

Clinical Perspective on Management of Pediatric Cardiology & Congenital Heart Disease in JKN Era



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Introduction



Congenital Heart Disease is still a major problem.
Contributor for infant mortality 22/ 1000 live births



Global Prevalence 6-10 live births.
Nearly 30-50% are critical

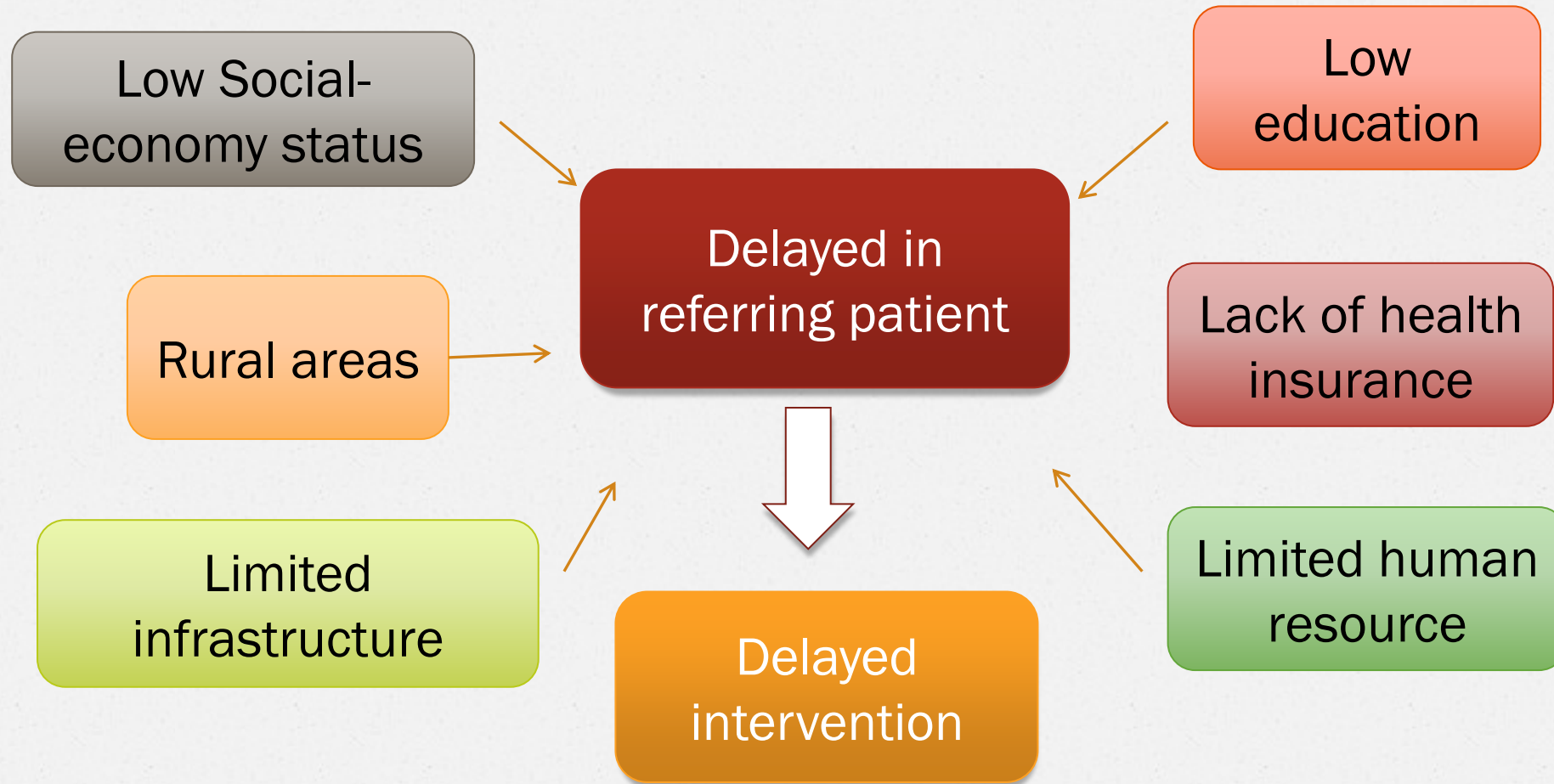


Indonesia: 9/10000 live births
At least 45,000 children per year



45% Requiring surgical or non surgical intervention in
the first year of life. Aproximately 25,000 cases/year

