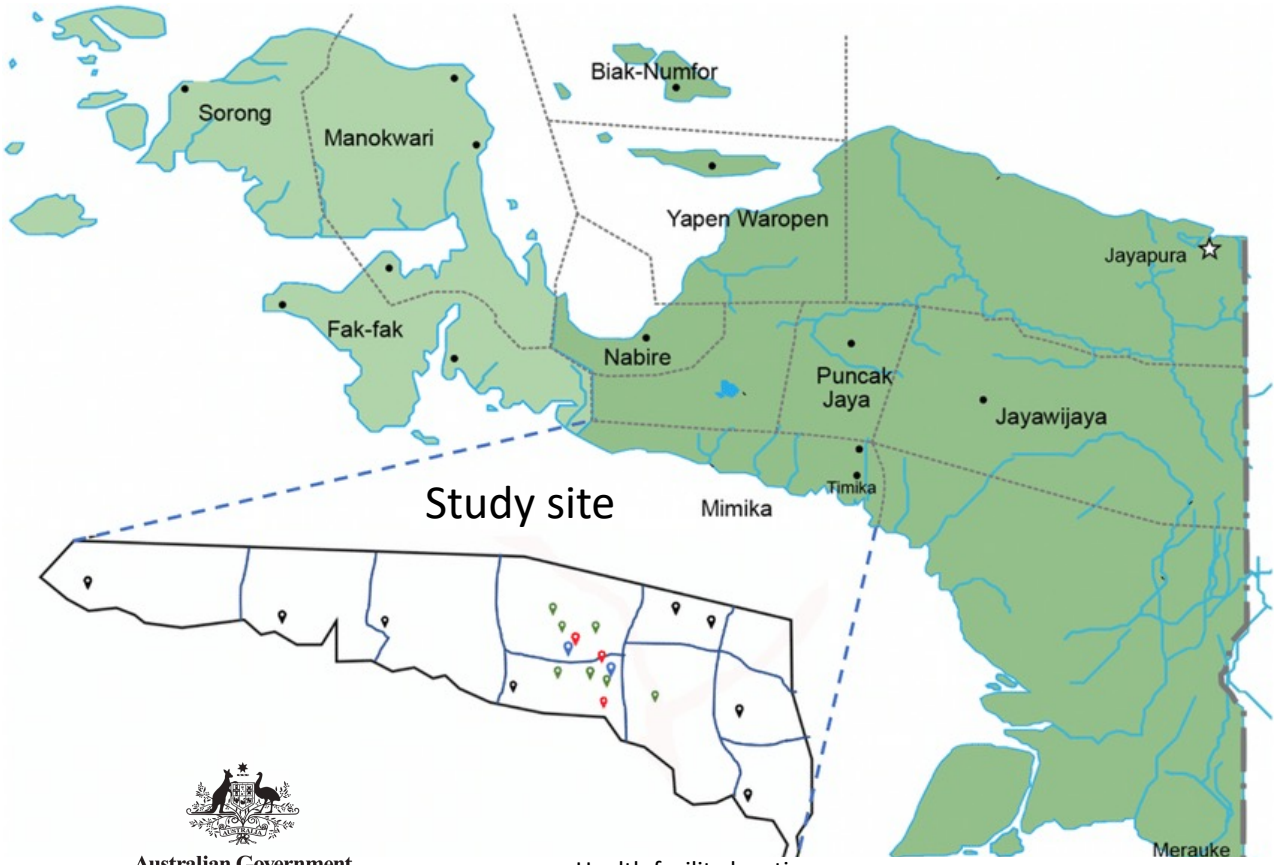
Central Government roles

- establishing **policies** related to TB control;
- carry out **TB control activities** in an integrated manner;
- provide the necessary **resources for TB** control;
- mitigate the **psychosocial and economic impacts** faced by TB patients and their families; and
- carry out **social protection** and empowerment efforts for TB patients and TB-affected communities.

Local Government roles

- Include **TB indicators** in local development plans **as a priority**;
- **coordinating** the implementation of TB control in the regions;
- provide **funding** for TB control from several sources;
- provide and improve **human resources** to achieve TB targets;
- actively and quickly detect TB cases by **involving the community;**
- ensuring that all people diagnosed with TB are **recorded and reported** in the TB information system;
- **provide TB preventive treatment** to vulnerable populations;
- Mitigate the **psychosocial and economic impacts** they face tuberculosis patients and their families; and
- formulate and establish **regional policies** to encourage TB patients to carry out treatment until it is finished.

Preventing TB in Children in Timika (PeTiT) study



Health system strengthening activities to increase uptake of TPT had been underway in clinics in Mimika district since September 2017

Very small local research team:
1-2 researchers on site
1-2 research assistants
International researchers from Menzies and Burnet Institute

Research funded by DFAT

Australian Government
Department of Foreign Affairs and Trade

The main intervention is improving human resource capacity, through training, mentoring, clinical support, educational materials, and CQI meetings

Trained TB staff to be a TB trainer

Introducing TB prevention treatment using child friendly regimen

Child TB Screening form

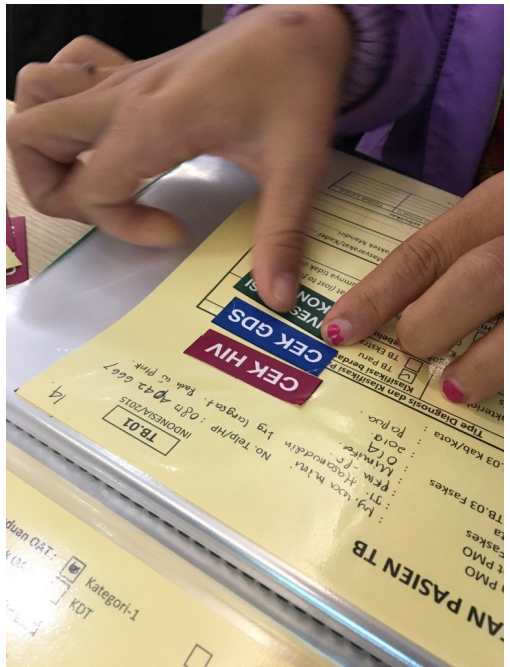
Formulir Scoring TB Anak

Nama	
Usia	

Parameter	Kriteria	Skor
Kontak TB	**0:** Tidak Jelas **2:** Ada kontak dg penderita TB BTA negatif/BTA tidak jelas **3:** Ada kontak dg penderita TB BTA positif	
Mantoux/ Tuberkulin	**0:** negatif **3:** Positif ≥10mm atau ≥5mm jika imunokompromis	
Demam	**1:** ≥2 minggu	
Batuk	**1:** ≥2 minggu	
Kelenjar Limfe	**0:** normal **1:** >1 kelenjar, ukuran >1cm, tidak nyeri	
Rontgen	**0:** normal **1:** gambaran mendukung TB	
	SKOR TOTAL	

