

# Contact investigation and prevention in Indonesia

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# Outline

- Child TB situation in Indonesia
- What has been done to enhance contact investigation and IPT provision
- Studies related to contact investigation & IPT
  - ACT4 study Bandung
  - Timika study

# INDONESIA



- Area : 5 million Km<sup>2</sup> / 17,800 islands
- Provinces : 34
- Population : 257,516,167
- Children aged < 15 yrs accounts for 29% population

# TB in Indonesia



## ESTIMATES OF TB BURDEN,<sup>a</sup> 2017

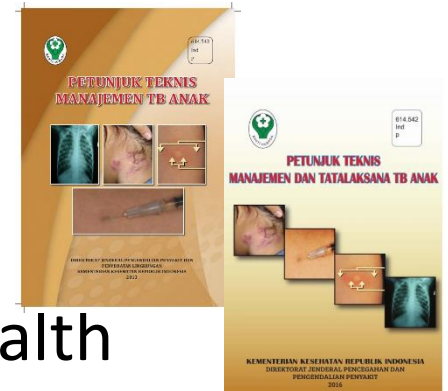
|                                    | NUMBER (THOUSANDS) | RATE (PER 100 000 POPULATION) |
|------------------------------------|--------------------|-------------------------------|
| Mortality (excludes HIV+TB)        | 107 (100–114)      | 40 (38–43)                    |
| Mortality (HIV+TB only)            | 9.4 (5–15)         | 3.6 (1.9–5.8)                 |
| Incidence (includes HIV+TB)        | 842 (767–919)      | 319 (291–348)                 |
| Incidence (HIV+TB only)            | 36 (20–57)         | 14 (7.7–21)                   |
| Incidence (MDR/RR-TB) <sup>b</sup> | 23 (16–31)         | 8.8 (6.2–12)                  |

## ESTIMATED TB INCIDENCE BY AGE AND SEX (THOUSANDS),<sup>a</sup> 2017

|         | 0–14 YEARS | > 14 YEARS    | TOTAL         |
|---------|------------|---------------|---------------|
| Females | 23 (23–23) | 326 (308–345) | 349 (329–370) |
| Males   | 26 (26–27) | 466 (435–497) | 492 (458–526) |
| Total   | 49 (48–50) | 792 (723–862) | 842 (767–919) |

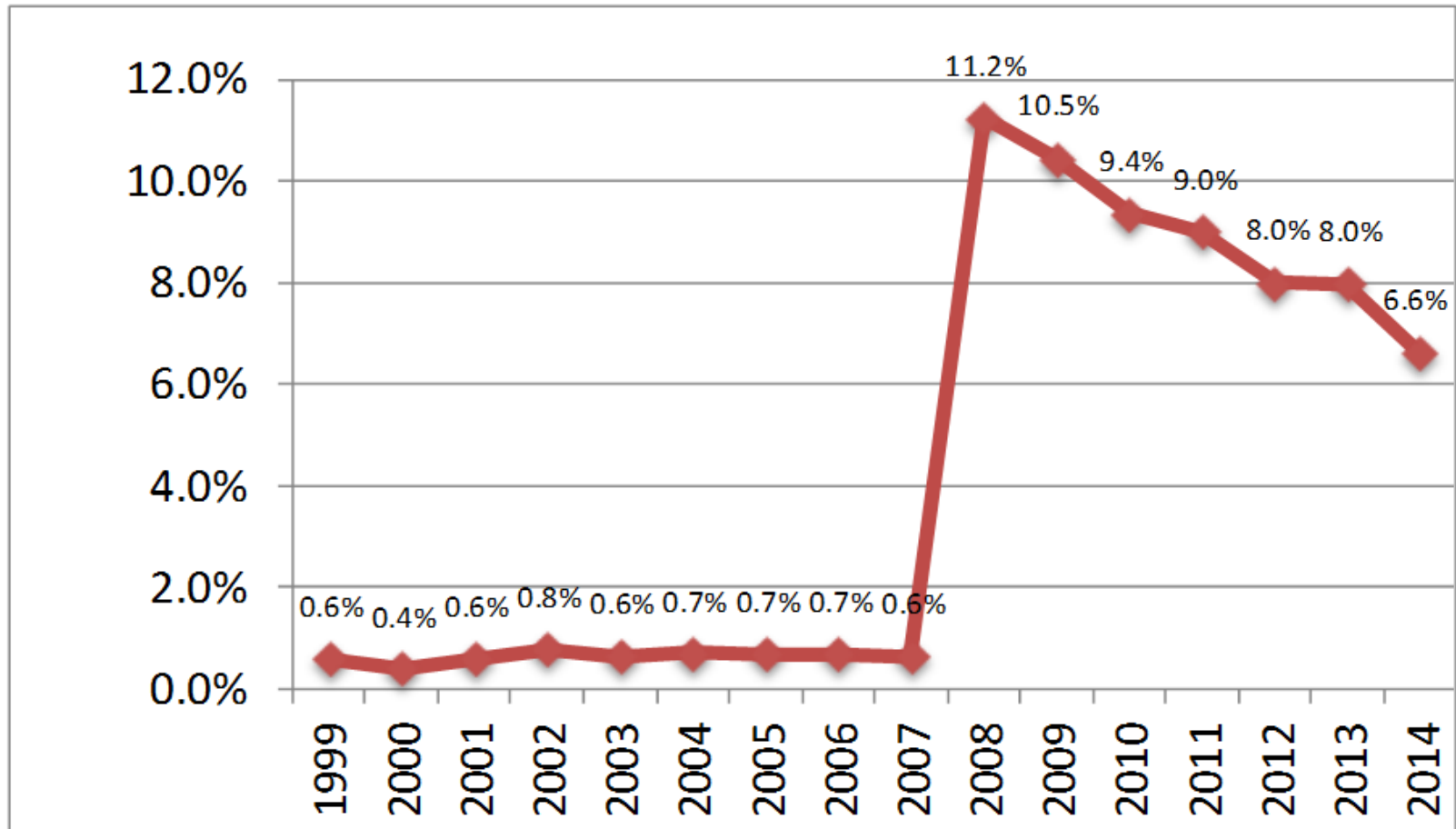
# Situation of child TB in Indonesia

- A child TB working group (2005), consists of:
  - NTP
  - The Indonesian Pediatric Society
  - National Child Health Program
  - Partners
- A national guideline of child TB
  - Available since 2006
  - Separated from the adult guideline
  - Revised: 2013, 2016
- TOT on the management of child TB for health workers at national level
- Technical assistance from international experts