Background Problems



CHD Problem

Limited centre for training congenital cardiac care in Indonesia

Lack of awareness and knowledge amongst referring physicians

Congenital cardiac care is demanding and more expensive

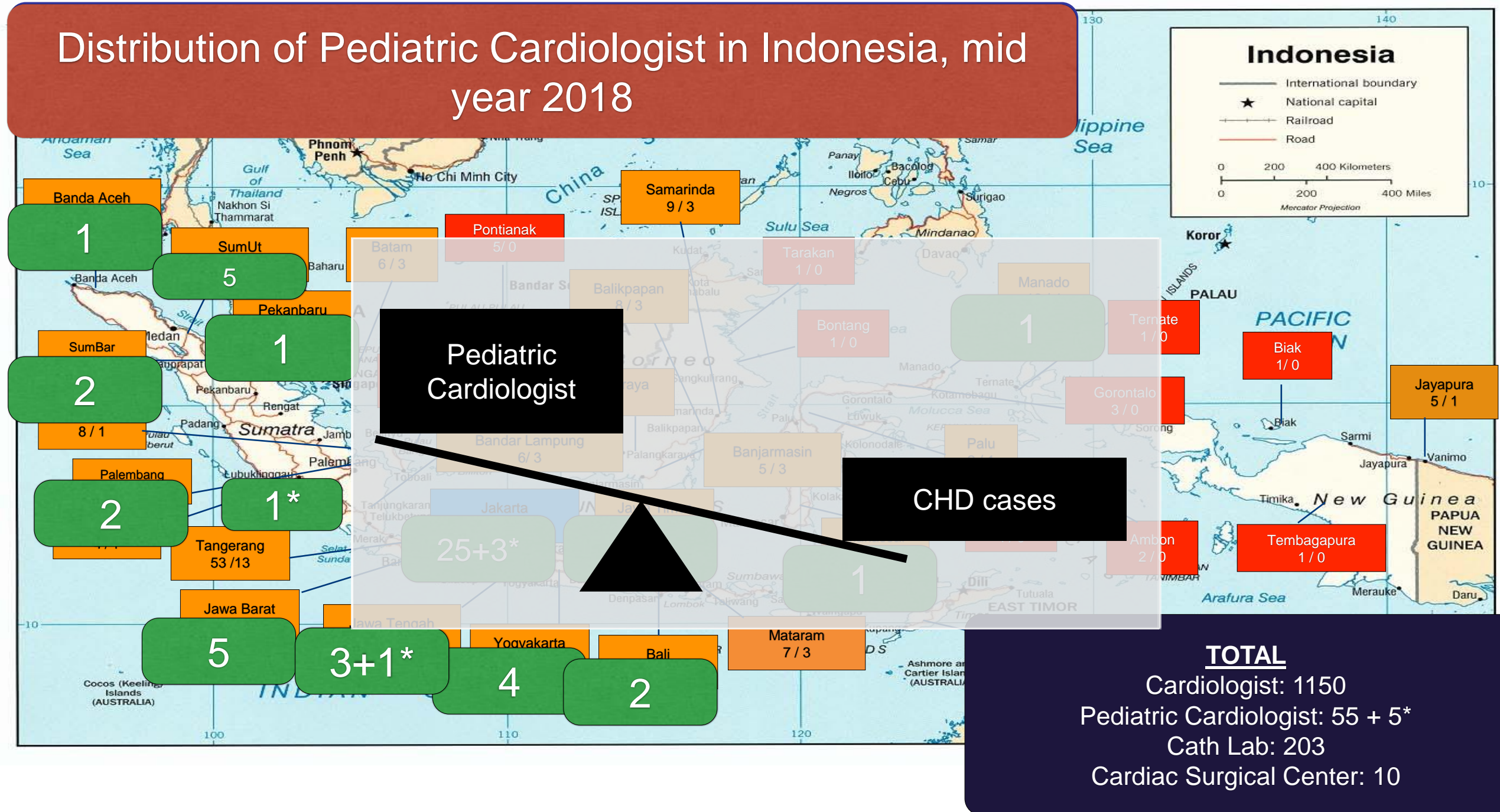
Low educated people may be treated by an unqualified person

Limited access to cardiac centre due to geographical condition of Indonesia archipelago

Increasing number of adult with uncorrected congenital heart disease (underdiagnosed)

Health
Policy ??