Untuk disimpan di rekam medik

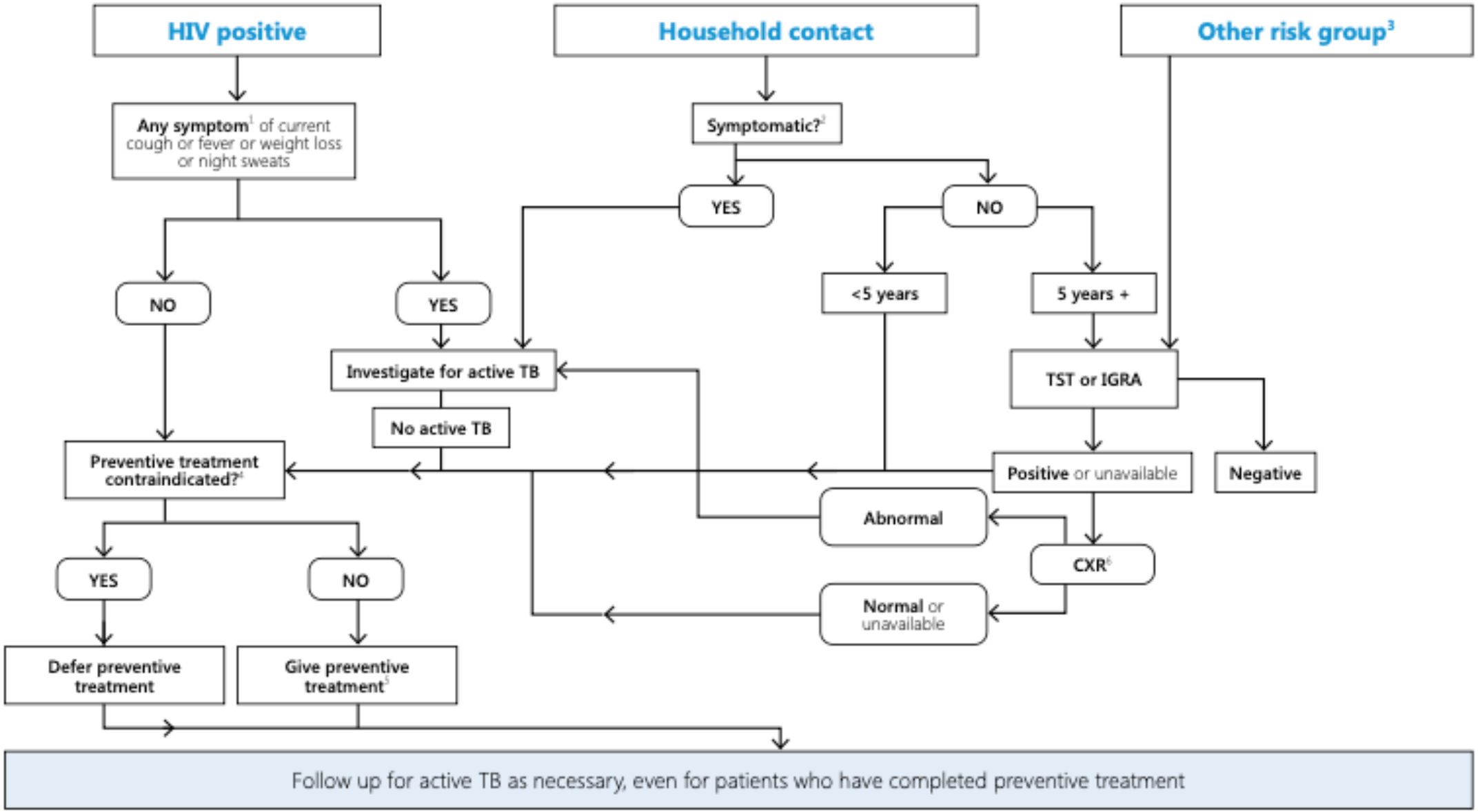
Create reminder tools



TB training in a primary healthcare

- Engagement with the District TB program through Continuous Quality Improvement meetings: working towards shared goals to improve quality care and adherence to guideline.

Fig. 1. Algorithm for LTBI testing and TB preventive treatment in individuals at risk



Educational materials for TB patients/parent

Pemeriksaan TB

Pemeriksaan TB untuk orang dewasa cukup dilakukan dengan pemeriksaan dahak sebanyak 2-3 kali dan jika perlu pemeriksaan foto rontgen dada. Jika lokasi TB bukan di paru-paru, maka dokter akan mengambil sampel jaringan dari lokasi sakit TB untuk diperiksa.

Pemeriksaan TB untuk anak lebih rumit karena anak, terutama balita, sering sulit mengeluarkan dahak. Dokter dan Perawat akan melakukan pemeriksaan berikut ini pada anak:

- **Pemeriksaan dahak.** Jika anak tidak bisa mengeluarkan dahak, dokter atau perawat bisa membantu mengeluarkan dahak anak dengan bantuan alat.
- **Pemeriksaan foto dada**
- **Tes tuberkulin atau tes Mantoux**
- **Pengukuran Berat Badan dan Tinggi Badan**
- **Menanyakan orang sakit TB atau batuk batuk yang kontak dengan anak**
- **Memeriksa pembesaran kelenjar getah bening**
- Memeriksa gejala dan tanda penyakit TB lainnya.

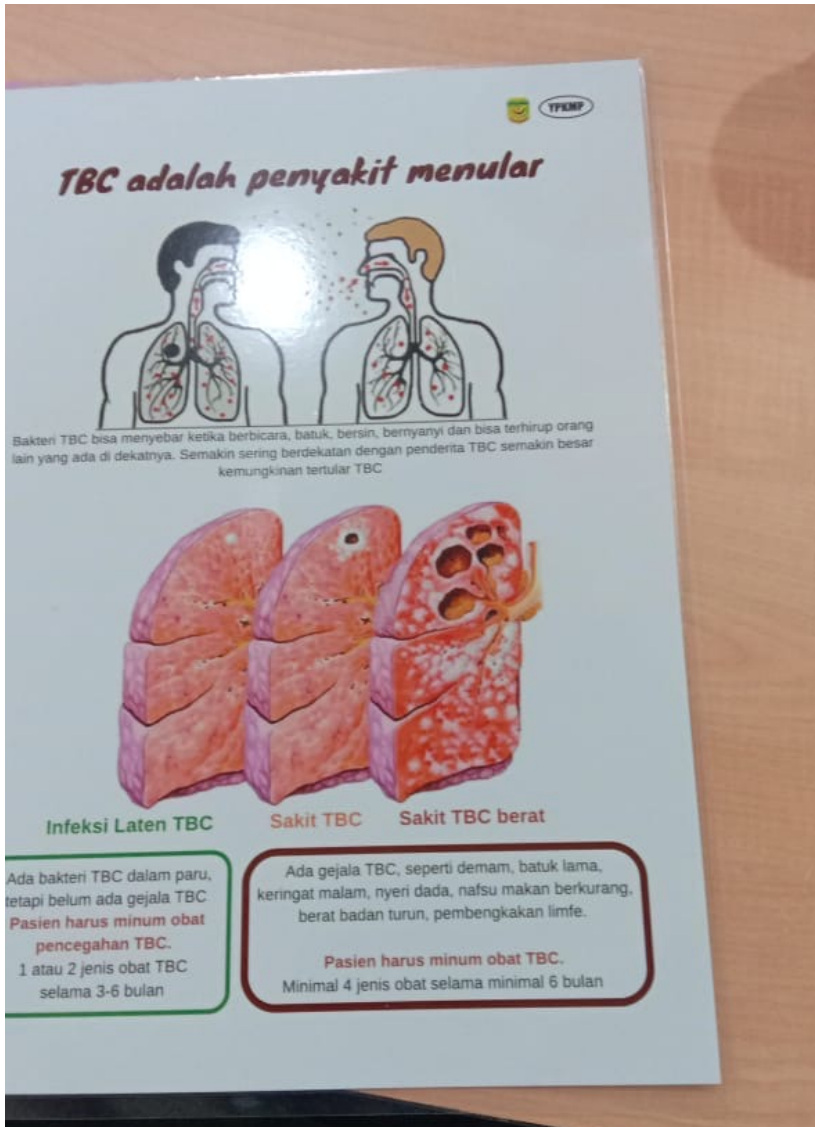
Pencegahan TB untuk Anak dan penderita HIV

Obat pencegahan TB (Isoniazid) dapat membunuh kuman TB yang masuk dalam tubuh anak sebelum kuman berkembang biak dan menyebabkan penyakit TB. Obat ini sudah tersedia gratis di Puskesmas dan Rumah Sakit.

