PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Is Indonesia achieving universal health coverage? Secondary analysis of national data on insurance coverage, health spending and service availability
AUTHORS	Pratiwi, Agnes; Setiyaningsih, Hermawati; Kok, Maarten; Hoekstra, Trynke; Mukti, Ali; Pisani, Elizabeth

VERSION 1 – REVIEW

REVIEWER	Yates, Robert Chatham House
REVIEW RETURNED	11-Apr-2021

GENERAL COMMENTS	I enjoyed reading this well-written paper on this extremely important topic as there is a lot of international interest in how the JKN is performing in Indonesia. The authors have also collated some very useful and extensive data from all over the country which is a rich source of material to evaluate progress to date. However how this is analysed and presented at times is a bit muddled for example sometimes conflating effective health coverage with insurance scheme membership. Also it isn't clear how "access" has been measured and whether this reflects geographical access to services (if so what represents good access) or actual utilisation of services. The latter is a much better measure and perhaps should be referred to us as service coverage rather than access to clear any ambiguity. Where I think the paper could be improved considerably though is in taking a much more rigorous and robust approach to assessing how the JKN has been performing - based on the evidence presented. In particular I feel that statements about high political commitment to UHC aren't justified when only 60% report having health insurance and 42% of poor households saying they are not covered. Also the extremely inequitable coverage of services between richer and poorer states is not compatible with the equity principles behind UHC. I would also argue that some of the policy recommendations made towards the end of the paper could make this worse (ie cutting funding to richer districts and increasing household contributions). This analysis may appear a bit harsh but 7 years after its launch, the JKN could and should be doing a lot better and would do so with much higher levels of public (tax) financing invested in PHC services especially in poorer areas. Also the GoI should drop the requirement for the non-waged to make regular contributions to the JKN or at least reduced them to

	nominal levels. Doubling contributions in 2020 was a huge mistake. Anyway my overall point is that with these results you should be arguing for a much more radical overhaul of the JKN (involving big increases in tax financing) and that just tinkering at the edges and/or increasing household contributions will not make a diferrence or could make things worse. Here also are some more detailed comments relating to the above: Page 4 Line 80 – With JKN membership having plateaued over recent years and with public spending still being very low (1.4% GDP) is this statement about high political commitment justified? Page 4 Last para – What has doubling premiums for the informal sector done to coverage rates? If many weren't joining before then presumably more have now dropped out hence reducing coverage rates – Does this policy fit with a political commitment to UHC? Page 7 Re health access measure. How has this measure been calculated because if it just relates to geographical access (ie Xkm from a facility) this is really a valid measure of access because if there are significant financial barriers to access the facility even were it next door poor, uninsured people wouldn't use it. Health services utilisation is a much better measure of real access. Page 9 Table 1 Its very striking how coverage rate of the JKN reported by the population is only around 60% which is widely different to the Govts claim of 82%. This should be a headline finding Page 10 Para – that 42% of poor households report being uninsured 7 years after the launch of the JKN is really very disappointing and challenges any claims of political commitment to UHC Page 12 line 1: How is easy access defined? Page 13 lines 282-284. As service use is the best measure of effective health coverage these findings from Eastern Indonesia show why measuring JKN membership is such a poor indicator of UHC in Indonesia – it's not really much use if the services aren't there. I feel the authors should make this one of their main conclusions Page 15 Lines and 316 and 319 seem to be contradictory – surely higher wealth is associated with higher levels of health spending Page 17 Lines 363-365. I would suspect that this higher level of out-of-pocket spending in richer urban areas in Java and Bali will be associated with people paying directly for medicines and diagnostic services in private labs

	Page 18 last para – I think this assessment is too generous given the date presented. The JKN has been running for 7 years now and 42% poor households are reporting not being covered. Also if premiums for the informal sector have doubled (in the midst of a pandemic) what has happened to coverage rates subsequently. Page 19 lines 411-413 The JKN is in deficit not because of too many claims but because it is grossly undefunded by the Govt. Turkey, Thailand Malaysia etc are performing better because their UHC programmes are much better funded using tax financing Page 19 Lines 418-421. I don't think suggesting cutting spending in urban areas is advisable or politically feasible or increasing household premiums as this will simply reduce demand. As all successful UHC systems have shown the only way to secure close to universal coverage (the goal of UHC) is through using tax financing to cover people living in the informal sector. This is what Jokowi did when he became Governor of Jakarta in 2012 and he should have done across the country in becoming President. Were he to do what PM Thaksin did in Thailand in 2001 and plough around 1% GDP into the JKN and do away with the need for non-waged to make contributions he could fulfil his UHC ambitions and become the UHC hero of Indonesia.