Distribution of Pediatric Cardiologist in Indonesia, mid year 2018



Center of CHD care

- **National Cardiovascular Center Harapan Kita Jakarta**
- Dr Cipto Mangunkusumo General Hospital Jakarta
- Dr Soetomo Hospital Surabaya
- Dr Sardjito Hospital Yogyakarta
- Jakarta Heart Center
- Some other hospitals

Aproximately **85%** of total **Pediatric cardiac surgery / intervention**
performed in **JAKARTA**

Pediatric and Congenital Heart Disease Services in National Cardiovascular Center Harapan Kita Jakarta-Indonesia



Pediatric and Congenital Heart Disease Team

- 10 Pediatric cardiologist
- 6 Pediatric cardiac surgeons
- 6 Pediatric cardiac intensivist

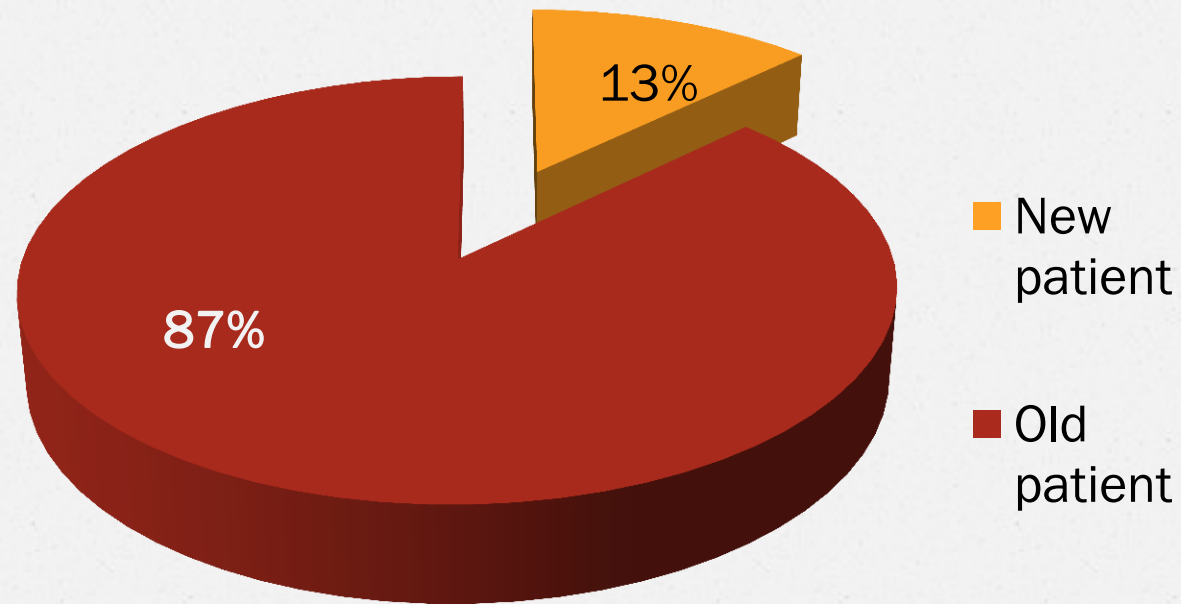


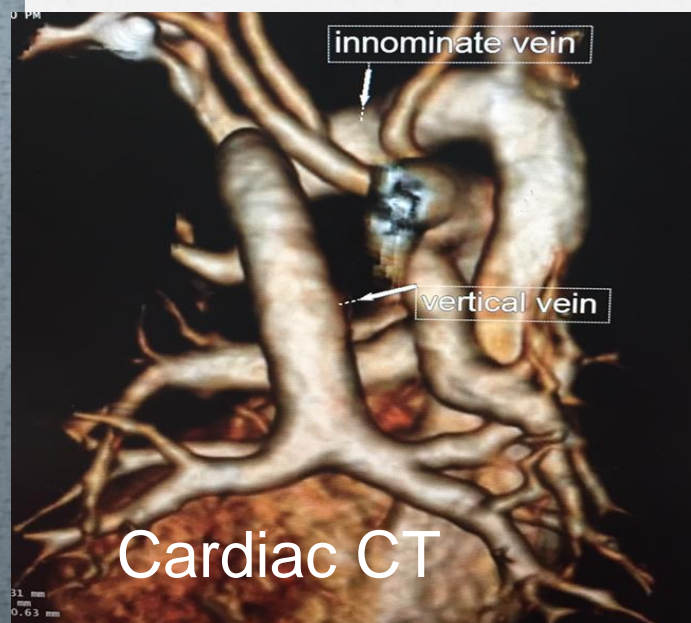
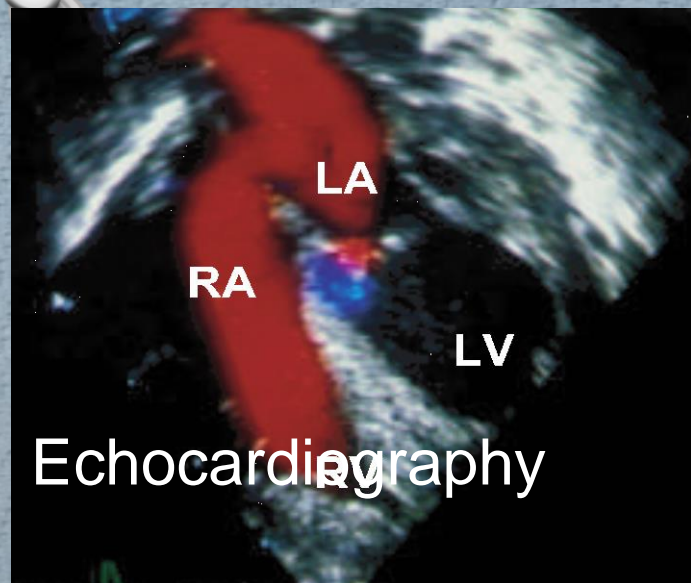
Facilities for Pediatric and CHD services

- 4 Outpatient Clinic (3 pediatric cardiologist clinics & 1 pediatric surgical clinic)
- Emergency Department (sharing with adult cardiac EMG)
- 3 Operating theater
- 1 Biplane Cath-Lab
- Pediatric and CHD ICU: 20 beds
- Intermediate Ward: 18 beds, 36 nurses, BOR 80-85%
- Pediatric Ward: 40 beds, 35 nurses (7 nurses per shift), BOR 80-90%

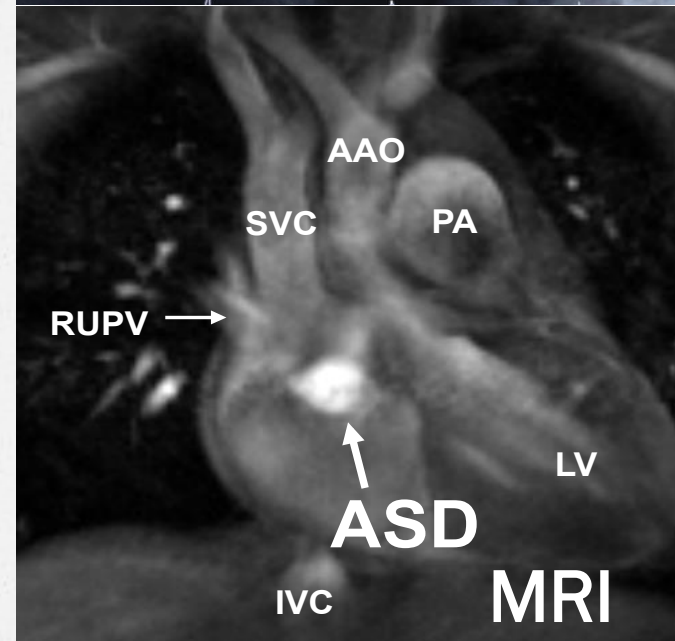
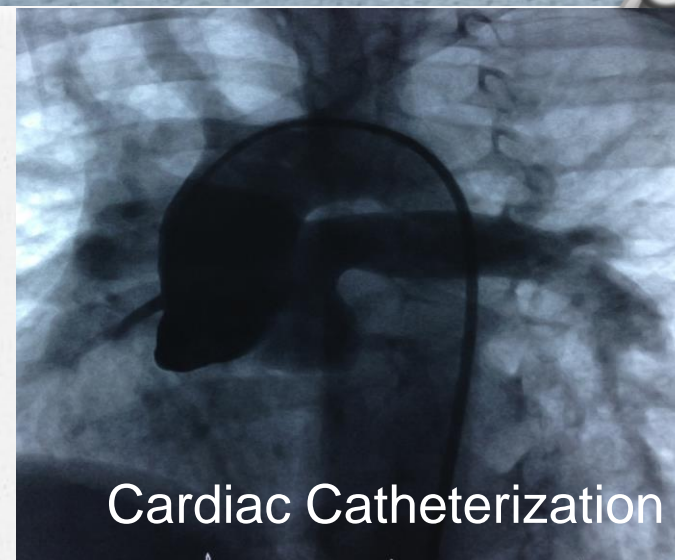
Outpatient Clinic 2016-2018