Obat pencegahan TB diminum setiap hari selama enam bulan. Efek samping obat, jarang terjadi, tetapi anak harus diperiksa kondisinya setiap bulan. Dan jika anak menjadi sakit TB maka obat pencegahan TB harus digantikan dengan obat anti TB.

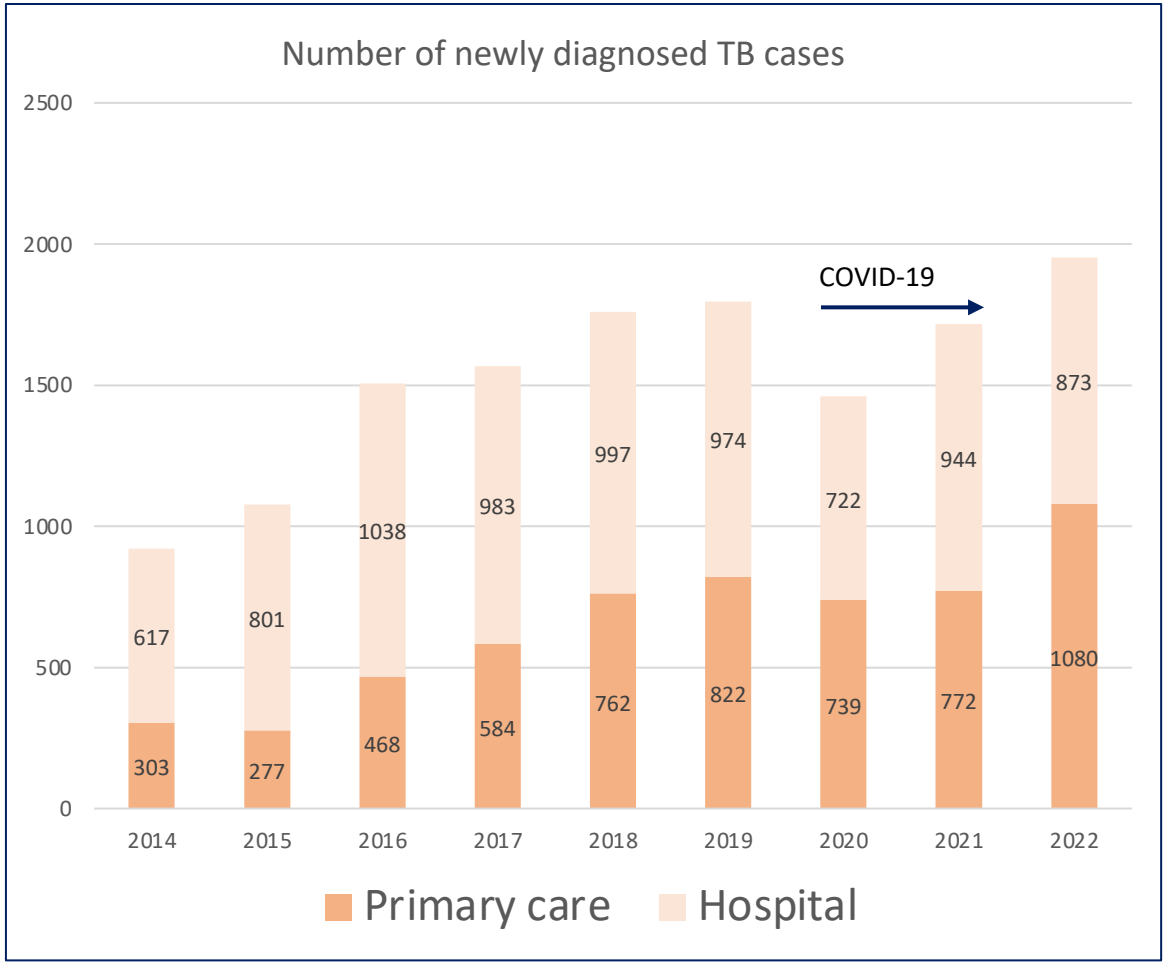
Informasi lebih lanjut mengenai pencegahan TB pada anak bisa didapat di Puskesmas dan Rumah Sakit, atau dengan menghubungi:
0812 4727 2078
pada jam kerja dari jam 08.00 - 16.00

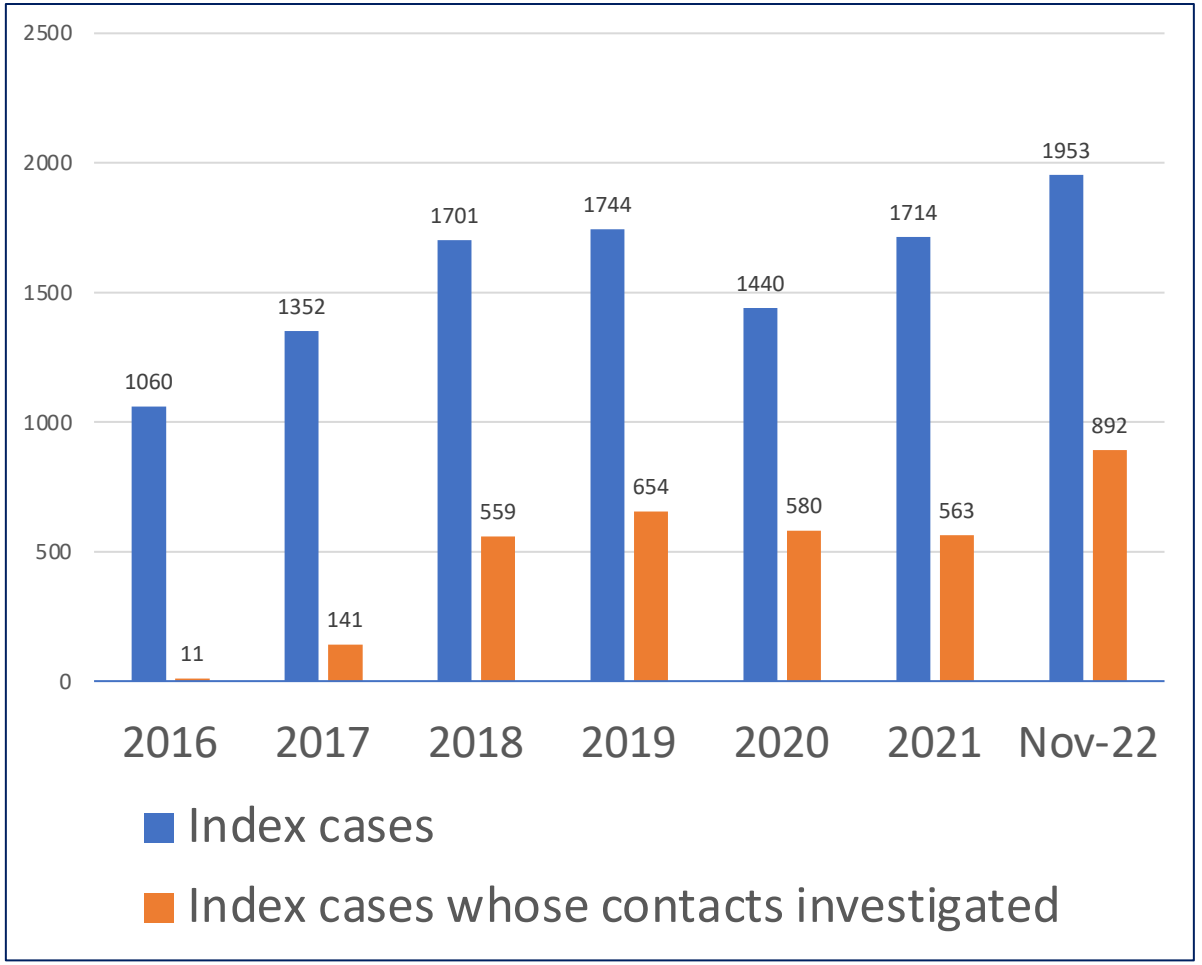
LINDUNGI ANAK DARI PENYAKIT TUBERKULOSIS