REVIEWER	Garg, Samir State Health Resource Centre, Chhattisgarh
REVIEW RETURNED	11-May-2021

GENERAL COMMENTS	This is an interesting study on a very relevant topic. The analysis is sound and the article is well written. In order to improve the quality and clarity of the manuscript, there are some comments: 1. The main suggestion is regarding how the conclusions of the study have been articulated including in the abstract. Conclusions need to highlight the main findings. The results showed that the scheme failed to meet its fundamental objective of protecting the insured individuals from high OOPE. Mostly, the insured incurred greater OOPE. The analysis does not support the conclusion that insurance protected the poor from high OOPE. In the analysis, being insured seems to be associated with greater OOPE. At best, being insured was not associated with amount of OOPE (when controlled for economic status). 2. An important aspect missed out in the analysis is regarding the type of providers utilised. The introduction mentions that out of the 2300 hospitals in the scheme, 1700 were private. The geographical distribution of providers has not been explored. What were the assumptions regarding service availability in remote/rural areas in design of JKN – whether it was assumed that giving a demand stimulus through insurance will result in a supply-side response? The authors can look at: Nandi S, Schneider H, Garg S. Assessing geographical inequity in availability of hospital services under the state-funded Universal Health Insurance Scheme in Chhattisgarh state, India, using a

	composite vulnerability index. Glob Health Action. 2018;11:1541220 How did the OOPE vary by type of provider (public vs private) has not been analysed. This aspect can be included in the discussion. The authors can also see: Garg S, Bebarta KK, Tripathi N. Performance of India's national publicly funded health insurance scheme, Pradhan Mantri Jan Arogaya Yojana (PMJAY), in improving access and financial protection for hospital care: Findings from household surveys in Chhattisgarh state. Vol. 20, BMC Public Health. BMC Public Health; 2020. 3. The discussion and conclusions are clear regarding the shortage of services in remote/rural areas and the inadequacy of insurance programme in addressing it. Similarly, it will be good to spell out clearly what happened in situations where services were available e.g. more urban areas. Was insurance enrolment effective in reducing the OOPE for inpatient or outpatient utilisation significantly? 4. The discussion can include comparison with literature from other diverse or large countries like India, Philippines etc. that have implemented government funded insurance programmes 5. The limitations of the analysis need to be clearly laid out, including any issues of selection bias.

1 – AUTHOR RESPONSE

Reviewer: 1
Dr. Robert Yates, Chatham House

Comments to the Author:
I enjoyed reading this well-written paper on this extremely important topic as there is a lot of international interest in how the JKN is performing in Indonesia. The authors have also collated some very useful and extensive data from all over the country which is a rich source of material to evaluate progress to date.

1) We would like to thank the reviewer for their efforts and useful comments, questions and suggestions. We have tried to use them to improve our paper. Below, we respond briefly to each of the comments and point out the changes that we made in our paper.

However how this is analysed and presented at times is a bit muddled for example sometimes conflating effective health coverage with insurance scheme membership.

2) This is a fundamentally important point. It was certainly not our intention to conflate the two; one of our central findings is that insurance scheme membership is of limited value if it does not open the door to affordable, quality health services for those that need them (which we consider to be effective health coverage). We have tried to clarify the language throughout (for example talking about "JKN membership"

rather than coverage). We have drawn attention to the distinction in the introduction (lines 77, 81-83) and in the discussion (lines 343-345).

Also it isn't clear how "access" has been measured and whether this reflects geographical access to services (if so what represents good access) or actual utilisation of services. The latter is a much better measure and perhaps should be referred to us as service coverage rather than access to clear any ambiguity.

3) We have clarified our definition of access, a geographical measure based on the reports of every one of Indonesia's 83,931 village heads, in lines 169-170. In the text, we have in most cases specified "geographic access" or substituted the term "service availability" to distinguish from other potential definitions of access.

4) We agree that measuring service use is also important, and we describe our definition in line 175-176. It is this measure, along with out-of-pocket spending, that we use to investigate the "outcomes" of insurance status and restricted geographic access, in Tables 4 and 5.

