

SUMMARY OF MAIN FINDINGS



PINTAR
PROTECTING INDONESIA FROM THE
THREAT OF ANTIBIOTIC RESISTANCE

STUDY PHASE I:
Situational Analysis



The drugs' storage in a pharmacy in Tabalong
Credit: PINTAR research team



PINTAR

PROTECTING INDONESIA FROM THE
THREAT OF ANTIBIOTIC RESISTANCE

A three-year research project aims to improve the appropriate dispensing of antibiotics (ABs) by private drug sellers and ultimately reduce the global threat of antimicrobial resistance (AMR). The study began in 2018 by a multidisciplinary team from Indonesia, Australia and the United Kingdom.



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AUSTRALIA

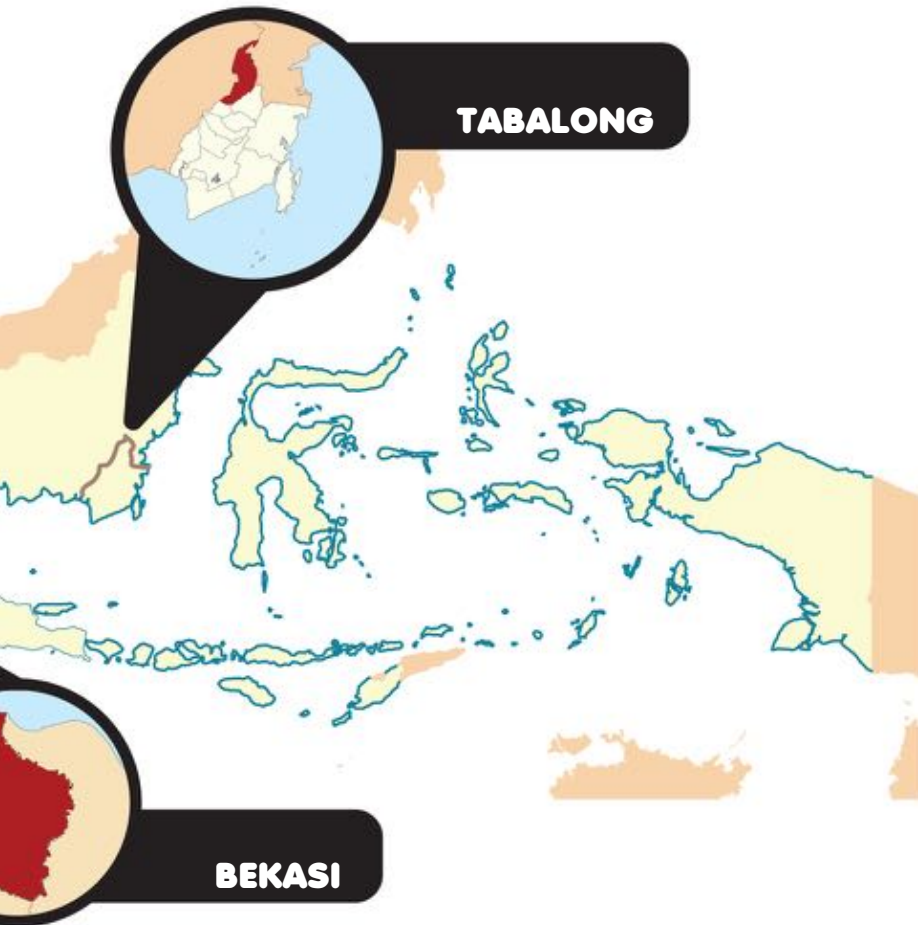


Australian Government

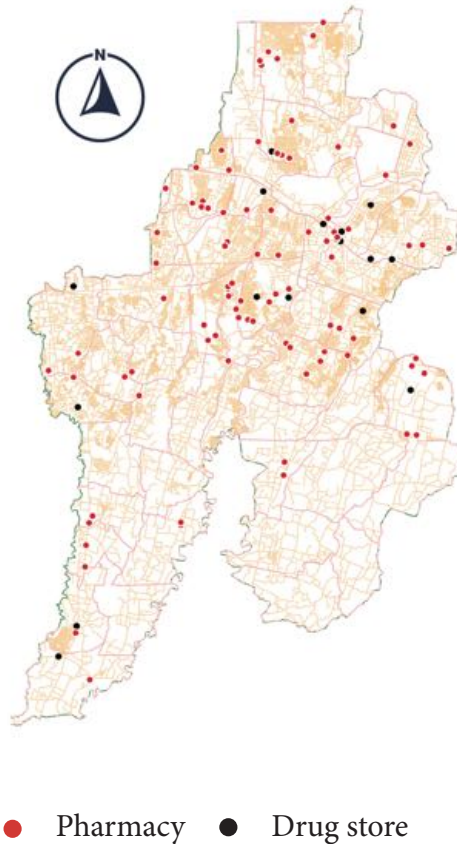
Department of Foreign Affairs and Trade

Study locations

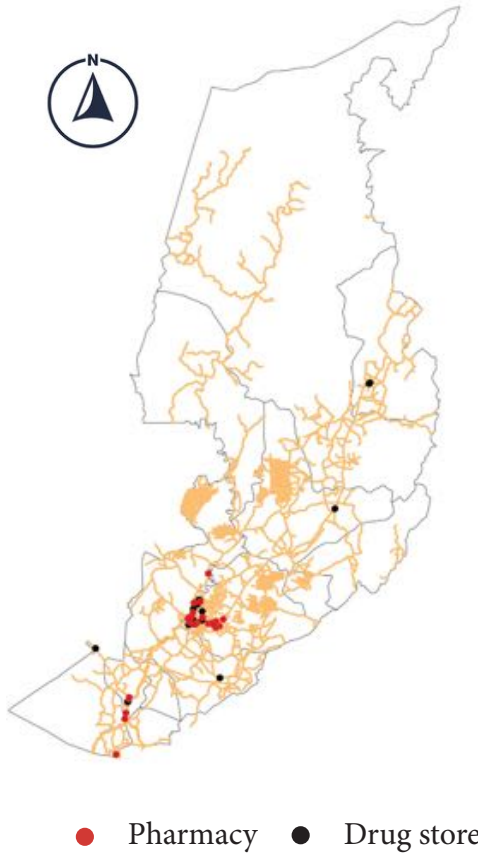




Visited Private Drug Sellers (PDS) in Bekasi, West Java, Indonesia



Visited Private Drug Sellers (PDS) in Tabalong, South Kalimantan, Indonesia



Research Methods

The study employed a cross-sectional survey and in-depth interviews with Standardised Patients (SP) and clients to understand the PDS' ABs dispensing practices.

SP Survey

The SP survey was conducted to document the ABs dispensing practice of PDS. Trained SP enacted three different clinical scenarios: child diarrhoea, suspected tuberculosis, of upper respiratory tract infection/common cold. In each district, each scenario was presented by at least one male and two female SP.