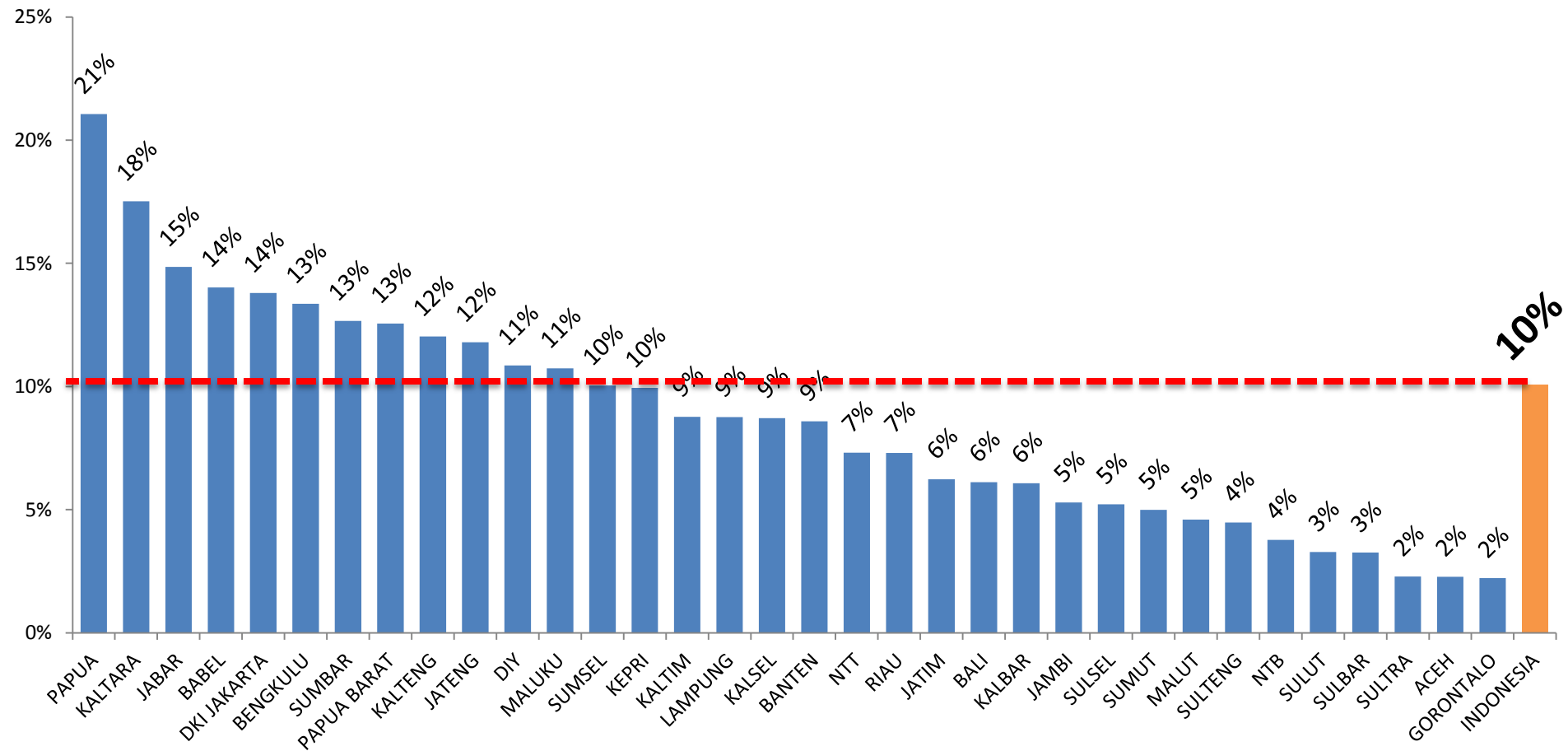


# Childhood TB- Situation

Children as a percentage of all TB cases reported in Indonesia<sup>3</sup>



# % Childhood TB cases per province (2017)



Courtesy NTP Indonesia

# Childhood TB- Situation (2014-2015)

| Indicators           | 2014        | 2015        |
|----------------------|-------------|-------------|
| Smear + pulmonary TB | 1731 (8%)   | 1,702 (6%)  |
| Smear - pulmonary TB | 17,409      | 23,053      |
| EPTB                 | 2,723 (12%) | 3,657 (13%) |
| MDR TB               | 2           | 3           |

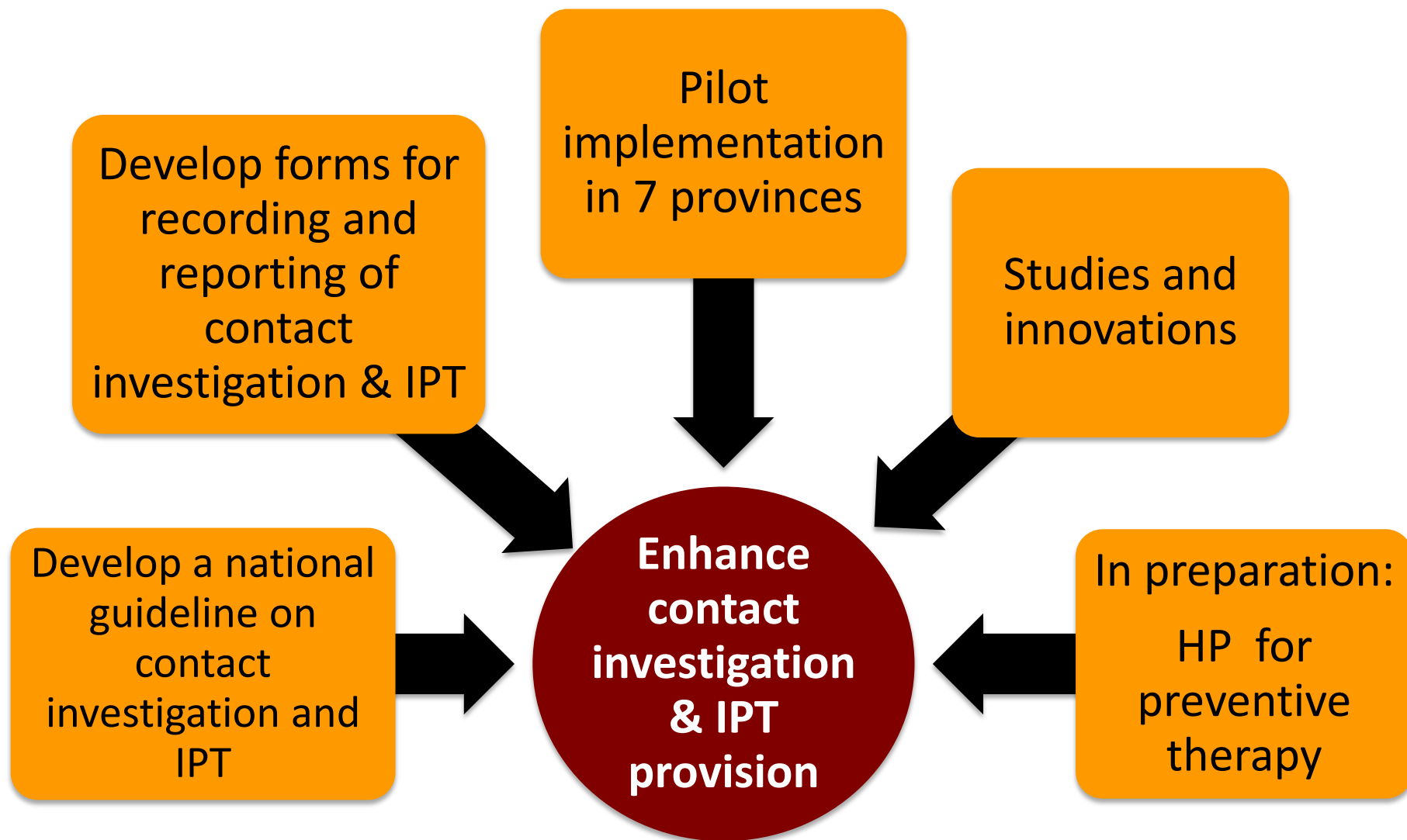
| Other Indicators                            | 2014- 2015     |
|---|----------------|
| TB Treatment outcomes                       | Unknown        |
| TB/HIV                                      | Unknown        |
| <b>Number of child contact investigated</b> | <b>Unknown</b> |
| <b>IPT uptake/outcomes</b>                  | <b>Unknown</b> |