Where I think the paper could be improved considerably though is in taking a much more rigorous and robust approach to assessing how the JKN has been performing - based on the evidence presented. In particular I feel that statements about high political commitment to UHC aren't justified when only 60% report having health insurance and 42% of poor households saying they are not covered. Also the extremely inequitable coverage of services between richer and poorer states is not compatible with the equity principles behind UHC.

5) We confess to using "political commitment" in a somewhat rhetorical sense. We have dropped the term. In line 75 we now speak of a target set by politicians.

I would also argue that some of the policy recommendations made towards the end of the paper could make this worse (ie cutting funding to richer districts and increasing household contributions). This analysis may appear a bit harsh but 7 years after its launch, the JKN could and should be doing a lot better and would do so with much higher levels of public (tax) financing invested in PHC services especially in poorer areas. Also the GoI should drop the requirement for the non-waged to make regular contributions to the JKN or at least reduced them to nominal levels. Doubling contributions in 2020 was a huge mistake.

Anyway my overall point is that with these results you should be arguing for a much more radical overhaul of the JKN (involving big increases in tax financing) and that just tinkering at the edges and/or increasing household contributions will not make a diferrence or could make things worse.

6) Thanks for sharing these views. Our paper reflects the situation in early 2018, after 4 years of JKN implementation. We agree that more could have been done, and also that greater investment of public money, especially at the primary level, is needed. We point out in the discussion that this would be desirable (line 414-420), but also that, given Indonesia's low tax yield, it would be difficult.

7) We note your concern about the risks of increasing household contributions. We do not argue for a reduction in subsidised contributions for poorer families. However, we believe that the steep increase in

out of pocket spending on services by household income, and the relatively low percentage of household finances that this represents in the higher quintiles, indicates that progressive contributions are one feasible option for increasing the sustainability of the JKN. We have underlined this in the discussion in lines 416-418.

Here also are some more detailed comments relating to the above:
Page 4 Line 80 – With JKN membership having plateaued over recent years and with public spending still being very low (1.4% GDP) is this statement about high political commitment justified?
8) Please see response 5)

Page 4 Last para – What has doubling premiums for the informal sector done to coverage rates? If many weren't joining before then presumably more have now dropped out hence reducing coverage rates – Does this policy fit with a political commitment to UHC?

9) Though we have not been able to find official figures, we provide reference to a press statement by the BPJS director general in September 2020, discussing the number of people switching to lower classes of cover. Overall, registrations are around 2 million lower now than they were in late 2019. Since the timing coincided with the COVID-19 pandemic, it will be very difficult to calculate the net effect of the rise in premiums on JKN membership. We note that the rise in premia post-dated the time period covered in our study; we refer to it in the introduction to provide context.

Page 7 Re health access measure. How has this measure been calculated because if it just relates to geographical access (ie Xkm from a facility) this is really a valid measure of access because if there are significant financial barriers to access the facility even were it next door poor, uninsured people wouldn't use it. Health services utilisation is a much better measure of real access.

10) Please see comments 3 and 4. The maps provided in Supplementary file 7 d and e) emphasise the importance of geographical barriers.

Page 9 Table 1 Its very striking how coverage rate of the JKN reported by the population is only around 60% which is widely different to the Govts claim of 82%. This should be a headline finding

11) We fully agree. The BPJS reports for the time were 71%, but that still represents a 17% margin over population reports. We have underlined this information in lines 78 of the introduction, and discuss the possible reasons for the difference, including their implications for JKN, in lines 340-343.

Page 10 Para – that 42% of poor households report being uninsured 7 years after the launch of the JKN is really very disappointing and challenges any claims of political commitment to UHC

12) We fully agree. The data were for 2018, but yes, it is disappointing. See our response 5, and lines (345-349).

Page 12 line 1: How is easy access defined?
13) See response 3

Page 13 lines 282-284. As service use is the best measure of effective health coverage these findings from Eastern Indonesia show why measuring JKN membership is such a poor indicator of UHC in Indonesia – it's not really much use if the services aren't there. I feel the authors should make this one of their main conclusions

14) We fully agree with your suggestion. We have rephrased parts of both the introduction and the discussion to underline the central importance of this observation [lines 81-83; 347-349].

Page 15 Lines and 316 and 319 seem to be contradictory – surely higher wealth is associated with higher levels of health spending

Sorry, we tried very hard, but were unable to identify the text to which this refers.

Page 17 Lines 363-365. I would suspect that this higher level of out-of-pocket spending in richer urban areas in Java and Bali will be associated with people paying directly for medicines and diagnostic services in private labs

15) We agree that is very likely; we mentioned the likelihood in line 380-383 of the discussion.

