PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Enablers and barriers to primary health care for Aboriginal and Torres Strait Islander adolescents: Study protocol for participatory mixed-methods research that builds on WHO global standards.
AUTHORS	Ritchie, Tirritpa; Purcell, Tara; Westhead, Seth; Wenitong, Mark; Cadet-James, Yvonne; Brown, Alex; Kirkham, Renae; Neville, Johanna; Saleh, Clara; Brown, Ngiare; Kennedy, Elissa; Hennegan, Julie; Pearson, Odette; Azzopardi, Peter S

VERSION 1 – REVIEW

REVIEWER	John G. Oetzel Univ Waikato
REVIEW RETURNED	11-Feb-2021

GENERAL COMMENTS	I applaud the authors work in co-designing a study protocol for understanding enablers and barriers to primary care for Aboriginal and Torres Strait Islander adolescents. This is a very important topic and has potential to make a positive contribution to health equity for the community. I appreciate the co-construction process in identifying the needs and goals of the community for this research. That is a strength of this protocol. The study methods are clearly outlined and detailed in the protocol and supporting documents (e.g., good Tables to summarise the measures/guides and all tools are listed as well). These are appropriate to address the research objectives. I have a few points of clarification or elaboration to consider in a revised version of the manuscript: 1. In the strengths/limitations, there is a note about high-income settings. This is a bit confusing as I assume the communities are low income. Perhaps you mean within a developed nation or high-income nation? 2. As I noted, the co-design process is a great strength of this protocol. Is there a particular co-design framework that was used in this process (e.g., community-based participatory research, participatory action research, culture-centered approach, He Pikinga Waiora Implementation Framework, etc.)? Part of the reason I ask this is question is that I want to know if the co-design/co-production process will continue throughout the research project. It appears this is the case with the development of an advisory board. However, I have also seen researchers have a strong co-design process initially that doesn't carry through to the research itself with advisory boards becoming tick boxes for community engagement. I also think this is helpful given that the process of co-design is as you mention broadly generalisable, but people do need to better understand this process. A little more depth about the approach you are taking will help understand the nature of the co-design. 3. I'd like to see the final section of the manuscript elaborate more

	on the expected outcomes, particularly in terms of discussion the implications of the research relative to the extant literature and existing practice in Australia. I'd move the ethics elements into methods and call the final section Discussion and Dissemination or Dissemination and Implications. This final section can be short (1-2 pages). If you make this change, I'd make a similar change to the abstract. 4. Included in this final section might be a paragraph about study limitations—these are listed in the opening although I think they could be discussed briefly in main text as well. Minor Editorial Changes 1. Abstract—first sentence has a common splice. Should be a semi-colon or full stop. The first sentence in the main text has a similar splice. 2. Abstract—in methods culturally safe care should be culturally-safe care; continues in others places in the manuscript. Good luck with your research process.

REVIEWER	Marnie O'Bryan ANU, CAEPR
REVIEW RETURNED	14-Feb-2021

GENERAL COMMENTS	This is an important topic for investigation supported by a thorough and impressive study protocol. In relation to participant recruitment I would be interested to know the basis upon which particular communities will be selected to participate. Note Page 16, should read REDCap. I have two more significant issues to raise. The first relates to health provision for young people who transition in and out of community for boarding school. In remote Cape York, this should include most 16-18 year olds given that there is very limited access to secondary education in the region. In this regard the work of McCalman, Benveniste, Wenitong, Saunders, & Hunter '"It's all about relationships": The place of boarding schools in promoting and managing health and wellbeing of Aboriginal and Torres Strait Islander secondary school students', 2020. Children and Youth Services Review, Elsevier is relevant as a starting point. The extent to which young people currently access school based health programs (for example immunisations, sexual health education etc), and what happens to those who prematurely discontinue secondary education, has not been well explored in the literature and would be a worthy inclusion in this study. When a young person drops out of school in their early teens, who ensures that that individual has a base level of health literacy? The study above identifies school/community communication as an issue of concern. It would be helpful to build on that research by engaging with what findings mean for community based health providers in this work. Appendix A, page 3 'Prompts' would ideally include school-based health services or health services arranged by the school. Similarly, Appendix C, Key Informant interviews should potentially include a non-community based adult to reflect the health care accessed by young people who transition in and out of community for the purposes of education. The second issue relates to dental care. Given the connection between dental health and other medical conditions, it would be interesting to include questions about the accessibility of dental care

	in the target communities, although the barriers and enablers for dental care may be distinct.