\*Child TB benchmarking tool Indonesia: December 2016

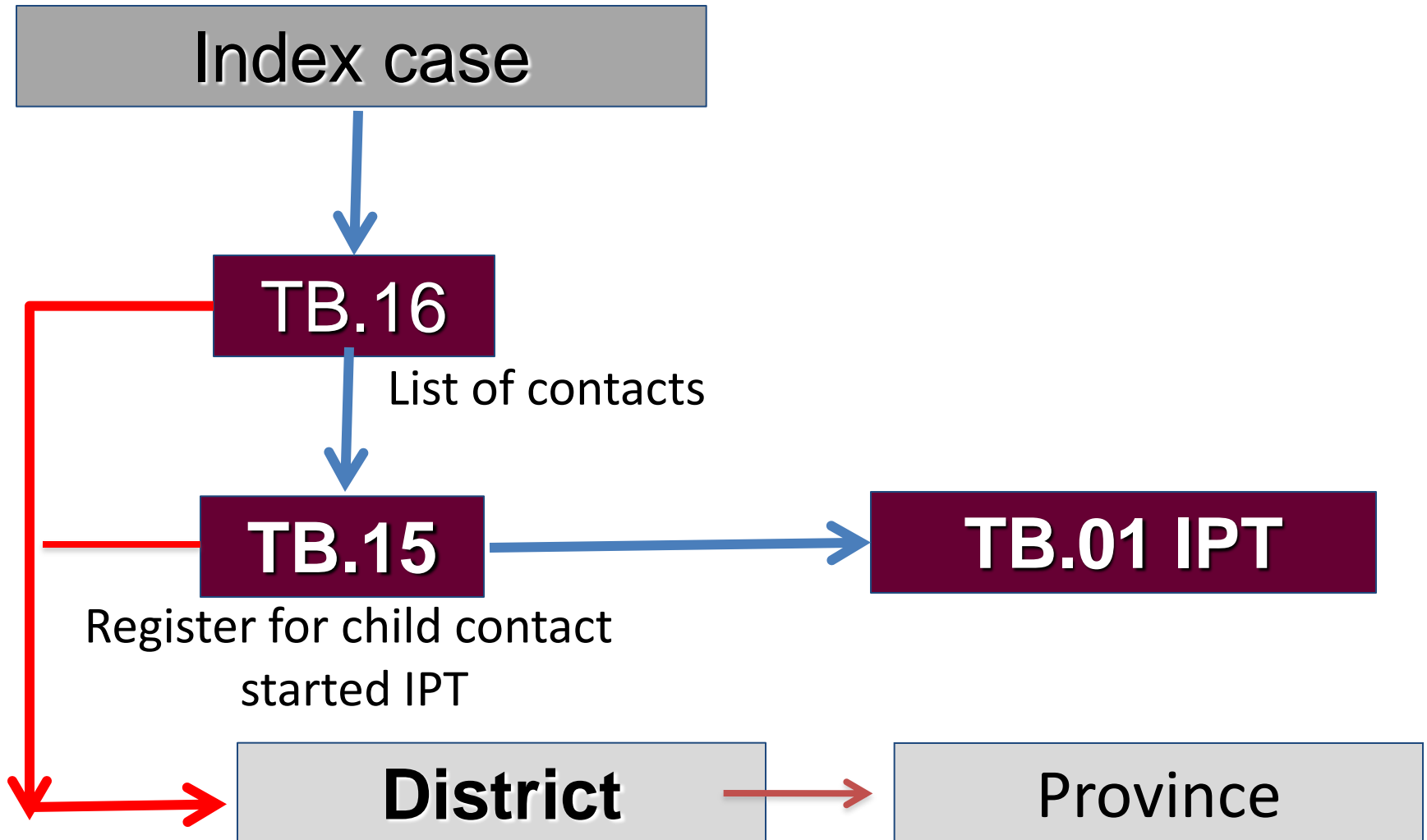


# What has been done to enhance contact investigation and IPT provision ?

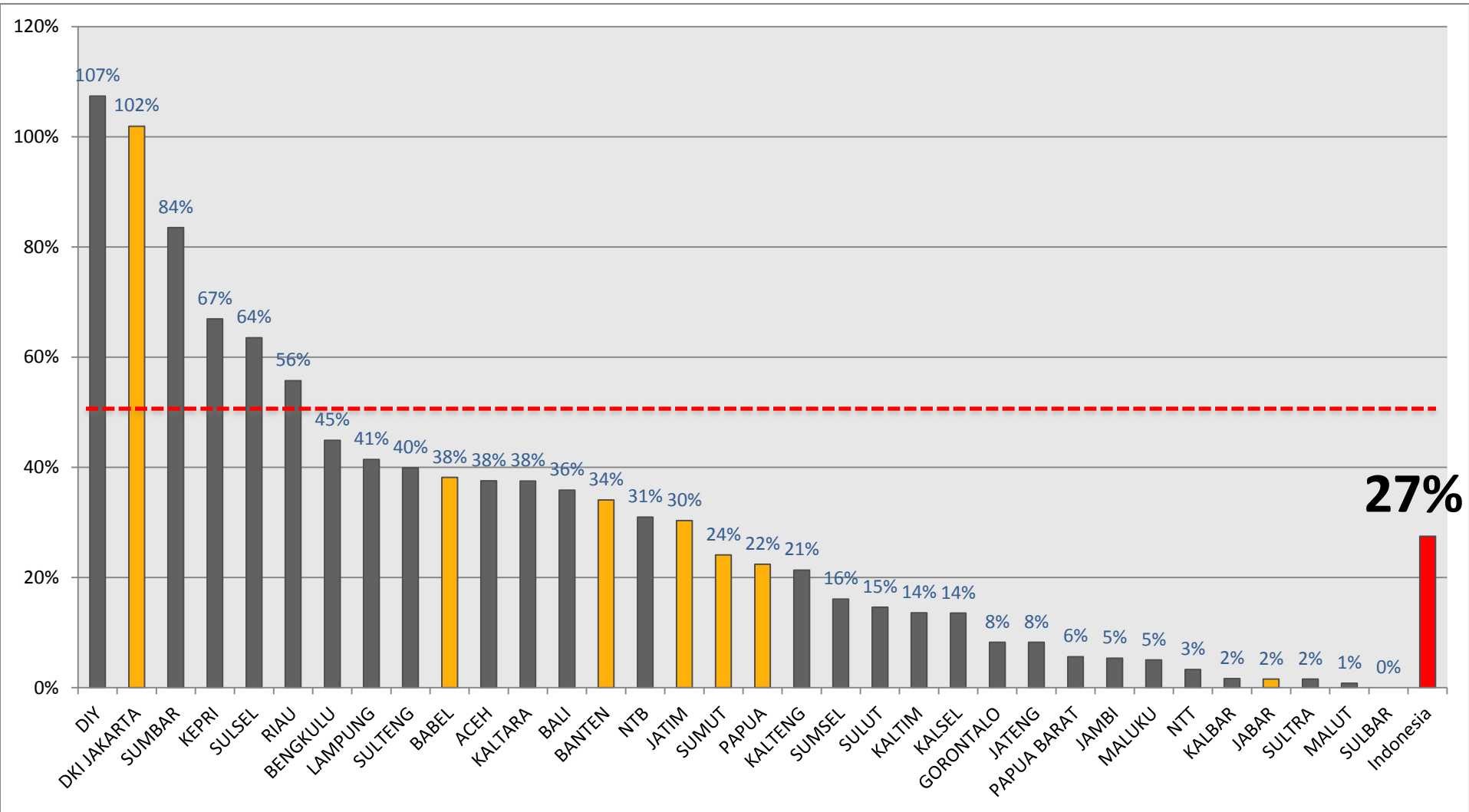




# Recording and reporting



# IPT uptake (%) in 2017







# ACT4 - Enhancing LTBI management: A cluster randomized trial



- PI: Dick Menzies (McGill, University, Montreal Canada)
- Funded by: CIHR, Canada
- 6 countries: Benin, Brazil, Canada, Ghana, **Indonesia**, Vietnam

# The ACT4 study

- A pragmatic cluster randomized trial
- The trial tests a two phase programmatic public health package:
  1. A standardized public health evaluation and analysis
  2. implementation of appropriate solutions and strengthening of the LTBI program
- Objectives:
  1. To estimate the increase number of household contacts initiating IPT per newly diagnosed index patient
  2. To evaluate the cost effectiveness of this two phase intervention.