Active TB case finding and contact investigation activities

TB case finding and contact investigation activities were affected by the COVID-19 pandemic, but recovered in 2021-2022





RESEARCH ARTICLE

Impacts of tuberculosis services strengthening and the COVID-19 pandemic on case detection and treatment outcomes in Mimika District, Papua, Indonesia: 2014–2021

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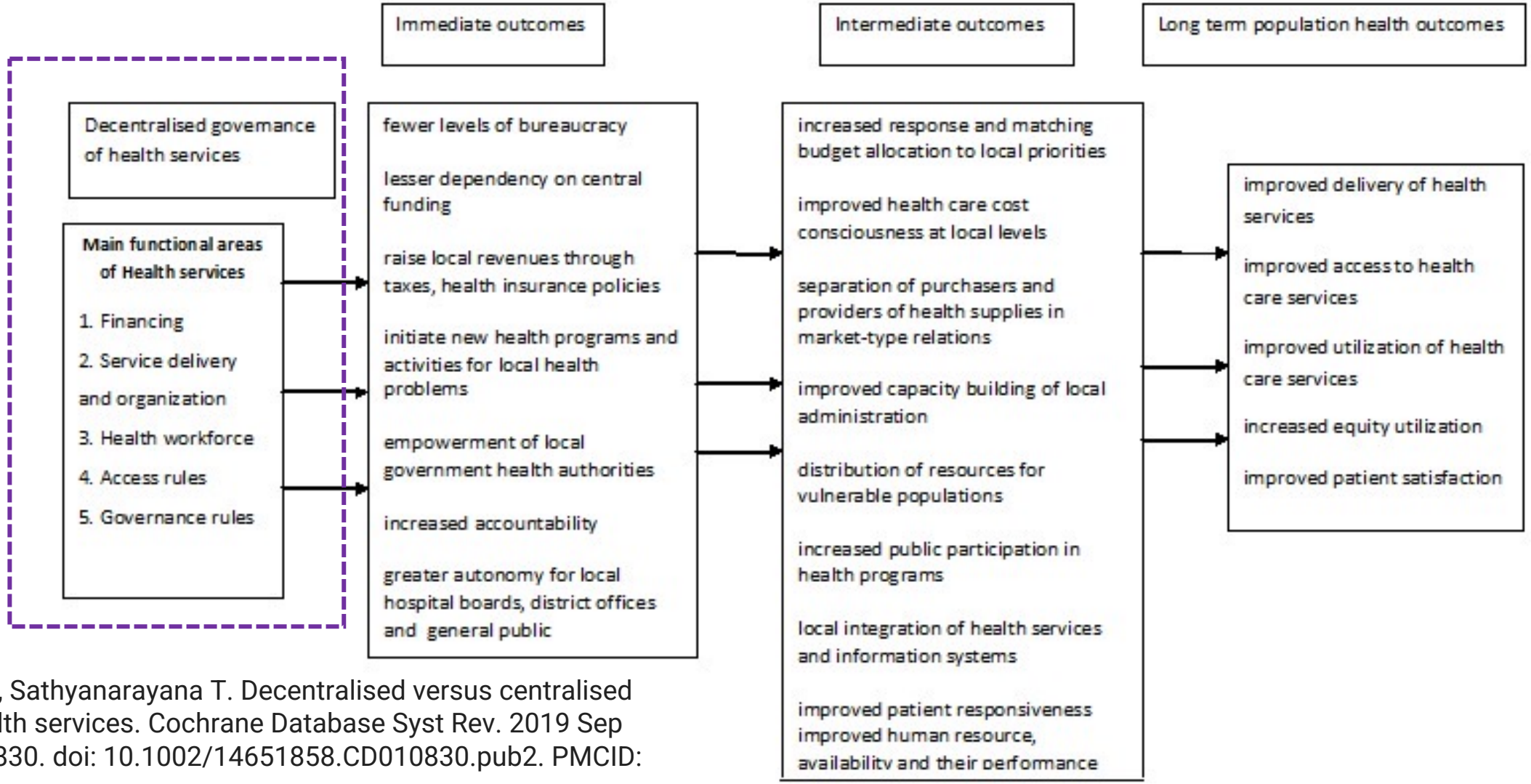
Abstract

Indonesia is a high-burden tuberculosis (TB) country with a wide case detection gap, exacerbated by the COVID-19 pandemic. We aimed to review the epidemiology of TB in a high-endemic setting of Indonesia before and during the implementation of health system strengthening activities for TB, including during the first two years of the COVID-19 pandemic. We analysed TB program data from Mimika District, Papua, Indonesia from 2014 to 2021. Health system strengthening activities to improve the programmatic management of TB were implemented from 2017 onwards. Activities included decentralization of TB services, training and mentoring of healthcare workers, improved screening for co-morbidities, and introduction and optimisation of Xpert testing in 2018. A total of 11,803 TB cases were notified to the Mimika District Health Office over eight years (2014–21). Between 2015 and 2019, there was a 67% increase in annual case notifications, an 89% increase in bacteriologically confirmed cases and the proportion of TB cases detected in primary care increased from 26% to 46%. In 2020, coinciding with the COVID-19 pandemic, investigation of people with presumptive TB fell by 38%, but the proportion of those tested with Xpert increased. TB case notifications decreased by 19% from 1,796 in 2019 to 1,461 in 2020, but then increased by 17% to 1,716 in 2021. Routine screening for co-morbidities (HIV, diabetes) among TB patients improved over time and was not affected by the pandemic. Treatment success overall was 71% and remained relatively unchanged. Loss to follow-up and death were 18% and 3.7% respectively. Improvements in TB case finding were observed over a period in which a range of health system strengthening activities were implemented. While COVID-19 had a negative impact on the TB program in Mimika District, there are encouraging signs of recovery. Further work is needed to improve TB treatment outcomes.

Table 1. Health system activities introduced over time in Mimika District, 2014–2021.