The details of the interaction with the PDS staff was documented using a smartphone-based structured questionnaire. It described history taking, advice or information provided by the PDS staff, treatment provided, length of interaction, and the medicine price.

In-depth Interviews

In-depth interviews were conducted with PDS to elaborate the results of the SP survey, which are:

1. the motives for dispensing (or not dispensing) ABs, including the perceptions of existing regulations
2. the social interactions with peers and clients ('communities of practice')
3. the awareness/knowledge of appropriate ABs use
4. the awareness of antimicrobial resistance
5. the distribution channels and pricing.

The in-depth interviews were also conducted with PDS clients to explore:

1. the reasons for going to PDS
2. the factors affecting those decisions (e.g. type of illness)
3. the understanding of ABs and appropriate use.

JULY
5-25
2019 | **SP SURVEY**
data collection in **Bekasi**

JULY
18-31
2019 | **IN-DEPTH INTERVIEW**
data collection in **Tabalong**

JULY
12-25
2019 | **SP SURVEY**
data collection in **Tabalong**

JULY/AUG
26-4
2019 | **IN-DEPTH INTERVIEW**
data collection in **Bekasi**

Research Timeline

PHARMACY

121
VISITED

25 in Tabalong
96 in Bekasi

362
INTERACTIONS

DRUG STORE

45
VISITED

24 in Tabalong
21 in Bekasi

133
INTERACTIONS

69%

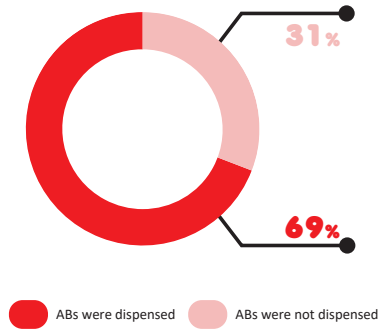
of ABs were dispensed without a prescription.

The proportion of Ab dispensing was higher in suspected tuberculosis (80.6%) and upper respiratory tract infection cases (79.2%) than in child diarrhoea (47.2%)

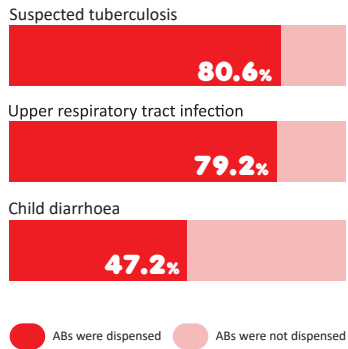
Proportion of AB dispensing in a pharmacy was far higher (75.7%) than a drug store (50.4%).