YEAR	2016	2017	2018
Number of Patients	17366	16460	13675

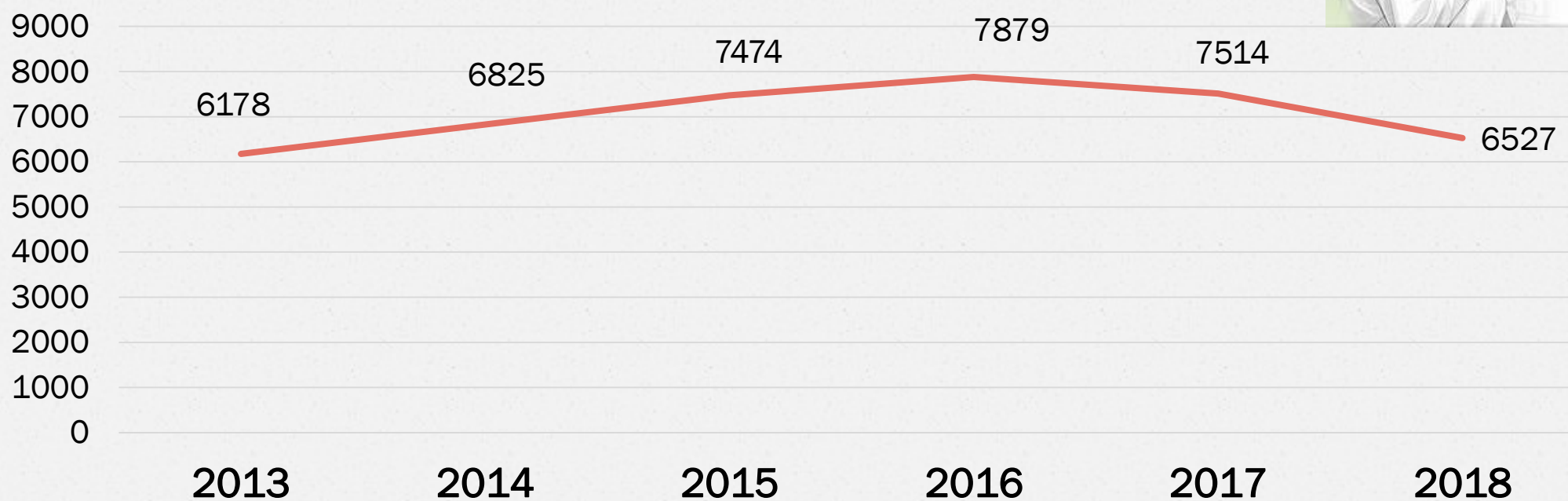
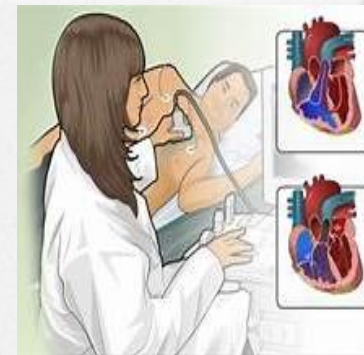