Year	Activity
2014	1. Electronic data entry for TB (SITT) in use for a full year after installment in 2013 2. Routine TB monitoring and evaluation meetings were conducted biannually
2015	Treatment was initiated for the first drug-resistant TB case
2016	Introduction of TB CEPAT ('Community Empowerment of People Against Tuberculosis')–funded by USAID
2017	1. TB CEPAT project continued 2. TB Challenge project was introduced–funded by USAID 3. TDRRCI project ('Tropical Disease Research Regional Collaboration initiative')–funded by the Australian Government (the Indo-Pacific Centre for Health Security of the Department of Foreign Affairs and Trade) to support following activities: • Establishment of household contact screening and management with TPT using 6H for young (<5 years) child contacts under-5 years in five facilities • Local TB training, focusing on childhood TB and TPT • Introduction of quarterly Continuous Quality Improvement (CQI) meetings for TB program
2018	1. TB CEPAT project ended 2. GeneXpert MTB/RIF machine (first in the district) installed in the District Hospital 3. TDRRCI project activities: • TB training provided–TB treatment; child TB; TB in pregnancy • Scale-up of household contact screening and TPT program to 11 health facilities • TB program competition between health facilities with prizes for best-performing facilities–case finding, contact screening, HIV testing, TPT • Diabetes screening kit was distributed to health facilities • TB Monitoring and Evaluation meetings quarterly
2019	1. TB Challenge project ended 2. The electronic TB Data Entry was updated (SITB) 3. STRATUM project ('Stronger Health Systems for multidrug-resistant tuberculosis and malaria')–funded as a follow-up to TDRRCI by the Indo-Pacific Centre for Health Security of the Australian Government Department of Foreign Affairs and Trade to support: • Comprehensive care introduced for drug-resistant TB care • Scale-up of household contact screening and TPT program to 16 health facilities • Introduced monthly meetings for TB monitoring and evaluation, led by the District Health Office • TB training provided: infection control; treatment of infection
2020	1. Public health response to COVID–diversion of health services and human resources; isolation/curfew at home from 2 pm; reduced clinic time at facilities; the GeneXpert machine in the district hospital temporarily used for SARS-CoV-2 diagnosis; contact screening implemented for COVID instead of TB 2. A new GeneXpert machine installed in a Primary Health Center for TB diagnosis 3. STRATUM project and follow-up PRIME-TB project ('Papua New Guinea & Indonesia for the Micro Elimination of TB'), also funded by Australian Government (the Indo-Pacific Centre for Health Security of the Department of Foreign Affairs and Trade): • Introduced online TB monitoring and evaluation meeting • Introduced online TB training • Activities to strengthen detection and treatment of MDR TB
2021	1. Indonesian NTP introduced short regimen for TPT using 3HP and 3RH 2. Three additional GeneXpert machines installed (for a total of five in Mimika District): one to the district hospital for TB diagnosis; one to the district hospital for SARS-CoV-2 diagnosis during the national sport event; and one to a primary health center for TB diagnosis 3. PRIME-TB activities: • Hybrid, online and onsite, TB monitoring and evaluation meeting • Hybrid, online and onsite, TB training, consultation, and mentoring

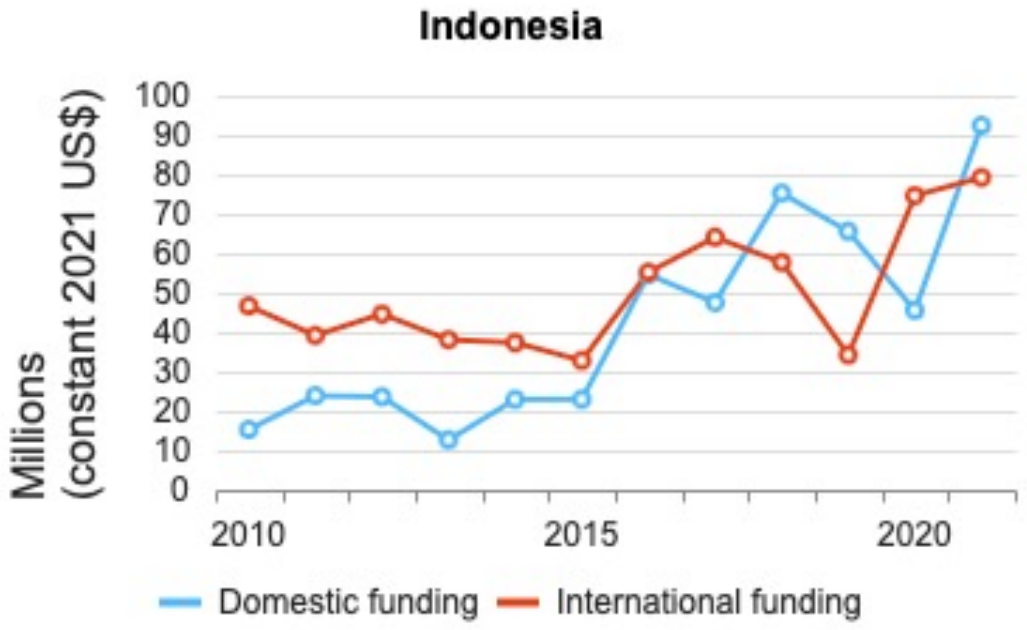
Logic model for pathways of decentralised governance of health services on health outcomes



Sreeramareddy CT, Sathyanarayana T. Decentralised versus centralised governance of health services. Cochrane Database Syst Rev. 2019 Sep 19;2019(9):CD010830. doi: 10.1002/14651858.CD010830.pub2. PMCID: PMC6752685.

1. Financing

1. Domestic funding for TB programs is increasing.
2. Policy: Local government must allocate budget for TB control
3. Private involvement in TB control program (CSR, grants, philanthropy)
4. In Mimika: The budget for TB program is not enough to run routine activities. TB staff were trained to create annual budget plan and logistic planning for TB program and identify source of funding from the health facility.



Ref: Global TB Report 2022

er: Ditjen Keuda 2022

Ref: Ministry of Home Affairs's presentation at TB HLM meeting, November 2022

Source of funding for TB CI and TPT related activities in Mimika District, Papua Province, Indonesia