In addition, the proportion of AB dispensing in a pharmacy were 3.07 times higher than a drug store.

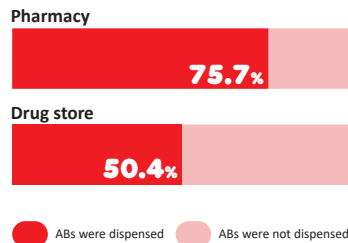
Proportion of AB Dispensing



Proportion of AB dispensing by case scenario



Proportion of AB dispensing by type of PDS



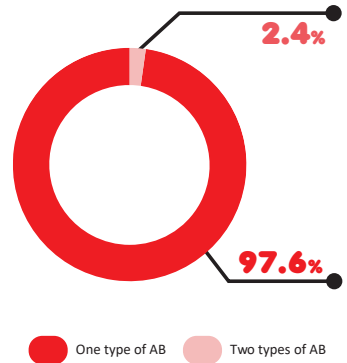
97.6%
of PDS were dispensing an AB only.

98.9%
of ABs were sold before their expiration date.

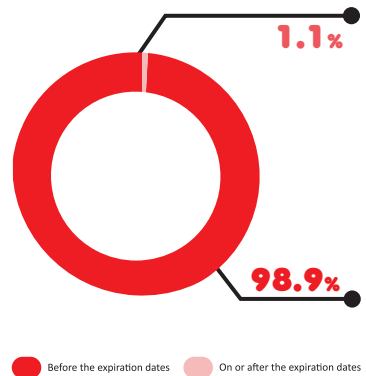
81%
of stand-alone pharmacies dispensed drugs without a prescription.

Proportion of AB dispensing in stand-alone pharmacy was 2.15 higher than in pharmacy with private practitioner.

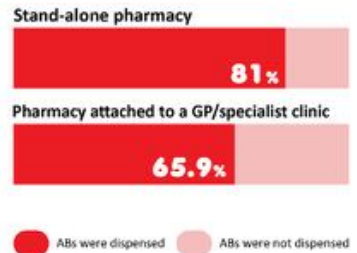
How many types of AB



When were the ABs sold?

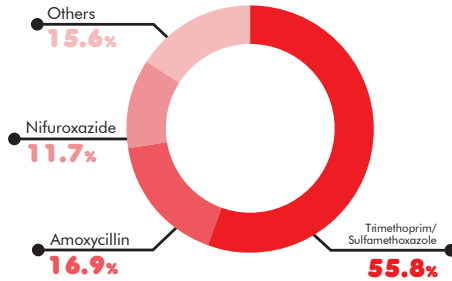


Rates of ABs dispensing by the availability of private practitioner in the PDS

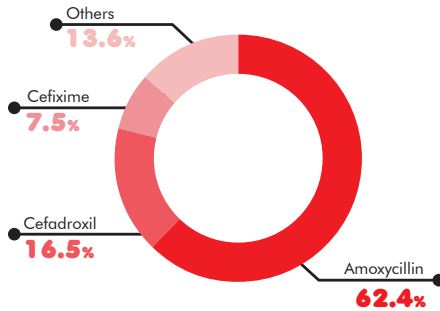


The most common types of dispensed AB

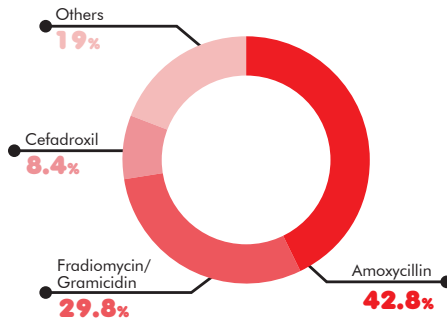
Child Diarrhoea



Suspected tuberculosis



Upper respiratory tract infection



IN-DEPTH INTERVIEW Results

BEKASI

30 VISITED

16 pharmacies
1 drug stores

16

PDS
INTERVIEWS

4 owners
2 pharmacists
7 owners/pharmacists*
3 managers/staff

16

CLIENT
INTERVIEWS

TABALONG

15 VISITED

8 pharmacies
7 drug stores

15

PDS
INTERVIEWS

8 owners
1 pharmacists
5 owners/pharmacists*
1 managers/staff

13

CLIENT
INTERVIEWS

**A situation of:*

1. The owner and pharmacist were interviewed together

2. The interviewee had a double role (as an owner and a pharmacist)

The current situation of PDS

“From a gross income of IDR 11 million, now it is under 10. There are many private practitioner. Especially after the BPJS was launched, before we had some collaboration with companies. But then they had to join BPJS, so there is a decrease. It affects the income. Also many people buy without prescription, or self-medication, so it occurs concurrently and it’s slowing down.”