VERSION 1 – AUTHOR RESPONSE

Comments	Response
Reviewer 2	
I applaud the authors work in co-designing a study protocol for understanding enablers and barriers to primary care for Aboriginal and Torres Strait Islander adolescents. This is a very important topic and has potential to make a positive contribution to health equity for the community. I appreciate the co-construction process in identifying the needs and goals of the community for this research. That is a strength of this protocol. The study methods are clearly outlined and detailed in the protocol and supporting documents (e.g., good Tables to summarise the measures/guides and all tools are listed as well). These are appropriate to address the research objectives. I have a few points of clarification or elaboration to consider in a revised version of the manuscript:	Thank you.
In the strengths/limitations, there is a note about high-income settings. This is a bit confusing as I assume the communities are low income. Perhaps you mean within a developed nation or high-income nation?	Thank you. This has been corrected: Adaptation of WHO guidelines and tools (global standards) for use with Indigenous adolescents in a high-income *nation*
As I noted, the co-design process is a great strength of this protocol. Is there a particular co-design framework that was used in this process (e.g., community-based participatory research, participatory action research, culture-centered approach, He Pikinga Waiora Implementation Framework, etc.)? Part of the reason I ask this is question is that I want to know if the co-design/co-production process will continue throughout the research project. It appears this is the case with the development of an advisory board. However, I have also seen researchers have a strong co-design process initially that doesn't carry through to the research itself with advisory	Thank you. The co-designed project will utilise a Participatory Action Research (PAR) approach, which has been widely used in Aboriginal and Torres Strait Islander health research. We have added the following detail in the text: To ensure meaningful partnership and co-design across this project we will adopt a *Participatory Action Research* (PAR) approach. (Baum, 2006) PAR enables power to be shared between the participating communities and the research team, and its iterative approach of data collection and reflection is focussed on developing actions which,

boards becoming tick boxes for community engagement. I also think this is helpful given that the process of co-design is as you mention broadly generalisable, but people do need to better understand this process. A little more depth about the approach you are taking will help understand the nature of the co-design.	in this case, are to strengthen primary health care. Baum F, MacDougall C, Smith D. Participatory action research. J Epidemiol Community Health 2006; 60(10): 854-7.
I'd like to see the final section of the manuscript elaborate more on the expected outcomes, particularly in terms of discussion the implications of the research relative to the extant literature and existing practice in Australia. I'd move the ethics elements into methods and call the final section Discussion and Dissemination or Dissemination and Implications. This final section can be short (1-2 pages). If you make this change, I'd make a similar change to the abstract. Included in this final section might be a paragraph about study limitations—these are listed in the opening although I think they could be discussed briefly in main text as well.	Thank you. We had followed the guidelines for a protocol publication (https://bmjopen.bmj.com/pages/authors/#protocol) which does not include a discussion of the implications- we do agree with the reviewer however that some brief statements around implications makes an important contribution and so have added these. We have kept the rest of the document structure as recommended by the guidelines but have now split the last section (ethics and dissemination) into a section on ethics (unchanged) and a new, expanded section on dissemination and implications. The implications of this project are substantial with strengthened primary care for young people having the potential to improve population health and health inequities. Adolescents represent a third of the Aboriginal and Torres Strait Islander population, and their health needs are substantial and largely unmet. Improving health at this time of life, particularly when young people are establishing their identity, transitioning from education to employment, and developing new relationships has the potential for long-lasting impacts. Through strengthened primary care there is also the potential to identity and address health risks that typically emerge during adolescence, including obesity and risky substance use that determine non-communicable diseases in adult life, key drivers of premature mortality for Indigenous Australians. There is also the potential to strengthen health care when young people may be starting to have children, assuring the best start to life for the next generation.
Abstract—first sentence has a common splice. Should be a semi-colon or full stop. The first	Thank you. This has been addressed.