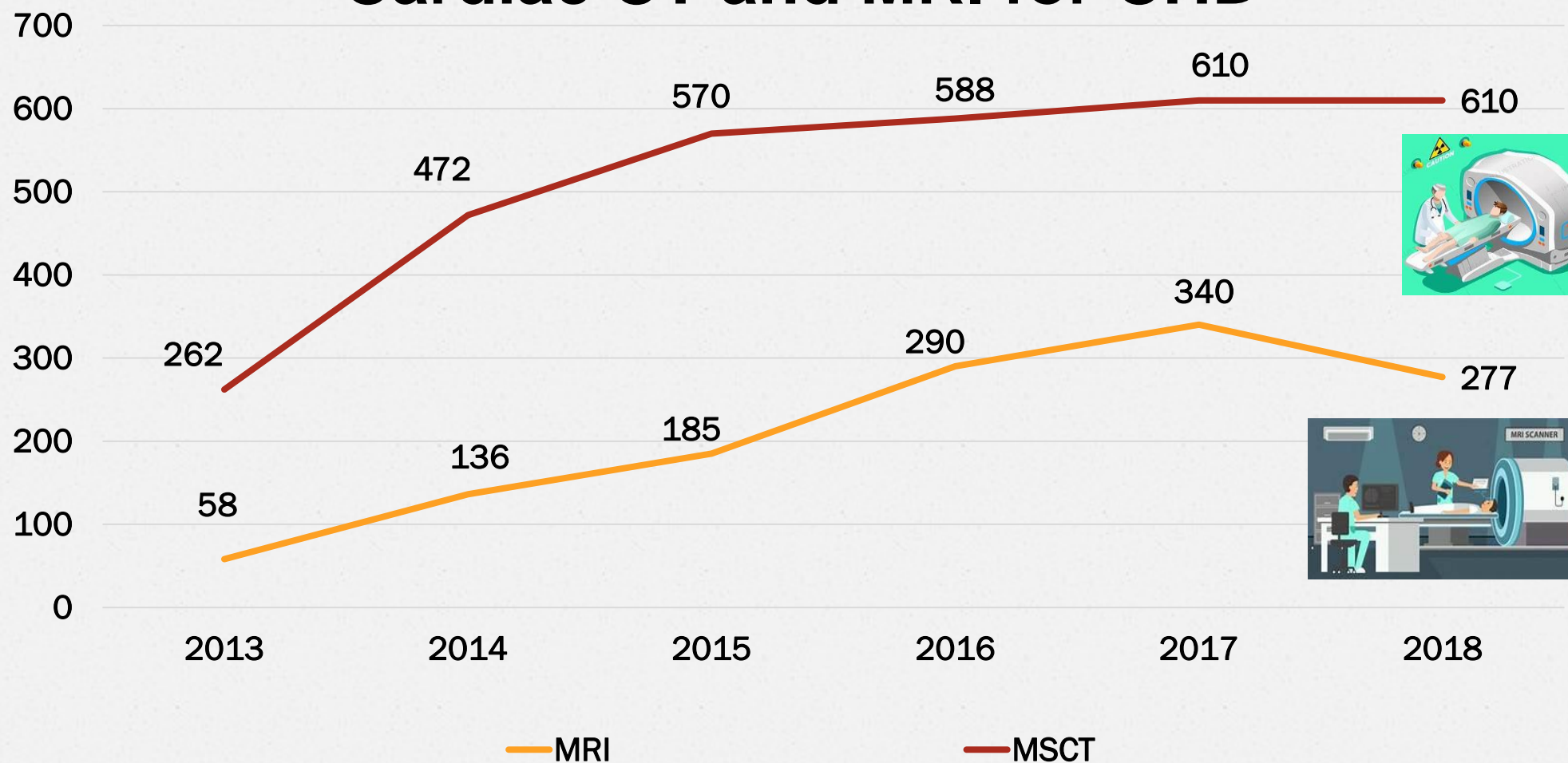
DIAGNOSTIC MODALITIES