Female, owner and pharmacist, Bekasi

The type of drugs dispensed by PDS

“Well there are many (customers) here – I will just provide drugs according to customers’ demands because they usually look for this or that, if I don’t have the drugs then I will prepare accordingly. Now I found out that in this area, they mostly need skin medicine. I think maybe it is because of the water, the water here is not so good, maybe because of the infiltration from the landfills. I live here, so I once had itchy skin, skin disease. But when I move to another location, it’s gone. Maybe that’s why many people look for skin medicine. So I provide drugs based on the needs of the people surrounding, I would know what they need. Every pharmacy in every area may have different drugs.”

Female, owner-pharmacist, Bekasi

The interaction process between PDS and clients

“Usually they will immediately mention the name of the drugs they want to buy, for example, cough medicine, or X cough medicine, sometimes they also bring the package of drug they want to buy, example hypertension, they will ask, ‘do you have this drug’ (Amlodipine).”

Female, staff, Bekasi

Drug supply to PDS

“I usually just bought it at the drug store that sells in retail. I don’t know if it is licensed or not. I usually buy there, buy one or two, he’s he distributor.”

Female, staff, Tabalong

Reasons for AB dispensing without prescription

- ABs are frequently demanded by clients without prescription.
- PDS often meet the demands because of fear of losing customers and in turn, losing profit.

“Well we have tried to inform them, but if they still like that (buying antibiotics without prescription) then we let them, we just give them, as long as we give them information. If we say like, ‘Oh it is not allowed’, and then they leave, well you know we are selling stuff, we need to sell stuff out, we need to pay our staff.”

Female, owner, Bekasi

Barriers to prevent inappropriate AB dispensing

- Efforts to educate clients on ABs use are sometimes resisted by the clients.
- ABs are also sold widely not only at pharmacies and drug stores but also small vendors.
- Conflicting role of pharmacists to endorse proper ABs practice in the PDS facilities

“It is true that there is a regulation for antibiotics, we know that, but most pharmacies are not owned by pharmacist, so there is a demand from owners, because the demand of antibiotics is high here.”

Female, pharmacist, Bekasi

“It is so easy to get antibiotics here, even sometimes the small vendors around here they have.”

Male, owner-pharmacist, Tabalong

Clients' health seeking behaviour

- Clients tend to immediately buy medicine for their illness.
- The perceived severity of illness affect the decision of seeking professional help or independently choosing their own medication.

“When I had a headache, I will just sleep or take a rest. (If it doesn't get better, do you go buying drugs at pharmacy or small vendor?) Yes, closest drug store or warung. (Do you have BPJS?) Yes I have. But for an illness like this I will buy cash. If the illness is more serious then I will go for treatment using BPJS.

Male, 47 y.o., Tabalong)

Purchasing drugs

“(How do you ask for drugs?) I will ask the pharmacist, tell them what the symptoms are, and s/he will pick some drugs for me. Sometimes they will offer some options, and then we will ask which one is the best. Usually they will ask, for example if I ask for cough medicine, they will ask if there is running nose, and for whom. If it is for children, they will ask the age.”

Female, 44 y.o., Bekasi

“(Do they inform you how to use it at warong?) No they just give me. But if I go to the physician, they will inform me how to use it.”

Female, 52 y.o., Tabalong

AB consumption behaviour

- ABs are perceived as “magic potion” and used for different health complaints.
- ABs can be purchased not only at the pharmacies but also drug store and small vendors.
- ABs can be purchased in retail at very small price (e.g. 1-2 pills)

“Usually I take Amoxilin, Paracetamol and Konidin (cough medicine-Red). When I have cough, if I only take Konidin I would not feel any effect. But when I mix it with Amoxilin and Paracetamol I will immediately get better. It’s great. (How long do you take it?) Twice a day, morning and evening. Usually when I have a common cold, if I take it for 2 days I will already feel better.”

Male, 65 y.o. Tabalong

“I’ve ever purchased antibiotics, not here but at warong. (so you can buy at warong?. Yes. (how much?) I bought 2 pills, it is close so if it is finished I can buy again. One is IDR 500 (AUD 5 cents), so 4 for IDR 2,000 (AUD 20 cents). (did you finish them?) I take them all, but if I get better then I stop. (if it is not finished do you keep them?) If there are still more I keep it, but if it is too long I will throw it away.”

Male, Tabalong

AMR research in Indonesia should be broadened to include the evaluation of the multifaceted interventions that better reflect the complex incentives and preferences of PDS and their clients.

Conclusion

PINTAR Research Study-September 2019

Email: info@pintarstudy.org

Website: pintarstudy.org