sentence in the main text has a similar splice.	
Abstract—in methods culturally safe care should be culturally-safe care; continues in others places in the manuscript.	Thank you. This has been addressed.
Reviewer 2	
This is an important topic for investigation supported by a thorough and impressive study protocol. In relation to participant recruitment I would be interested to know the basis upon which particular communities will be selected to participate.	Thank you. We have detailed how communities will be selected in section b of the methods: *The community partners are to be purposively selected by Apunipima taking into consideration: competing demands on the community and/or service; community priorities and readiness to focus on adolescent health; and ability of the research team to travel to the community (relating to seasonal access).* As the sequencing of the project has been adapted due to the COVID-19 pandemic, early results from activities exploring the supply side enablers and barriers to care may also be used to identify priority communities for the in-depth research. This detail is included in section d of the methods: *We will also review routinely collected administrative data across all 11 communities; on reflection this sequencing may help identify communities to invite to partner in the research which we plan for early 2021 once travel is possible.*
Note page 16, should read REDCap.	Thank you. This has been addressed.
I have two more significant issues to raise. The first relates to health provision for young people who transition in and out of community for boarding school. In remote Cape York, this should include most 16-18 year olds given that there is very limited access to secondary education in the region. In this regard the work	Thank you for this important comment. The importance of understanding how best to provide health care for young people who transition in and out boarding schools is something that we discussed as length as a team. We had also discussed that some young people may access health care from other services not managed by

of McCalman, Benveniste, Wenitong, Saunders, & Hunter '"It's all about relationships": The place of boarding schools in promoting and managing health and wellbeing of Aboriginal and Torres Strait Islander secondary school students', 2020. Children and Youth Services Review, Elsevier is relevant as a starting point. The extent to which young people currently access school based health programs (for example immunisations, sexual health education etc), and what happens to those who prematurely discontinue secondary education, has not been well explored in the literature and would be a worthy inclusion in this study. When a young person drops out of school in their early teens, who ensures that that individual has a base level of health literacy? The study above identifies school/community communication as an issue of concern. It would be helpful to build on that research by engaging with what findings mean for community based health providers in this work. Appendix A, page 3 'Prompts' would ideally include school-based health services or health services arranged by the school. Similarly, Appendix C, Key Informant interviews should potentially include a non-community based adult to reflect the health care accessed by young people who transition in and out of community for the purposes of education.	Apunipima. Taking this all into consideration we decided as a team to focus this work on strengthening the services that Apunipima is responsible for, with the hope that this work may provide a platform for then strengthening care provided through other services, including schools. Our inquiry with young people is qualitative. We ask young people to identify the issues that are of priority to them, and the services available to support their health. We have now added in a specific prompt around schools to ensure that this important issue is explored. The in-depth research is being conducted in partnership with communities, and hence at this stage we have focussed the KIIs within communities. It is a good suggestion however to consider undertaking a KII with adults outside the community- this will be discussed and agreed with the community advisory group once these partner communities have been decided.
The second issue relates to dental care. Given the connection between dental health and other medical conditions, it would be interesting to include questions about the accessibility of dental care in the target communities, although the barriers and enablers for dental care may be distinct.	Thank you. Agree this is an area of interest- there are also many other areas of interest we could explore! Our inquiry with young people is qualitative. We ask young people to identify the issues that are of priority to them using the visual participatory method of body mapping. It will be of great interest to see what issues are identified (and those that are not).
Editor(s)' Comments to Author	

Please revise the 'Strengths and limitations' section of your manuscript (after the abstract). This section should contain five short bullet points, no longer than one sentence each, that relate specifically to the methods. The aims or expected impact of the study should not be summarised here.	Thank you. This section has been addressed.