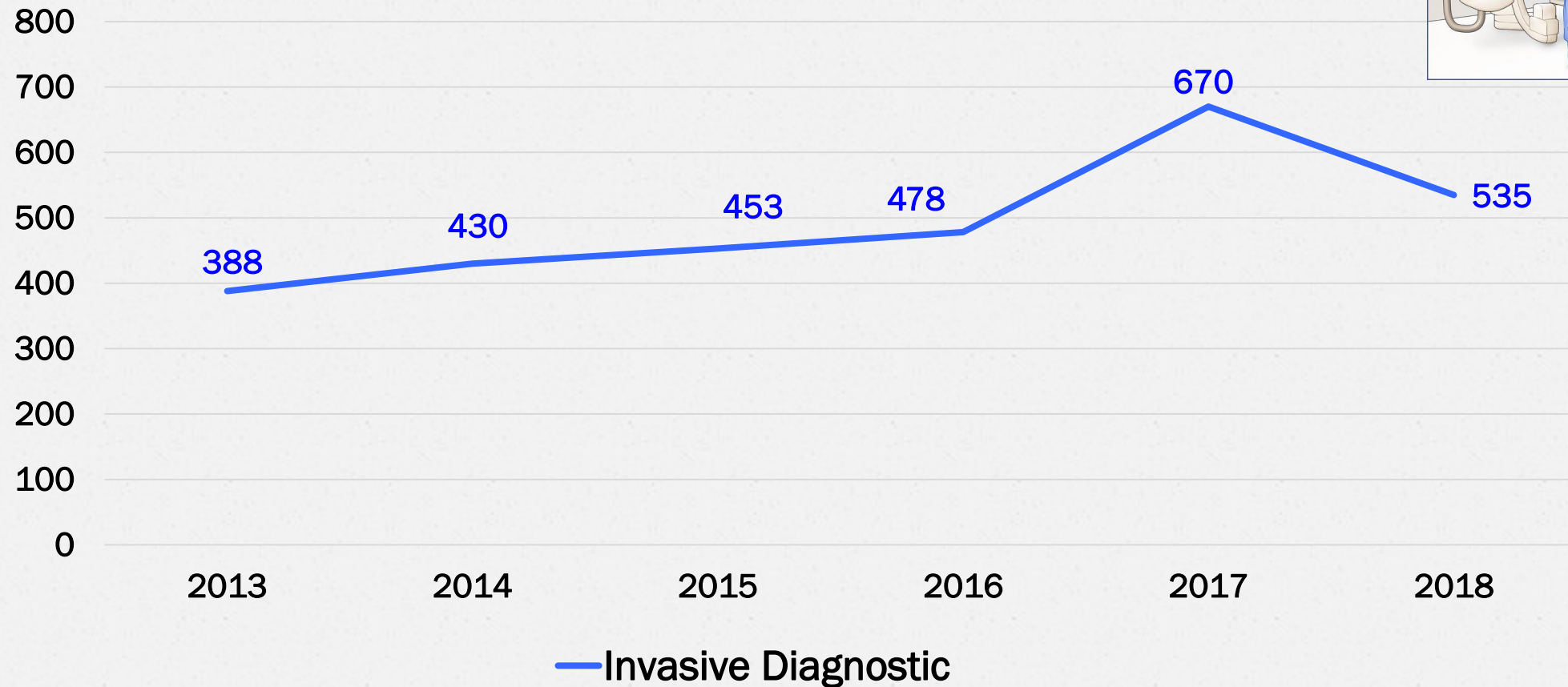
Transthorakal Echocardiography (outpatient)