Page 18 last para – I think this assessment is too generous given the date presented. The JKN has been running for 7 years now and 42% poor households are reporting not being covered. Also if premiums for the informal sector have doubled (in the midst of a pandemic) what has happened to coverage rates subsequently.

16) Our study shows that by 2018, JKN was associated with far higher inpatient use compared with the uninsured, suggesting it increased access; it also protected many families from excessive spending on inpatient care; among insured patients who were hospitalized, the poorest families were the most likely to have free care. We feel these achievements should be recognised.

17) We fully agree that would be very interesting to analyse the impact of the pandemic. Our study focuses on 2018, and can perhaps be used as a baseline to look at the impact of raising premiums on coverage rates.

Page 19 lines 411-413 The JKN is in deficit not because of too many claims but because it is grossly undefunded by the Govt. Turkey, Thailand Malaysia etc are performing better because their UHC programmes are much better funded using tax financing

18) We agree that JKN is underfunded. We have addressed this in sub section implication for research and practice (paragraph 2). We have added information in lines 411 on percentage of GDP invested in health by the government, with comparator countries, to illustrate the low levels of public investment in health in Indonesia, despite the fact that 69% of all JKN premiums are paid for by the government (introduction paragraph 2). We also discuss the feasibility of increased funding for health from public sources.

Page 19 Lines 418-421. I don't think suggesting cutting spending in urban areas is advisable or politically feasible or increasing household premiums as this will simply reduce demand. As all successful UHC systems have shown the only way to secure close to universal coverage (the goal of UHC) is through using tax financing to cover people living in the informal sector. This is what Jokowi did when he became

Governor of Jakarta in 2012 and he should have done across the country in becoming President. Were he to do what PM Thaksin did in Thailand in 2001 and plough around 1% GDP into the JKN and do away with the need for non-waged to make contributions he could fulfil his UHC ambitions and become the UHC hero of Indonesia.

19) Thanks for this suggestion. By subsidising such a high proportion of contributions (and by providing additional cash injections to JKN) the government has, informally, begun to implement your suggestion that informal sector premia should be paid out of taxation. We fully agree that finding a feasible and sustainable solution that is also politically palatable will be a challenge.

Reviewer: 2
Dr. Samir Garg, State Health Resource Centre, Chhattisgarh

Comments to the Author:
This is an interesting study on a very relevant topic. The analysis is sound and the article is well written. In order to improve the quality and clarity of the manuscript, there are some comments:

1. The main suggestion is regarding how the conclusions of the study have been articulated including in the abstract. Conclusions need to highlight the main findings. The results showed that the scheme failed to meet its fundamental objective of protecting the insured individuals from high OOPE. Mostly, the insured incurred greater OOPE.
The analysis does not support the conclusion that insurance protected the poor from high OOPE. In the analysis, being insured seems to be associated with greater OOPE. At best, being insured was not associated with amount of OOPE (when controlled for economic status).

1) We would like to thank the reviewer for the thoughtful review and useful feedback and suggestions. We have tried to use your comments to improve our paper. In the conclusion in the abstract, we have carefully specified that the insurance scheme protects many inpatients from excessive spending (not outpatients). We also point out that many others cannot benefit because few services are available.

2. An important aspect missed out in the analysis is regarding the type of providers utilised. The introduction mentions that out of the 2300 hospitals in the scheme, 1700 were private. The geographical distribution of providers has not been explored. What were the assumptions regarding service availability in remote/rural areas in design of JKN – whether it was assumed that giving a demand stimulus through insurance will result in a supply-side response? The authors can look at:

Nandi S, Schneider H, Garg S. Assessing geographical inequity in availability of hospital services under the state-funded Universal Health Insurance Scheme in Chhattisgarh state, India, using a composite vulnerability index. Glob Health Action. 2018;11:1541220

2) Thank you for this useful reference about geographical inequity in availability of hospital services in India. Some of the interesting results are similar to our findings. We have incorporated a reference to this article in the discussion (line 112; 345-347).

How did the OOPE vary by type of provider (public vs private) has not been analysed. This aspect can be included in the discussion. The authors can also see:

Garg S, Bebarta KK, Tripathi N. Performance of India's national publicly funded health insurance scheme, Pradhan Mantri Jan Arogaya Yojana (PMJAY), in improving access and financial protection for hospital care: Findings from household surveys in Chhattisgarh state. Vol. 20, BMC Public Health. BMC Public Health; 2020.