# ACT4 study Bandung

Team: Centre of TB/HIV study, Fac of Medicine, Padjadjaran University

- Principal investigator: Prof. Dr. Rovina Ruslami
- Investigators: Dr. Bachtis Alisjahbana, dr. Panji Hadisoemarto

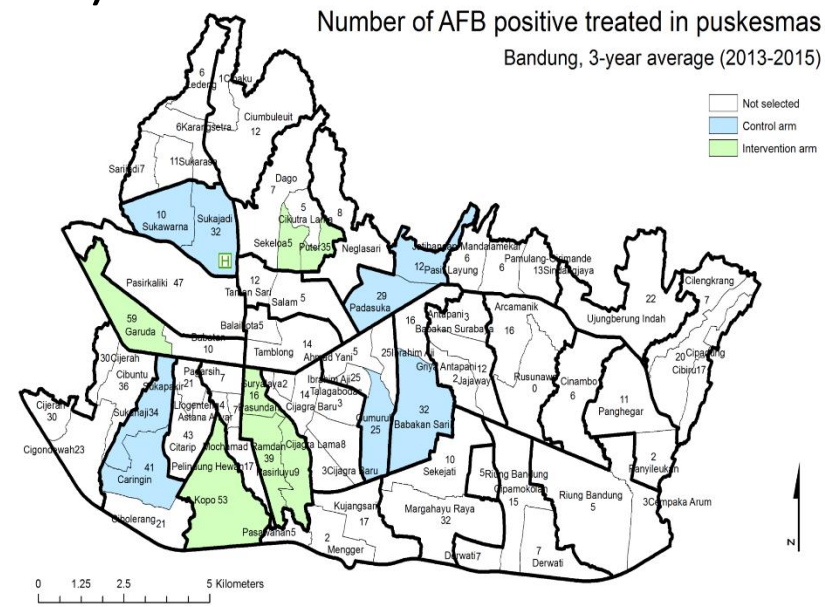
**Intervention group:** 7 PHCs (shaded green)

**Control group:** 7 PHCs (shaded blue)

- Outpatient services/DOTS clinics
- Some have sputum microscopy
- No x-ray machine available

Each catchment area:

- 30,000 – 150,000 people
- > 40 AFB + cases/year



Courtesy Rovina Ruslami



**Phase 1**

**Phase 2**

Evaluating  
the current  
cascade of  
care in LTBI

Interview to  
index case,  
contacts,  
parents of child  
contact, health  
worker

Identify  
problems  
and  
solution

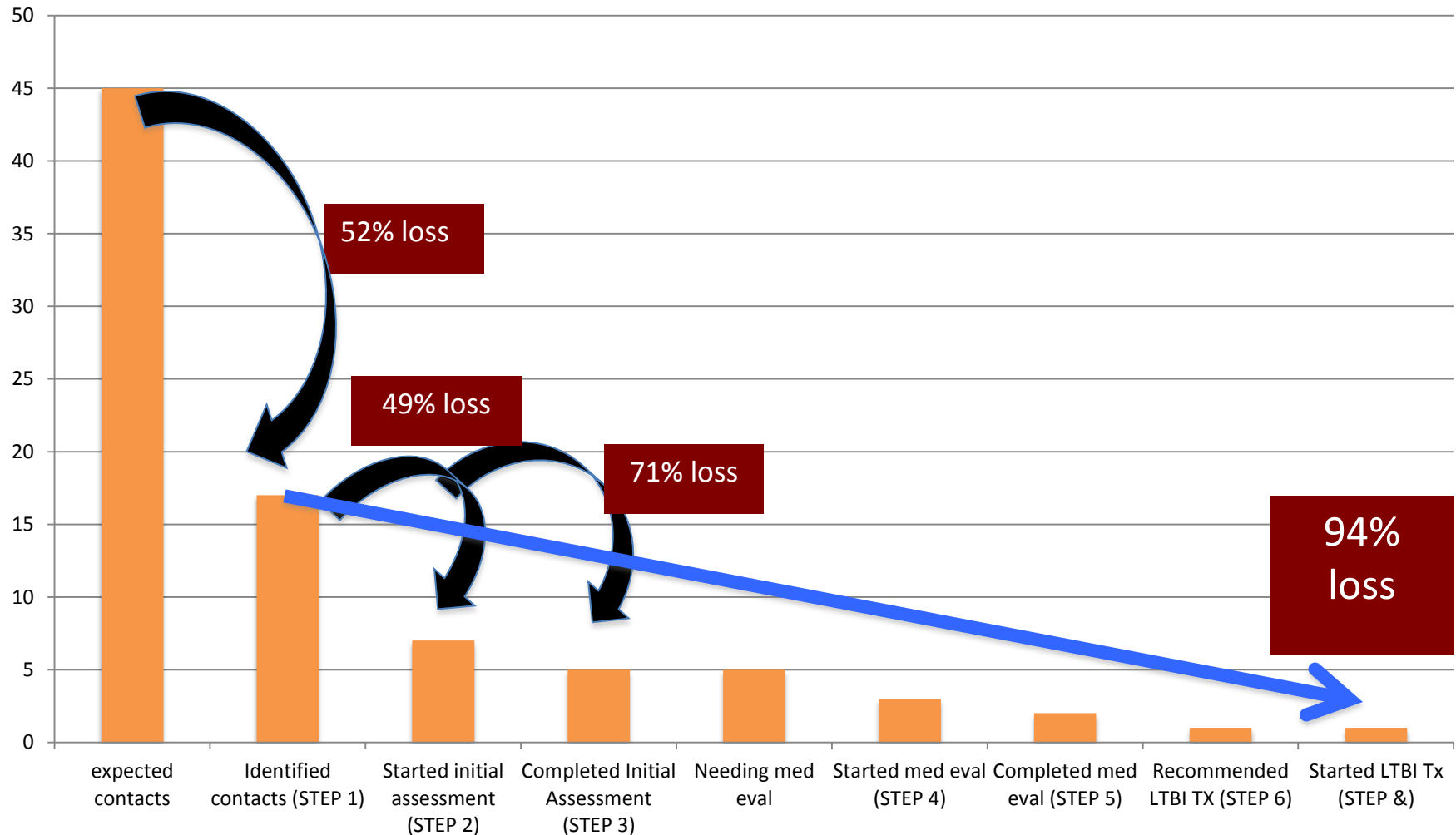
Interven-  
tion

Monitoring  
progress

**August 2016 – on going**

- Retrospective review of TB patient registry
- Period: Sept 2015 to Nov 2016

# Number of contacts aged < 5 years completing each step of cascade



# Why they lost ?

## Methods

98 structured interviews:

- Index cases (n = 20)
- Household contacts (n = 38)
- Parents of child contacts (n = 20)
- Healthcare workers (n = 20)



## MAIN FINDINGS

- Index cases and contacts/parents  
**Did not consider medical evaluation/treatment of asymptomatic contacts necessary**
- Healthcare workers  
**Lack of time as a perceived barrier (more time spent for non TB related activities (incl. administrative work))**
- Both  
**Lack of knowledge & information**

Evaluating  
the current  
cascade of  
care in LTBI

Interview to  
index case,  
contacts,  
parents of child  
contact, health  
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Identify  
problems  
and  
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Interven-  
tion