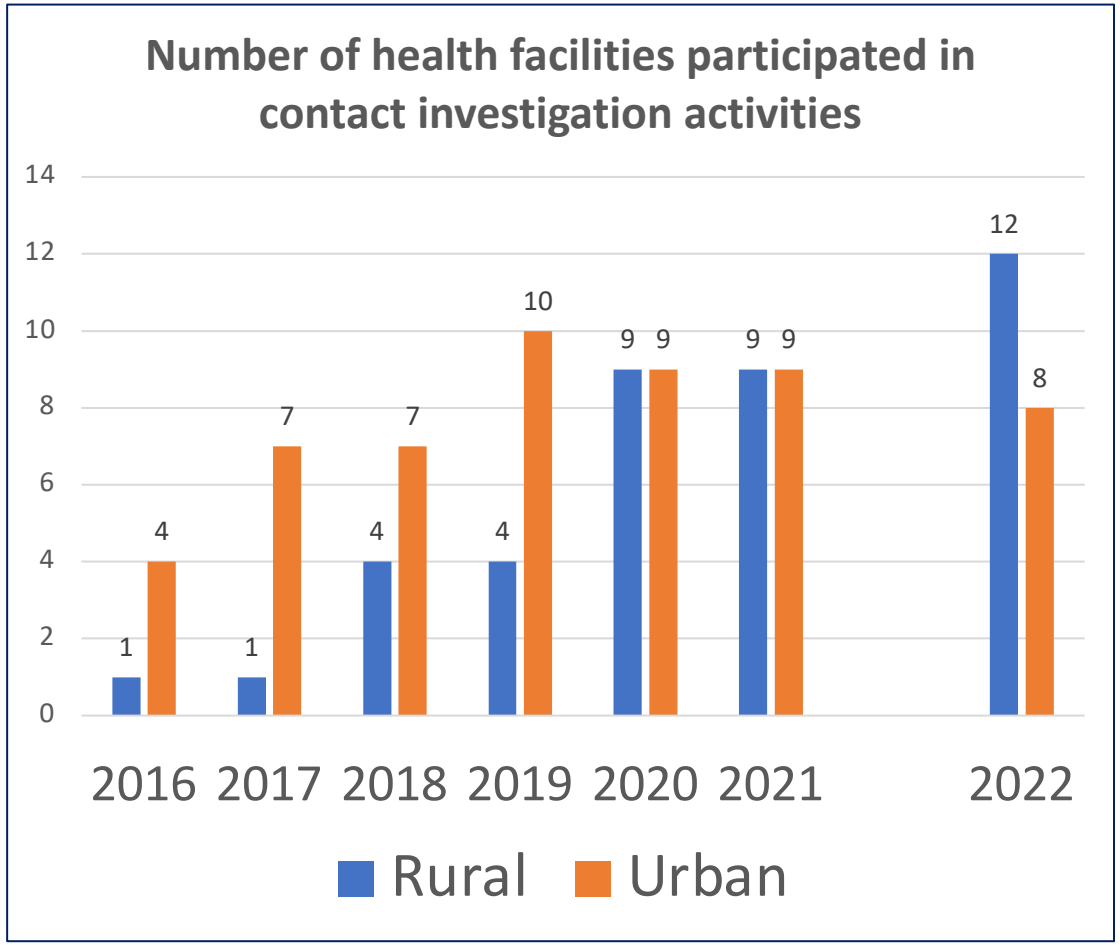
Component	NTP/MoH (GF)	DHO	Primary Healthcare (BOK/BPJS)	Private Company (CSR)	Research project
Home visits	✓		✓		
Logistic for laboratory tests	✓	✓	✓	✓	✓
Human resources		✓	✓		
Training for TB staff	✓	✓			✓
Active case finding activities		✓	✓		
Enabler/Gift/Reward for patients			✓	✓	
Monitoring and evaluation meeting		✓			✓
Recording and reporting	✓	✓	✓		✓

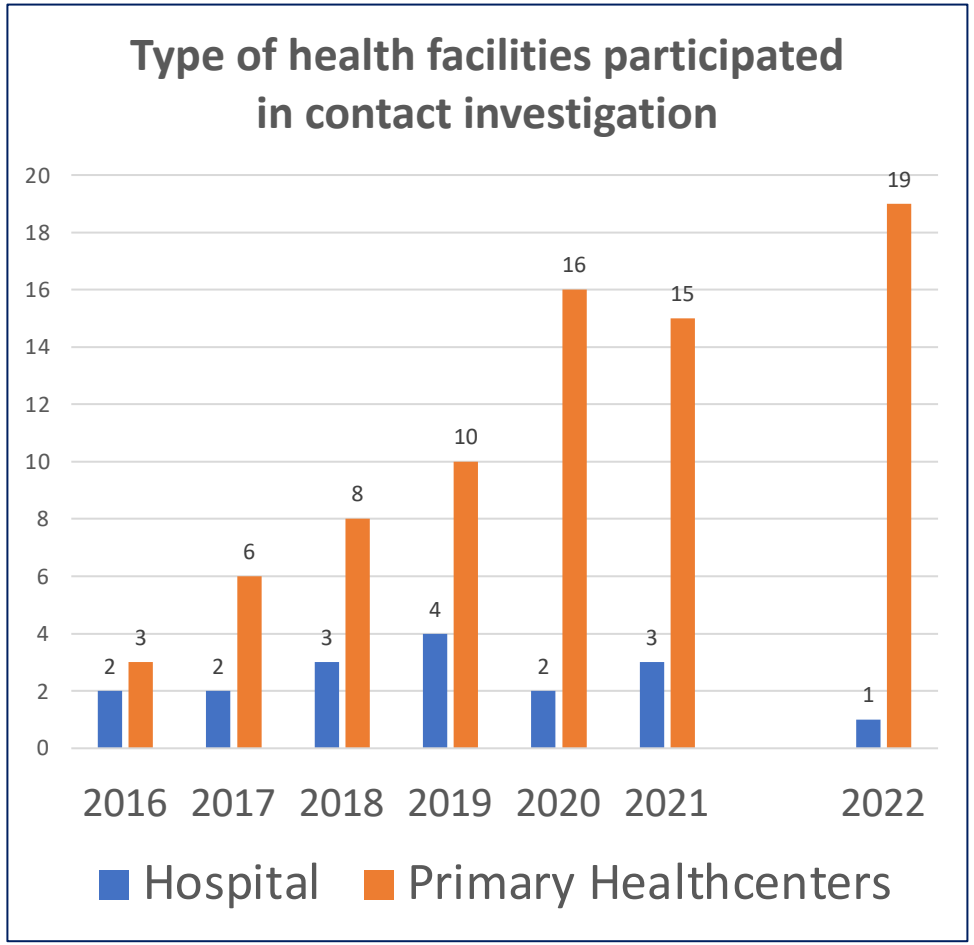
2. Service Delivery and Organization

- The DHO initiate a campaign to screen 100,000 people in 2022
- Encourage hospital to transfer TB cases to Primary Health Centers (PHCs) for contact investigation and better patient's supervision
- Improve access to Tuberculin Skin Test for TB infection screening for older children (>5 years) and adult
- Invite participation of a local private company to provide food supplements for TB patients
- Empower local TB staffs to be TB trainers for TB staff at other health care facilities
- Each PHC has specific policy for CI and TPT, including incentive for staff, reward, access to vehicle, reward for patient
- Job promotion for best performer staffs
- The district won the best district for active TB case finding in the country in 2022

	No of people screened	Presumptive TB	New TB cases
NTP target	8000	3000	34
Mimika's target	100,000	5000	250
Current achievement	85,121	3740	204
% of district target	85.1%	74.8%	81.6%
% of program target	1064%	125%	600%

Participation of health facilities in TB contact investigation including “after” the pandemic.