Thank you for this useful suggestion. In the discussion, we point out that future studies could benefit from a trend analysis, and analysis of patterns in the use and OOP in private and public healthcare facilities (please see lines 384 and 443).

3. The discussion and conclusions are clear regarding the shortage of services in remote/rural areas and the inadequacy of insurance programme in addressing it. Similarly, it will be good to spell out clearly what happened in situations where services were available e.g. more urban areas. Was insurance enrolment effective in reducing the OOPE for inpatient or outpatient utilisation significantly?

3) Thank you for this question. We fully agree that it is interesting to learn more about effectiveness of the insurance scheme in reducing OOP. In this study, we only use one year of cross-sectional data. This allows us to compare the uninsured with the insured. Our results show that utilization is higher among insured where services are available. Specifically, in inpatients, having health insurance protects many from OOP in areas where sufficient services are available. We suggest that future studies explore how trends in OOP evolve over time (please see line 442 - 444).

4. The discussion can include comparison with literature from other diverse or large countries like India, Philippines etc. that have implemented government funded insurance programmes

4) We fully agree. Comparison with other schemes in other countries is certainly interesting. We added some references in the discussion section (please see line 384; 389-390; 397)

5. The limitations of the analysis need to be clearly laid out, including any issues of selection bias.

5) Thank you, for pointing this out. We made this more explicit in the limitation part (please see line 431-439).

VERSION 2 – REVIEW

REVIEWER	Yates, Robert Chatham House
REVIEW RETURNED	07-Jul-2021

GENERAL COMMENTS	I enjoyed re-reading this well-reseached and well-written paper and am grateful to the authors for amending the paper taking into consideration the points I raised in my original review

REVIEWER	Garg, Samir

	State Health Resource Centre, Chhattisgarh
REVIEW RETURNED	18-Jul-2021

GENERAL COMMENTS	The authors have not addressed the Comment (no.1) regarding articulating the conclusions clearly and according to the results of the analysis presented. The abstract is not clear either.

VERSION 2 – AUTHOR RESPONSE

Reviewer: 1

Dr. Robert Yates, Chatham House

Thank you.

Reviewer: 2

Dr. Samir Garg, State Health Resource Centre, Chhattisgarh

1) We thank Dr. Samir Garg for bringing our attention back to comment 1, and are sorry that our initial reply did not adequately explain our response.

The Reviewer says:

"The results showed that the scheme failed to meet its fundamental objective of protecting the insured individuals from high OOPE. Mostly, the insured incurred greater OOPE. The analysis does not support the conclusion that insurance protected the poor from high OOPE. In the analysis, being insured seems to be associated with greater OOPE. At best, being insured was not associated with amount of OOPE (when controlled for economic status)."

It is true that overall, the insured spent more on healthcare than the uninsured, but as Tables 4 and 5 show, (and we highlight in the abstract) that was in part because they used more healthcare, and more inpatient care in particular. This is why, in the discussion we refer to the "gateway" effect of health insurance; where services are available, the reassurance of being insured may embolden people to seek care, but once in the system they may be subject (by choice or otherwise) to additional charges. The fact that the "overspend" is concentrated among the wealthiest suggests that much of the additional spending is incurred by those who can best afford it. Figure 2 compares spending among those who actually use services, by insurance status and household wealth. Among the uninsured in the poorest wealth quintile, 22.2% of inpatient service users pay 10% or more of non-health spending on healthcare. That compares with 12.7% among the insured. We draw attention also to the finding, highlighted in the abstract, that poorer patients are most likely to receive entirely free inpatient care.

Whether or not this constitutes successful protection from unaffordable spending for the poorest is indeed a matter of interpretation. Our interpretation is that JKN successfully protects many of the poorest Indonesians who have access to inpatient services from excessive spending on those services. BMJ Open practices open peer review (which we very much support). The reviewer's alternative interpretation, that these data show "the scheme failed to meet its fundamental objective of protecting the insured individuals from high OOPE" stands on the public record; we respect the reviewer's understanding and welcome views about which interpretation is more appropriate in the circumstances. We have carefully deliberate and would like to maintain our own interpretation of our study findings, reflected in both the abstract and the discussion.

We have modified the abstract to clarify that our conclusions apply primarily to the poorest Indonesians (who are the main targets for the financial protection provided by JKN). We have also added the conclusion.