Monitoring  
progress

**1. In-service training**

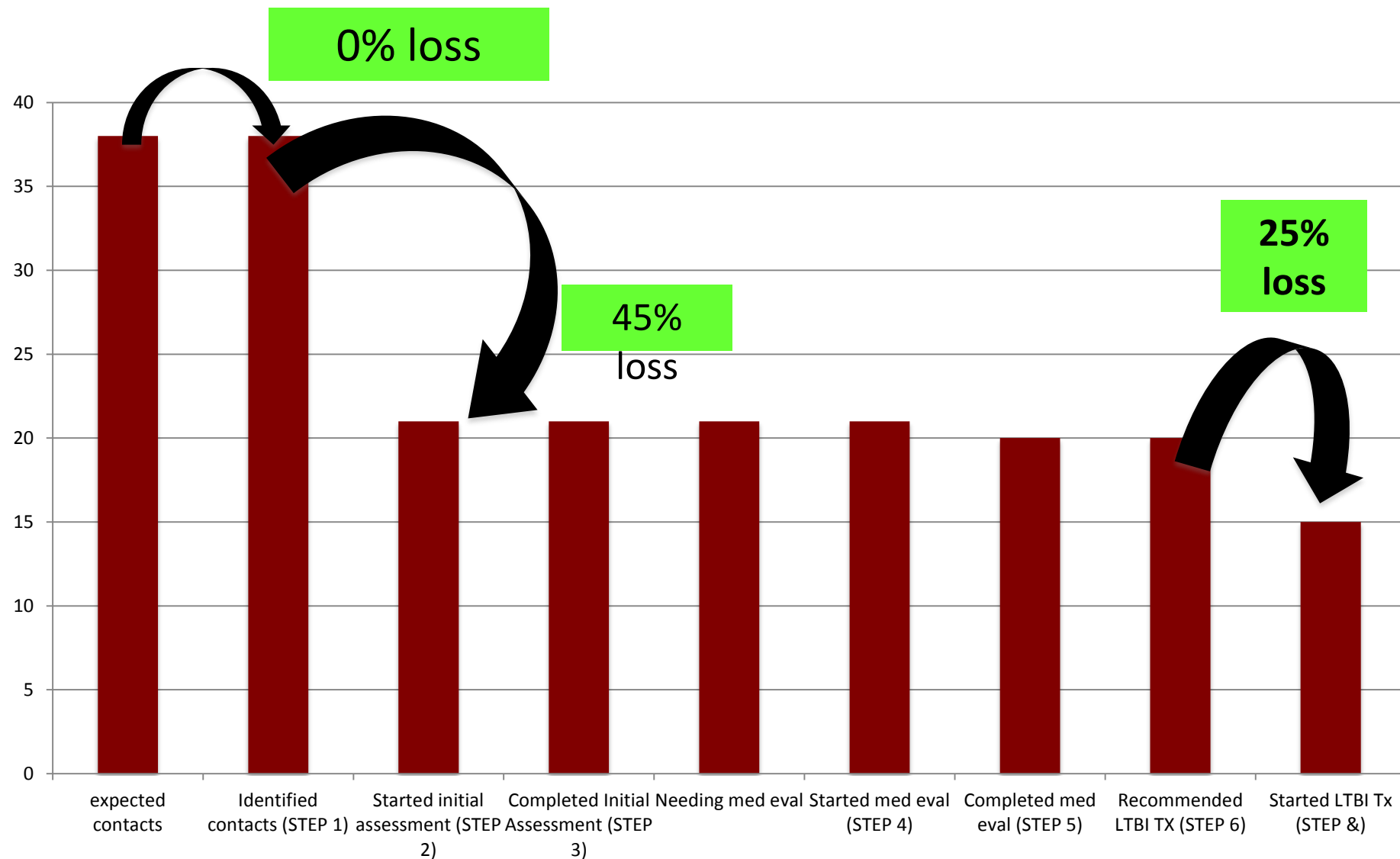
- Every week for the 1<sup>st</sup> two months
- Every 2 weeks for 2 months
- Monthly for the last 2 months

**2. Electronic reminder for patient**

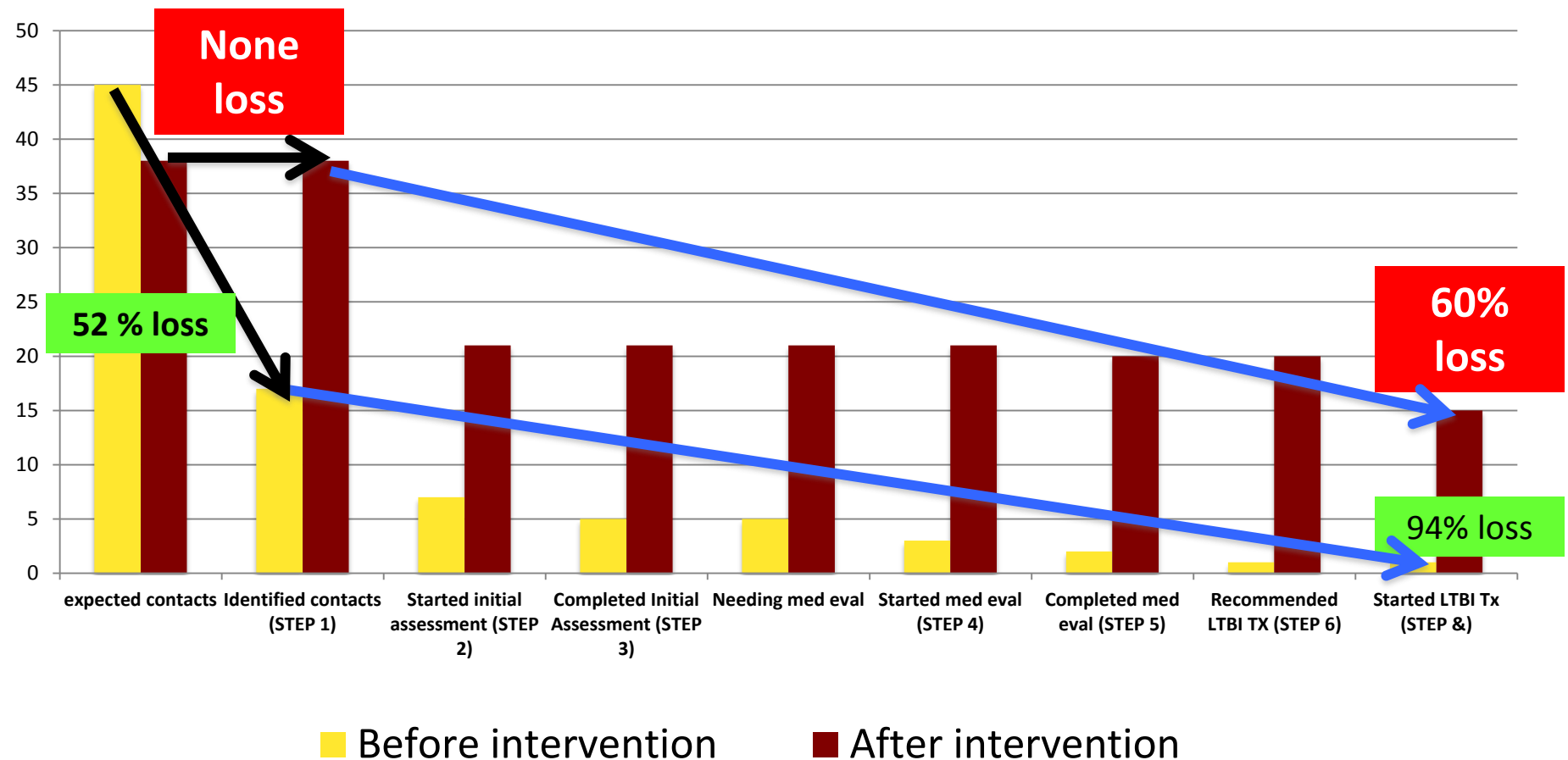
**3. Educational material using flip chart**

**4. “Gift” for child contact**

# Number of contacts aged < 5 years completing each step of cascade: after interventions



# Number of contacts aged < 5 years completing each step of cascade: before & after interventions



# Is that sustained ?

- The response is good
  - From the health care worker
  - From the parents of the children
- It's sustain; it stays after the intervention was stop.
  - Screening and recruitment still going on at the intervention sites AFTER the intervention is stop



**Strengthening health systems to improve contact investigation and treatment for tuberculosis contacts in Timika, Indonesia**





