

Appendix S1 – Reflexivity Statement

1. How does this study address local research and policy priorities?

Since the National Health Insurance (JKN) system was implemented in 2014, Indonesia has suffered several scandals around substandard and falsified medicines. Articles in mainstream media regularly call into question the quality of medicines procured by providers of JKN services. The topic of medicines quality is regularly mentioned as a priority topic in a forum of Indonesian academics interested in medicine policy convened by the Special Adviser to the Minister of Health.

CVD medicines are of particular interest to the government of Malang district, because the elected district head (Bupati) has joined with health officials to prioritise investment in CVD control services. In the beginning of the study, prior to research protocol development, we discussed the research with relevant officials, including from the district department of health, the district medical stores, the provincial and national medicine regulators. The district health department provided written support for the study, with the specific proviso that the study results should be shared with department officials for follow up action. Meanwhile the national regulator has expressed an interest in understanding better exposure to the risk of poor-quality medicines, and the contribution market mechanisms and procurement practices might make to reducing that risk.

2. How were local researchers involved in study design?

The study was conceptualised by a foreign researcher who has worked with Indonesian health authorities for two decades. Researchers from Brawijaya University were consulted at length at the design stage, and gave material inputs to the protocol. The study was managed and implemented entirely by Indonesian nationals based in the study area; they also guided the re-design occasioned by the COVID pandemic.

3. How has funding been used to support the local research team?

With the exception of salary support for one foreign researcher and publication fees, the budget was spent entirely in Indonesia, on locally-based staff, data collection and testing.

4. How are research staff who conducted data collection acknowledged?

We have thanked two data collectors who are not in academic positions and not authors by name in the acknowledgements. Other data collectors are authors.

5. Do all members of the research partnership have access to study data?

Yes

6. How was data used to develop analytical skills within the partnership?

We held regular research meetings with all authors throughout the process. All team members provided input regarding the adaptations required by COVID, as well as suggesting relevant analyses as fieldwork progressed.

Preliminary analysis was performed by the first and last authors, and discussed in an extended research meeting within the partnership, some of whom suggested additional

analyses as well as enriching interpretation. We did not provide formal analytic skills training during this research.

7. How have research partners collaborated in interpreting study data?

In addition to the regular research meetings with academic colleagues from all involved institutions described above, we presented preliminary results to the medicine regulator before development of our final manuscript. Their interpretation and observations added texture and context to our own.

8. How were research partners supported to develop writing skills?

The first author AD (an early-career Indonesian national) was supported by senior academics in the group to develop and refine writing skills throughout the research process. Mentoring focused on developing policy presentations and policy briefs as well as academic paper writing skills.

9. How will research products be shared to address local needs?

We conducted a dissemination meeting with the local and national medicines authority soon after receiving the medicine samples laboratory testing result from the third party laboratory. Brawijaya University researchers plan further dissemination of results to the district health department in the context of other on-going research related to CVD care in which the Health Department is involved.

10. How is the leadership, contribution and ownership of this work by LMIC researchers recognised within the authorship?

Seven of the 12 authors are Indonesian nationals. This includes first author AD, an early career Research Fellow who managed the study, conducted much of the data collection and analysis, and co-drafted this manuscript. Other roles are recognised in the contribution of authors statement.

11. How have early career researchers across the partnership been included within the authorship team?

Three authors, including the first author, are early career researchers (AD, BI, AL). All are Indonesian nationals based in the study area, although the first author was affiliated as a Research Fellow at The George Institute for Global Health at the time of the study.

12. How has gender balance been addressed within the authorship?

Five authors are male (DP, BI, SS, GT, SJ) and seven authors -- including the first and last authors -- are female (AD, AP, AP, AL, DL, AM, EP).

13. How has the project contributed to training of LMIC researchers?

A weekly and bi-weekly online discussion has been held during the research period to allow knowledge transfer, discussion and analytical training from the senior researchers (EP, AP, DP, SJ) to the junior researchers based in LMIC (AD, AL, BI).

We note also that the participation of senior Indonesian researchers (JS, GT, AM, DL) contributed to building the skills of researchers based in HICs, including by helping them to better understand policy processes and research-policy interaction in the Indonesian

context, and by highlighting the importance of culture in considerations related to research ethics.

14. How has the project contributed to improvements in local infrastructure?

This project has not directly contributed to improvements in local infrastructure.

15. What safeguarding procedures were used to protect local study participants and researchers?

We sought ethical clearance from both local and international institutions, and were careful to observe all of the terms of those clearances as they relate to protecting researchers and medicine sellers from any potential harm associated with the study. In addition, we made major changes to our original research plan to reduce risk of exposure to COVID-19. We eliminated a household survey that would have required contact with thousands of often elderly individuals at high risk for CVD, conducted much of our preliminary or formative research by phone rather than in person, and followed strict COVID-prevention protocols when collecting and processing samples.