Cardiac CT and MRI for CHD



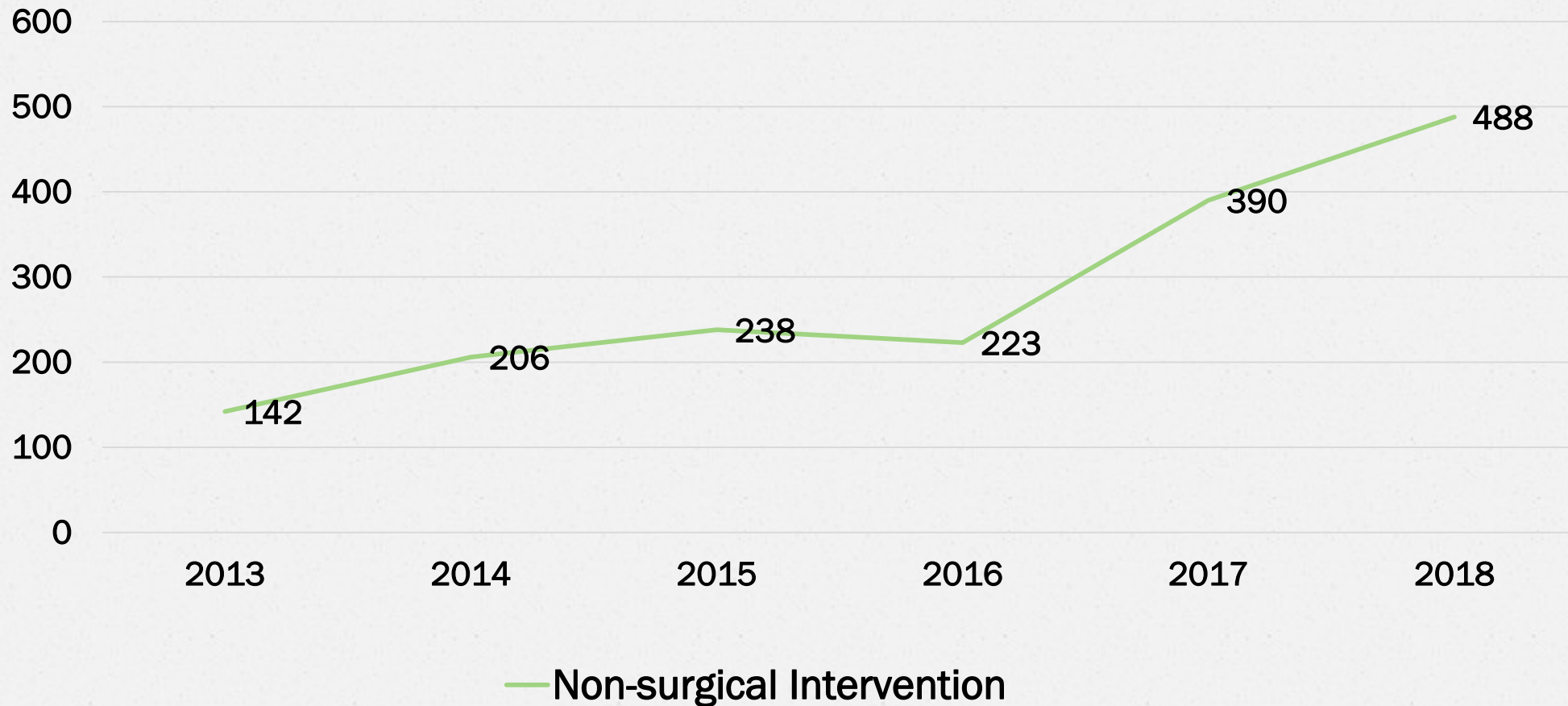
Diagnostic cardiac catheterization





Non Surgical Intervention

Non surgical intervention



Non surgical Intervetion

No.	Procedure	2016	2017	2018
1	PDA closure with <i>device</i>	113	117	106
2	ASD closure with device	47	120	170
3	VSD closure with device	10	47	46
4	PFO closure with device	8	3	3
5	BPV	36	38	53
6	BAV	1	3	3
7	BAS	14	3	10
8	Collateral Embolization	12	22	27
9	PDA stenting	3	6	5
10	PAV perforation	2	3	1
11	Temporary Pacemaker	8	8	8
12	Pericardiosentesis	7	11	0

PROBLEMS : **LONG QUEUING**

o **SURGICAL PROCEDURE**

- simple cases: up to 6 months
- High risk cases: up to 12 months

o **Non SURGICAL PROCEDURE (by CATHETERIZATION)**

- Diagnostic Catheterization up to 12 months
- Non surgical Intervention: up to 18 months
- PDA closure with device up to 2.5 years

PROBLEM: **INSURANCE COVERAGE**

- Most of patient use National Universal Coverage (BPJS),
- other charity insurance; Yayasan Jantung Indonesia, Peduli Kasih, etc
- **NOT ALL** the expenses are covered by insurance
- The Hospital has to subsidize the remaining cost



INACBGs Classification

NON SURGICAL INTERVENTION

PDA DEVICE CLOSURE

- No of cases queuing : 134 cases
- Billing cost : Rp. 59.487.145
- Insurance coverage : Rp.40.699.104

DEFISIT : - Rp. 18.788.041

NON SURGICAL INTERVENTION

VSD DEVICE CLOSURE

- No of cases queuing : 156 cases
- Billing cost : Rp. 118.301.802
- Insurance coverage : Rp. 108.256.228

DEFISIT : - Rp. 10.045.574

NON SURGICAL INTERVENTION

ASD DEVICE CLOSURE

- No of cases queuing : 152 cases
 - Billing cost : Rp. 93.520.221
 - Insurance coverage : Rp. 115.901.300
- SURPLUS : Rp. 23.381.079**

Summary

- Congenital heart disease is still a major problem in Indonesia
- At least 25.000 patients per year with CHD need to be intervened, but only 2000 cases can be done
- Many obstacles are still exist due higher number of cases, long queuing and limited coverage of Insurance

Suggestion

- o New reclassification has to be implemented as soon as possible
- o Collaboration with other parties involved is still needed



Thank You