# Tropical Disease Research Regional Collaboration Initiative (TDRRCI) on Tuberculosis and Malaria



**Indonesia team:**

**PI: dr. Trisasi Lestari**

- Universitas Gadjah Mada
- Yayasan Pengembangan Kesehatan Masyarakat Papua



**PAPUA NEW GUINEA  
INSTITUTE OF  
MEDICAL RESEARCH**

**YPKMP**

Study sites: 3 PHCs, 2 hospitals

**June 2017**

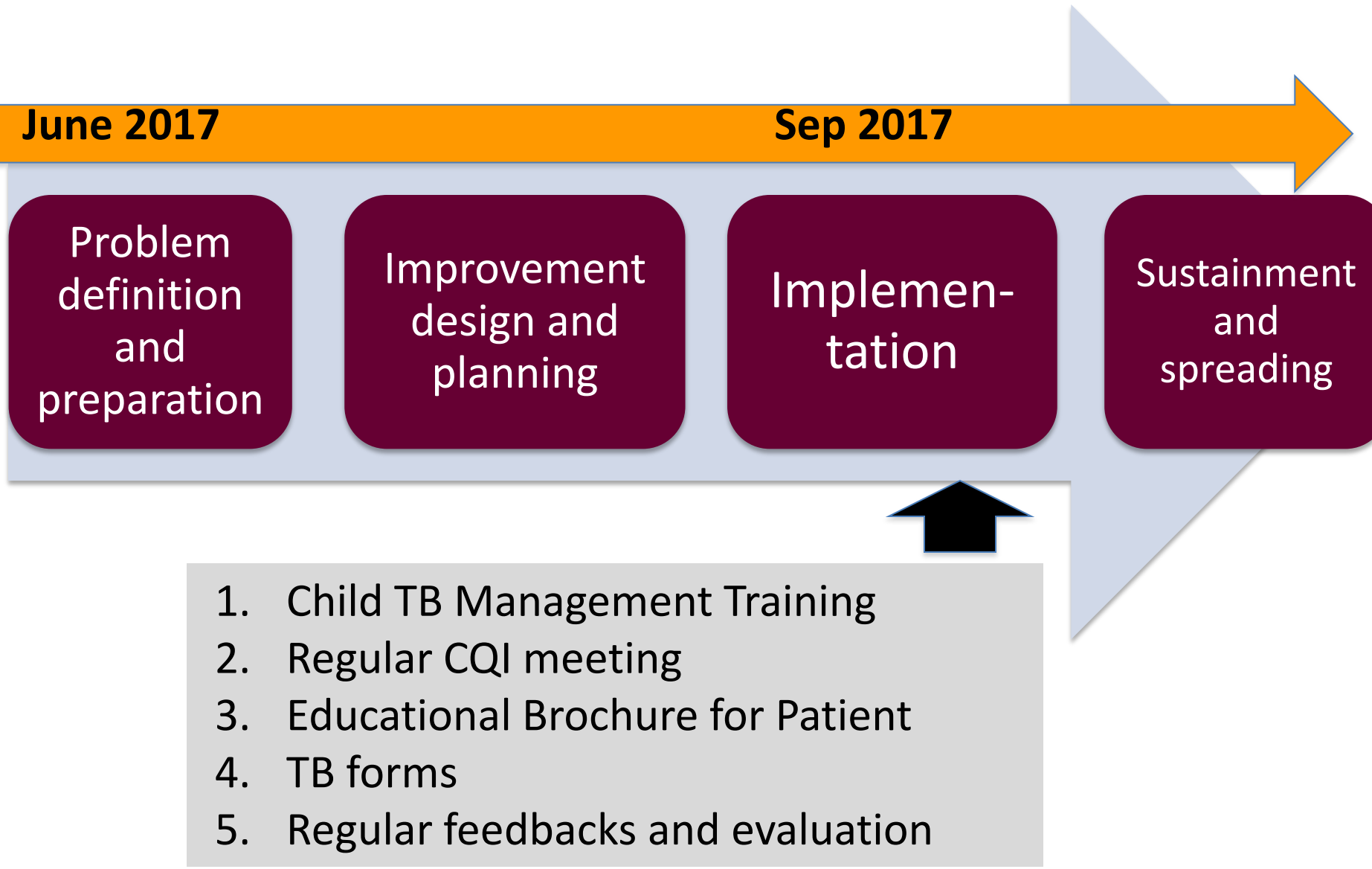
**Sep 2017**

Problem  
definition  
and  
preparation

Improvement  
design and  
planning

Implemen-  
tation

Sustainment  
and  
spreading

- 
1. Child TB Management Training
  2. Regular CQI meeting
  3. Educational Brochure for Patient
  4. TB forms
  5. Regular feedbacks and evaluation