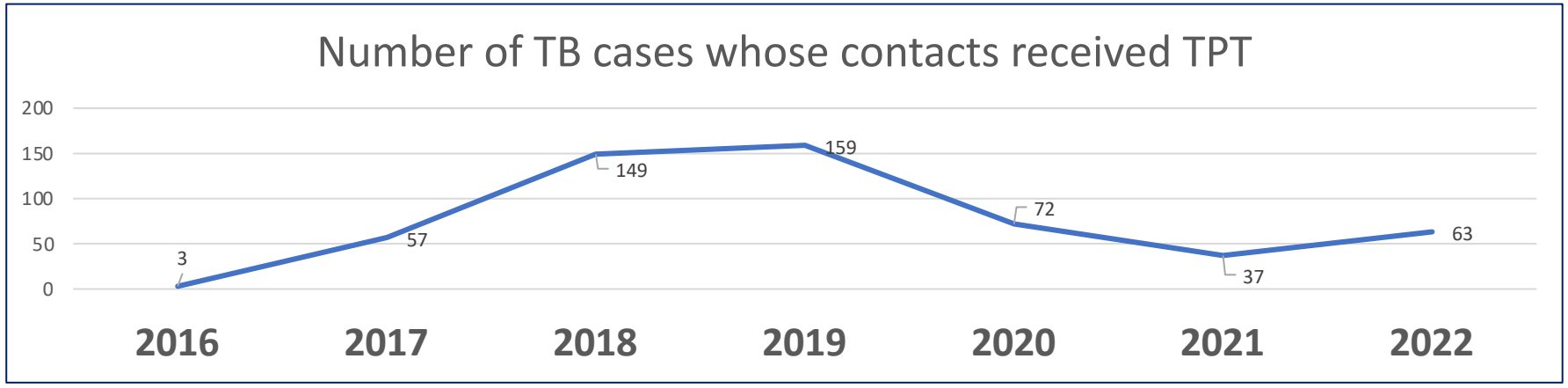
Proportion of new TB cases identified from contact investigation

MIMIKA	2016	2017	2018	2019	2020	2021	2022	Total
Total number of contacts screened	31	564	2314	2830	1706	1636	3091	12,172
Contacts with TB	2	21	70	82	37	4	26	242
Yield	6,5%	3,7%	3,0%	2,9%	2,2%	0,2%	0,8%	2%

other provinces **2022**	**North Sumatera**	**Banten**	**Jakarta**	**West Java**	**Central Java**	**East Java**	**South Sulawesi**	**East Nusa Tenggara**
Total number of contacts	122,440	111,982	91,586	604,616	684,637	494,852	116,723	21,828
Contacts with TB	136	1060	275	2084	3313	2084	483	263
Yield	0.1%	0.9%	0.3%	0.3%	0.5%	0.4%	0.4%	1.2%

Impact of COVID pandemic on TPT services

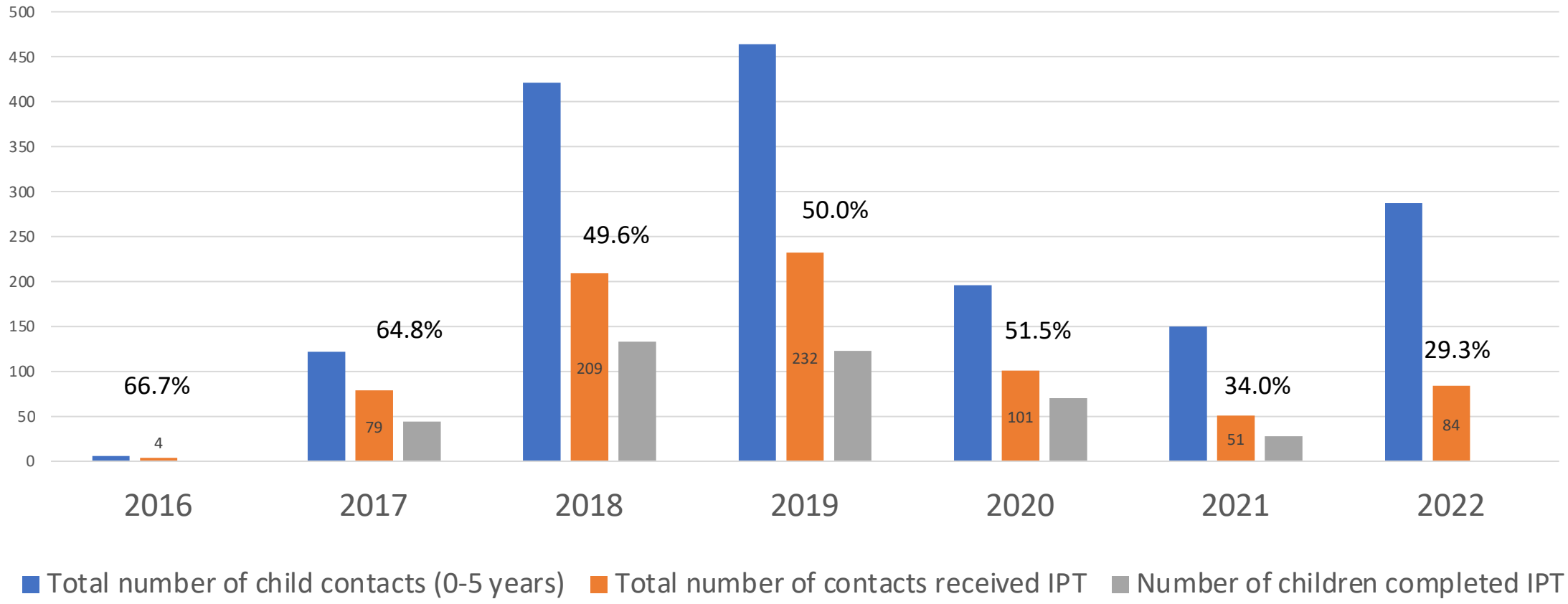
	2016	2017	2018	2019	2020	2021	2022
Number of health facilities providing TPT	3	8	10	14	14	12	9
Hospital	0	2	3	4	2	2	1
Primary healthcenters	3	6	7	10	12	10	8



3HP and 3HR were introduced in early 2022. Stock out of child formulation of INH in the country in 2022 also affects compliance with TPT

Proportion of child contacts receiving TPT in Indonesia

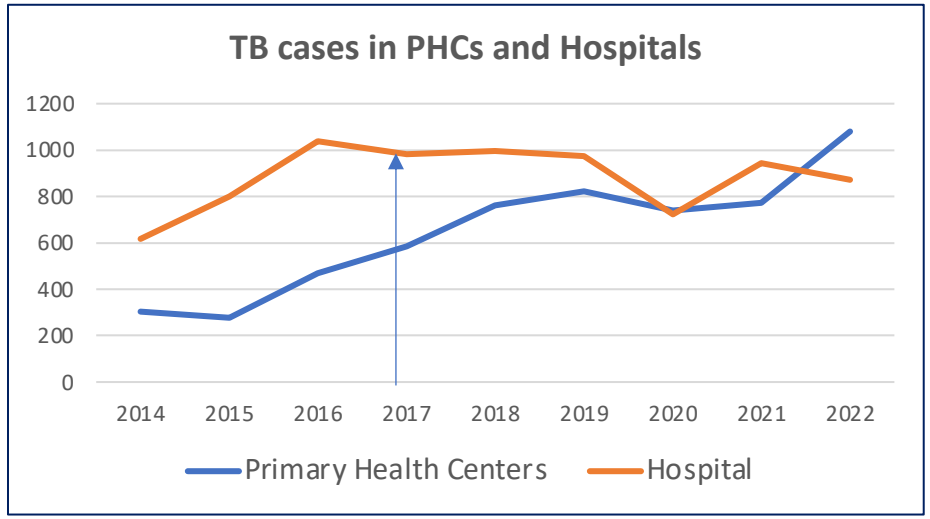
The national target is to provide TPT to 70% of eligible household contacts