# Training for health workers



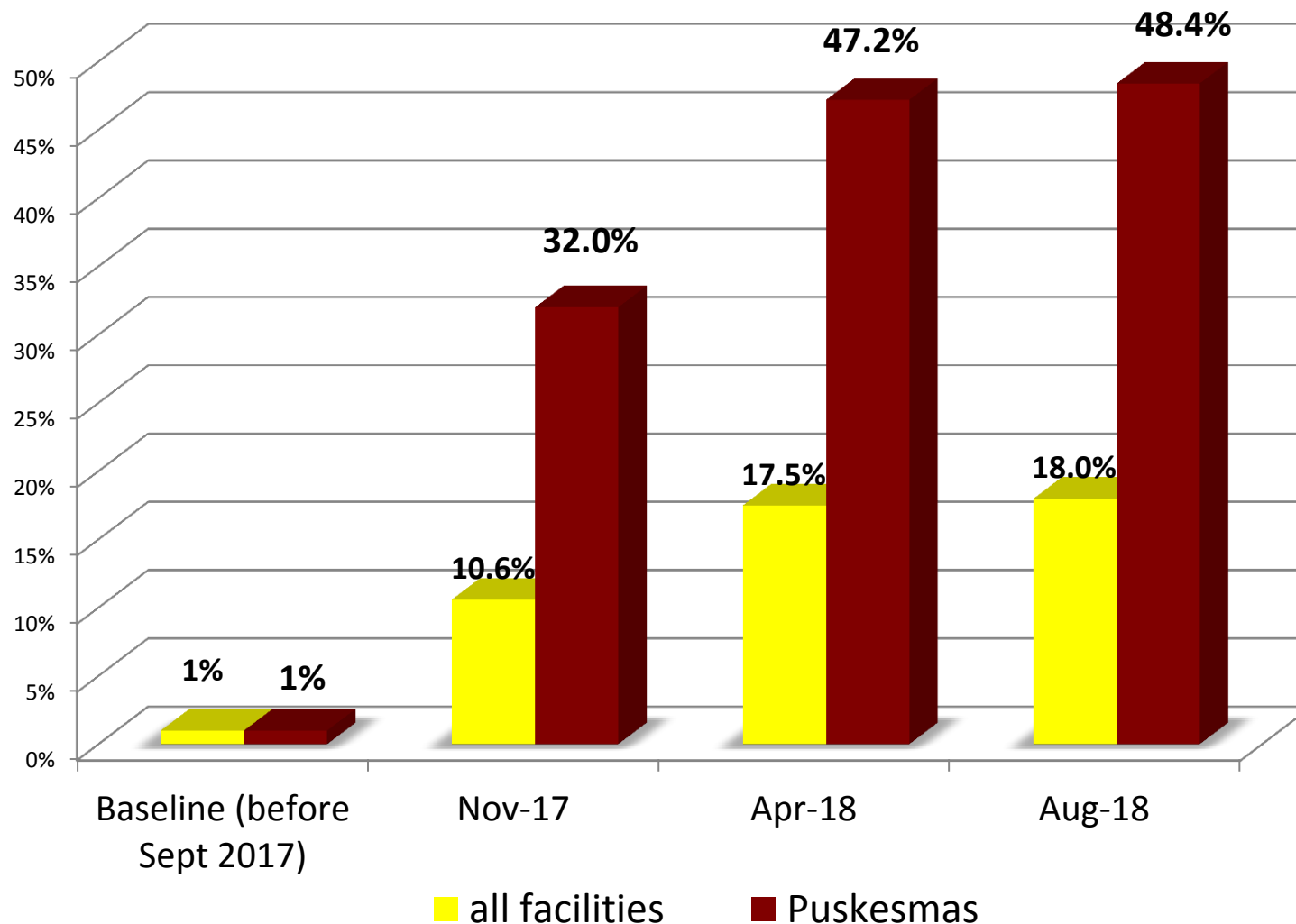


# Gift for child contact initiated IPT



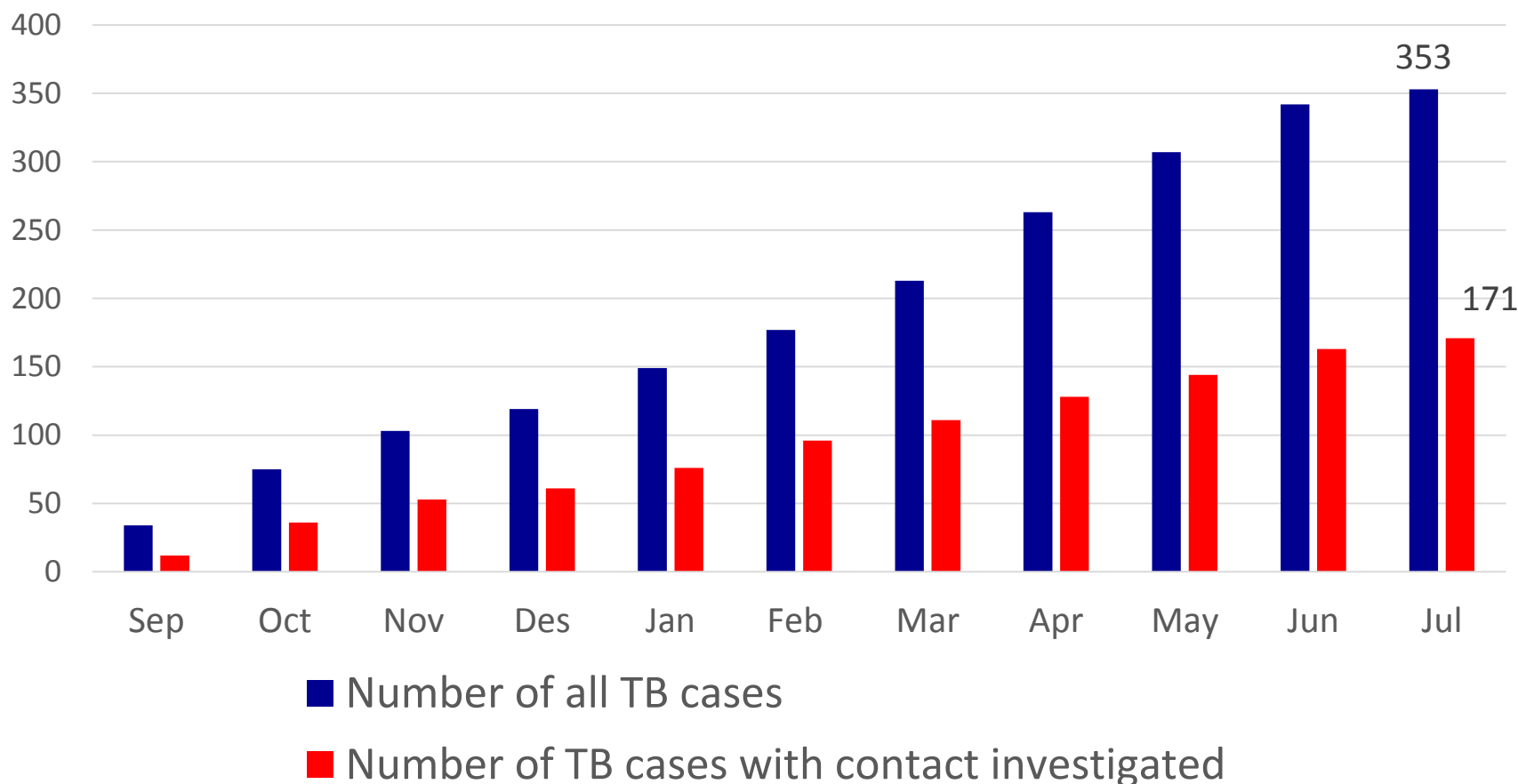
# Contact Investigation Coverage

**Target : >90%**



Proportion of index cases with contact investigated

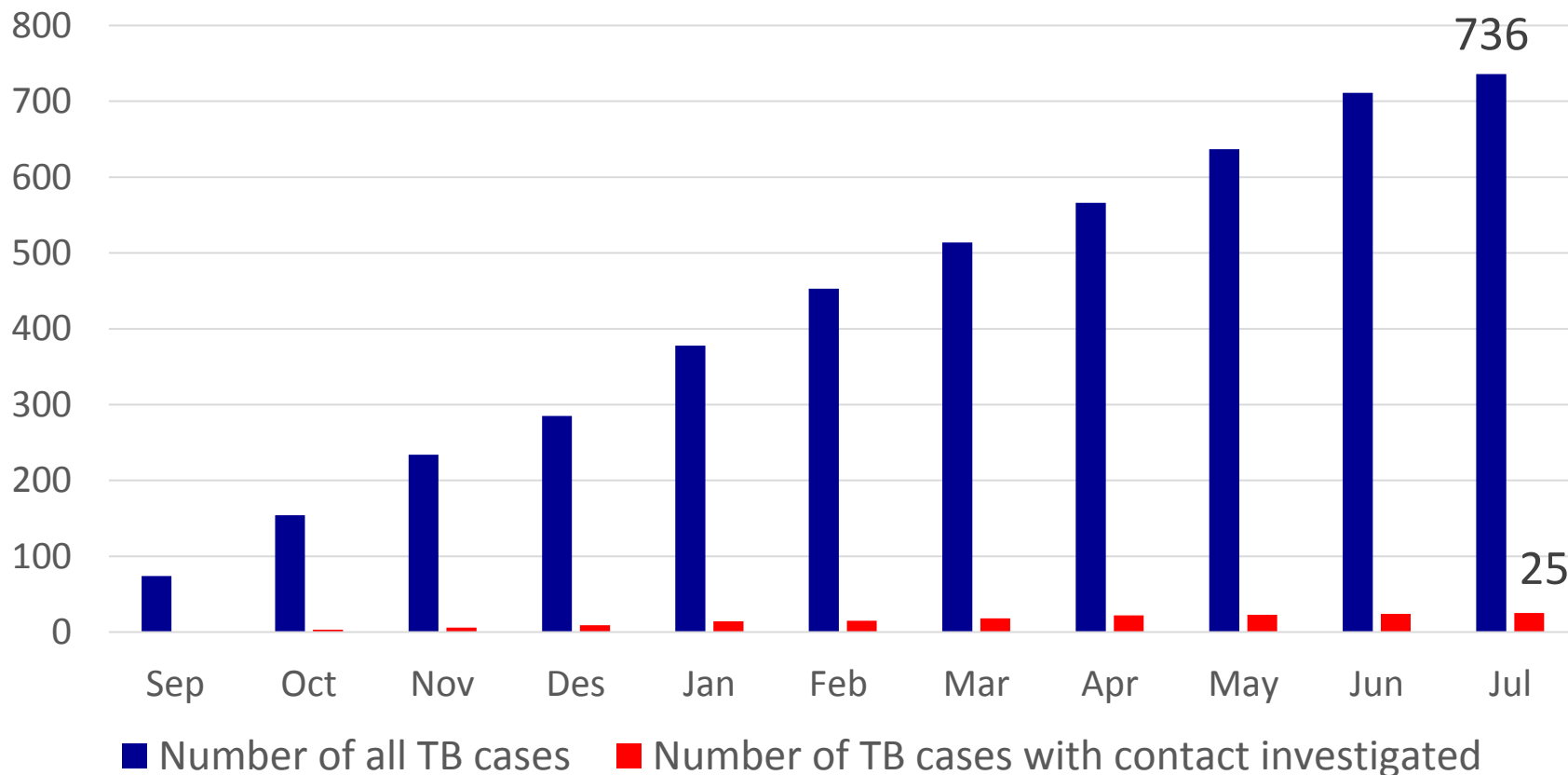
# Primary Health Centre (PUSKESMAS): Contact Investigation Coverage 48.4%



Courtesy Trisasi Lestari

# HOSPITAL:

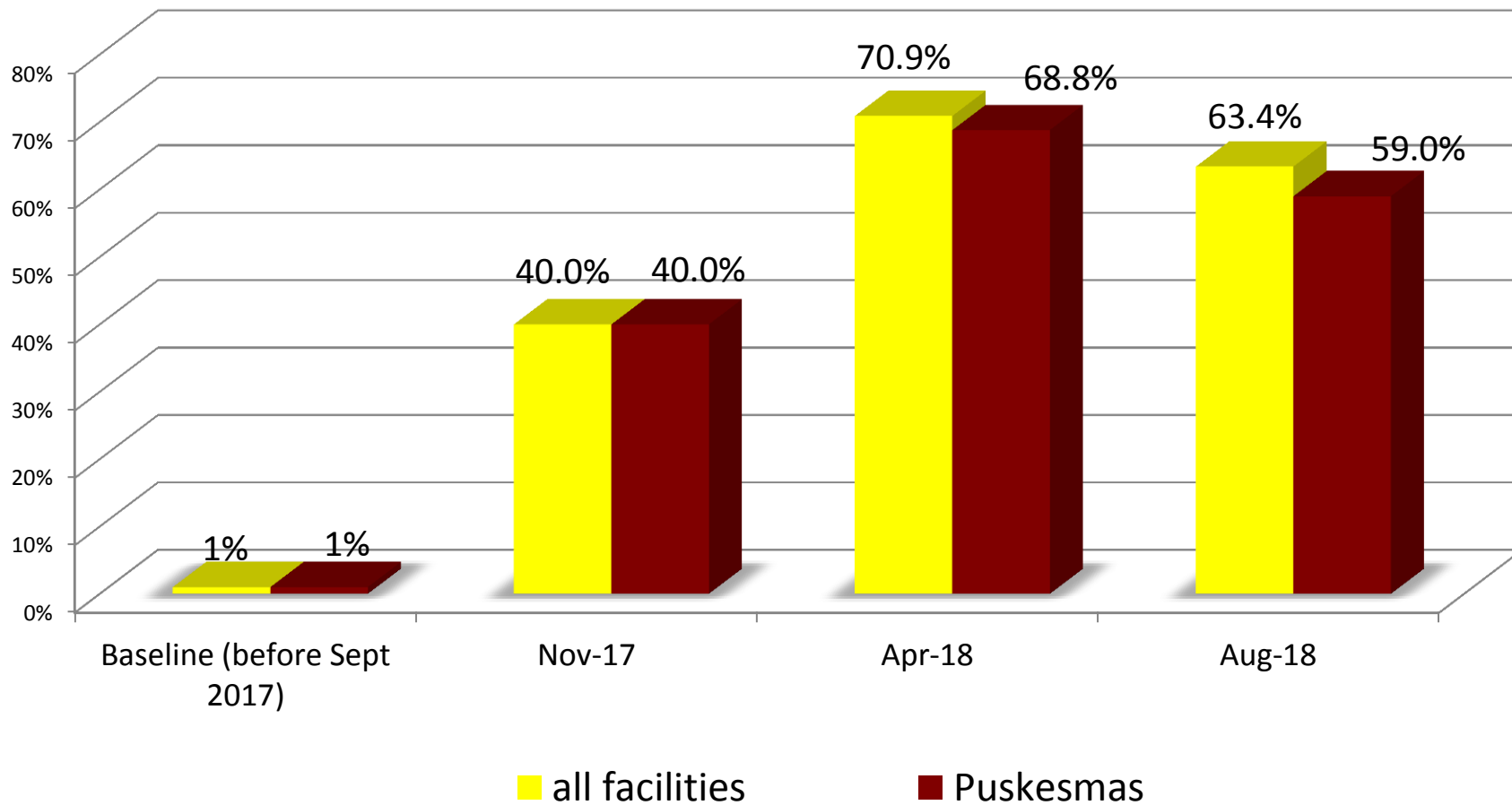
## Contact Investigation Coverage 3.2%



Courtesy Trisasi Lestari

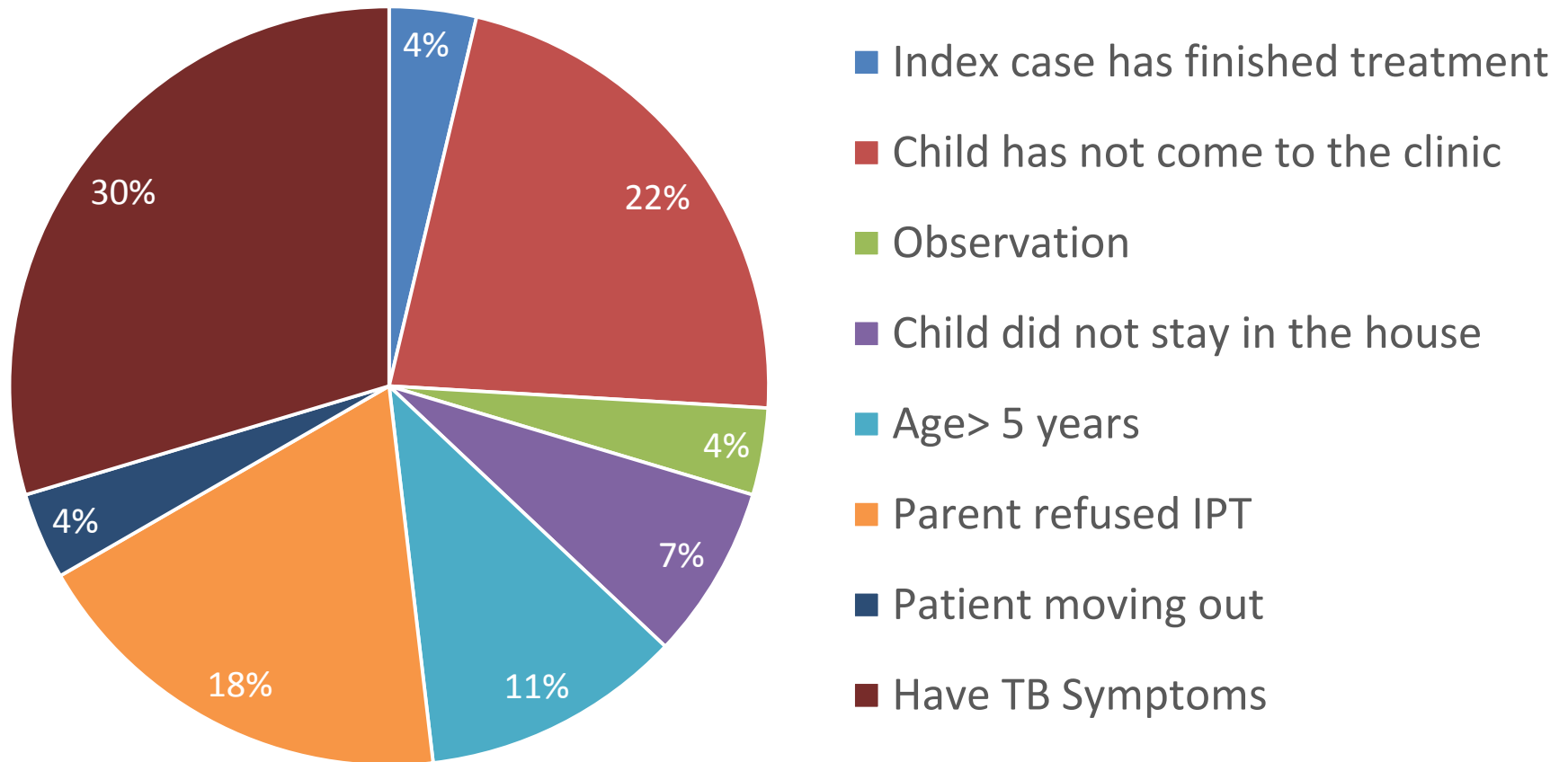
# IPT uptake

## Target : >90%





# Reasons for no IPT

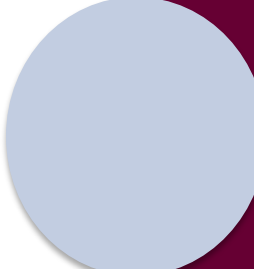


Courtesy Trisasi Lestari

# Summary

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There has been improvement in contact investigation and IPT provision in Indonesia

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More efforts and innovations are required to enhance the coverage of contact investigation and IPT