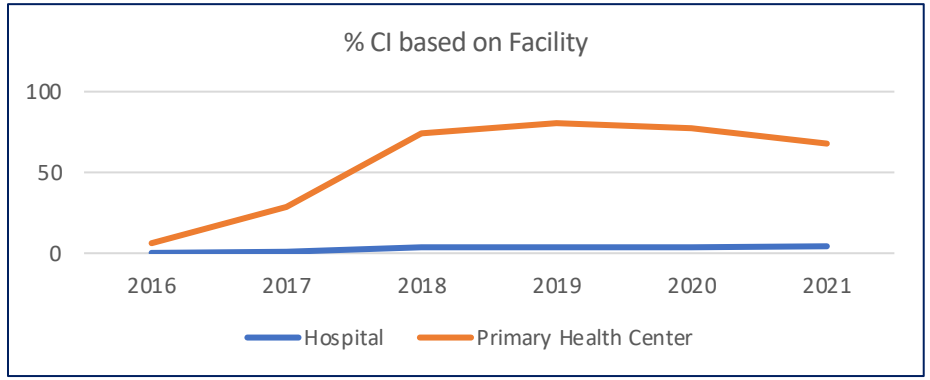
3. Health Workforce

- **Contact investigation and TPT directly increased staff's workload**
  - Number of TB staff per health facilities is very limited (1-3 staff per PHCs)
  - Time for : home visits, Patient's education, Patient's management, Recording and reporting the details of contacts and screening results, Isoniazid preparation when child formulation not available.
  - Need a tool to calculate staff's workload for active case finding, contact investigation, patient management, TPT, recording reporting and M&E
  - Initiative to invite health cadres to participate in TB CI and TPT activities
  - Collaboration with other health programs for home visit and TB screening to household contacts
- **Improving staff's competence**
  - Regular training for TB staff and access to research team for consultation
  - TB staff with more experiences in TB-CI and TPT become mentors for other TB staff in health facilities that has just started performing TB-CI and TPT
- **Improving staff's motivation**
  - Sharing photos of TB CI and TPT activities in WhatsApp group to motivate others and praise achievements.
  - Annual awards on TB days for best performers in CI and TPT activities

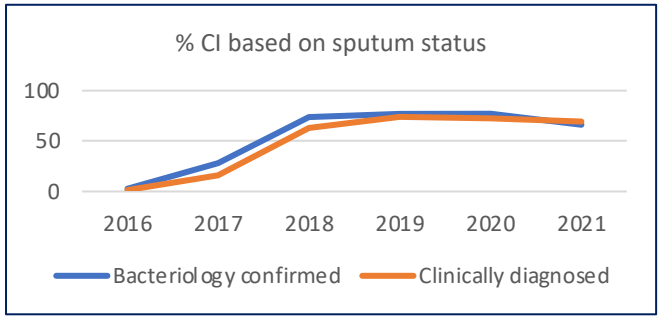
4. Access

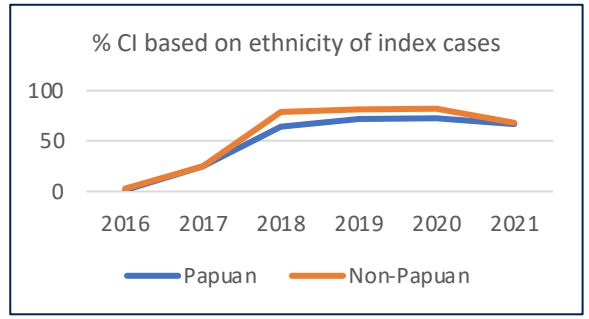


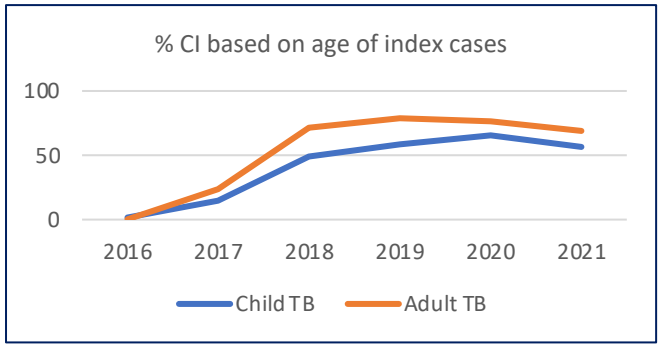
- Proportion of TB cases who received treatment at PHCs are increasing, as a result of increased patient referral from hospitals, and increase ACF activities

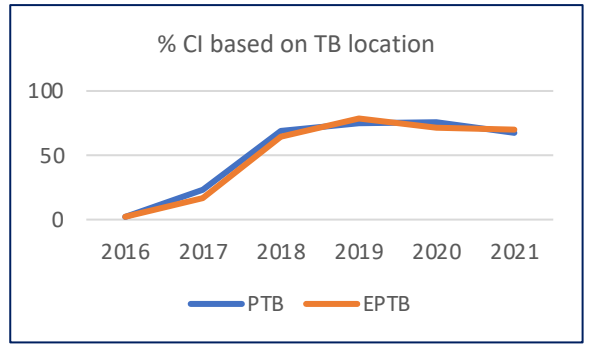


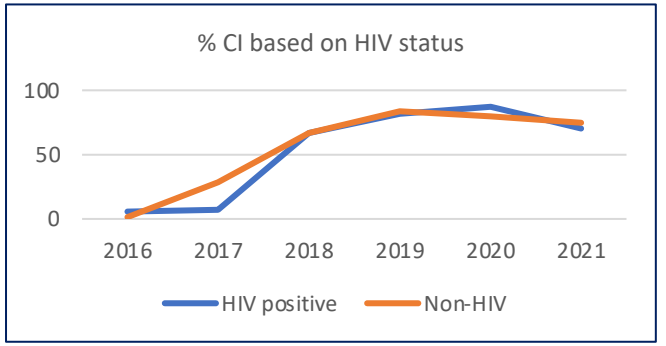
Contact Investigation at Primary Health Centers

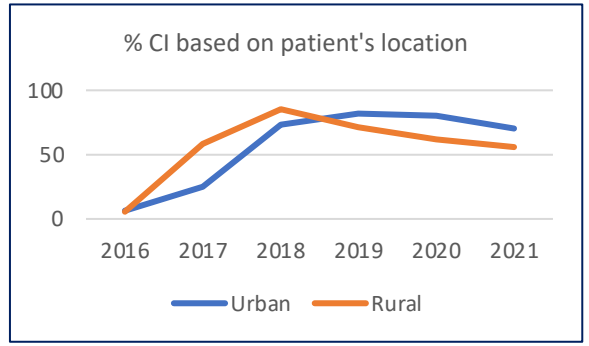












5. Governance

- Challenges:
  - Budget and logistic planning at the district level is still poor → dependent to the central/provincial budget
  - Staff rotation and mentoring of the next TB program leader.
  - Lack of authority to improve access to TB logistics (essential drugs for TPT, tuberculin diagnostic machines)
  - Lack of workload assessment and compensation from the health facility or local govt.
- Facilitators:
  - Staff's motivation and willingness to learn new knowledge about TB
  - The leadership of the district TB coordinator
  - Team pride, since the TB Mimika TB team recognized at the national level for their achievement

Conclusions

- Decentralization of TB contact investigation and preventive treatment to the primary care has positive impact to TB case finding and improve coverage of TB preventive treatment.
- Capacity building performed by local staff is an effective and efficient strategy in remote settings to increase voluntary participation of the health workforce.
- Dependency to the NTP and the external funding is still high and may risk the sustainability of contact investigation and TPT program in the long term.

Thank you
for your kind attention

Acknowledgement

Mimika TB Team

Mimika District Health Office

National TB Program

Yayasan Pengembangan Kesehatan dan Masyarakat Papua (YPKMP)

Center for Tropical Medicine, Universitas Gadjah Mada

Menzies School of Health Research

Burnet Institute

DFAT Australia