PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Building capacity for the use of systems science to support local government public health planning: a case study of the VicHealth Local Government Partnership in Victoria, Australia
AUTHORS	O'Halloran, Siobhan; Hayward, Joshua; Strugnell, Claudia; Felmingham, Tiana; Poorter, Jaimie; Kilpatrick, Stephanie; Fraser, Penny; Needham, Cindy; Rhook, Ebony; DeMaio, Alessandro; Allender, Steven

VERSION 1 – REVIEW

REVIEWER	Karla Canuto Flinders University, Rural and Remote - NT
REVIEW RETURNED	11-Oct-2022

GENERAL COMMENTS	This is a well-written, interesting paper that will contribute positively to the literature. I just have a couple of suggestions for the authors to consider. 1) The limitations discussed in the discussion don't include the limitations of this study. These should be discussed clearly, not just the limitation of existing evidence. 2) Suggested edit to wording in the discussion (p14). "These types of approaches also look promising in rural Aboriginal and Torres Strait Islander communities." The wording was a little awkward.

REVIEWER	Pippa McKelvie-Sebileau The University of Auckland, School of Population Health
REVIEW RETURNED	23-Oct-2022

GENERAL COMMENTS	Main comments Thank you for the opportunity to review this interesting work on building systems thinking and group model building facilitation capacity in local government staff. The partnership described between researchers, local government and community is a useful and potentially powerful model to effect change. The manuscript is well written and apart from the minor comments listed at the end, I have only two main comments to consider. In the objective the purpose of this study is described as 'to present as approach to build capacity'; a qualitative study. I wonder if it would be more clear to state that this is a methodological study, or a feasibility study, rather than to utilise the traditional structure of intro, methods, results and discussion. The results section is very short and could in essence be combined into the methods. However, if the purpose was to evaluate whether the proposed methodology was useful, or effective, (or another qualifier), this should also be clearly stated and the results and discussion should reflect this.

	In addition, at times in the manuscript it could be more clearly described which phase is being described – the training phase to build LG capacity (Block one?); or the GMB phase (block two?). For example, the main outcomes in the abstract describe phase 2 first, then phase 1. Results and interpretation should be clearly described as interpretation of the feasibility of capacity building OR the effectiveness of GMB facilitated by LG staff. These are the two main questions covered in the research and they should both be discussed. Intro – no comments Methods The wording 'Council core facilitation teams… delivered GMB to groups of community stakeholders from each of the 13 partner councils' is confusing as it looks like the stakeholders were from the council. Could you just say district? Council area? How were the stakeholders chosen? Later on you mention 'council stakeholders' when it would be clearer to use community stakeholders throughout. This relates to earlier comment to carefully distinguish phase 1: training council staff from phase 2 council staff (and others) using newly developed systems thinking skills to deliver community workshops. Please indicate how the 13 councils were selected. Please give more explanation on CLDs were deidentified as not all readers will be familiar with this terminology Were the community GMB online too, or just the training? Patient and public involvement – were the public not involved in the GMB workshops? Please provide more information about how community stakeholders were identified and selected for GMB Results – Please see earlier comments about the framing of this paper. Please mention GMB in the results. Eg. Did all 13 council sites host 3 GMB workshops? How many people in total participated in these workshops? Discussion It would be useful to comment on the acceptability of this training for local government staff. The first part of your article is really about feasibility – can LG staff be trained to deliver GMB? The fact they did seems to answer that question positively, but there is little discussion on the acceptability and perceived utility. There is also little comment on the community perceptions of participating in GMB that was developed and led by LG staff from the community, rather than by researchers (who may often be from outside the community). This seems an especially important point to make, particularly with regard to acceptability for Indigenous communities. It would be useful to discuss whether LG are the right people to be involved in health promotion work. For this paper to be useful to others involved in similar work it may also be useful to discuss the potential 'gaps in knowledge' as participants progressed from workshop training to facilitation. What are the learnings that could be shared? Future studies – could you give context to user interface and user experience? I assume this refers to the training process using STICKE and delivering online but it's a bit of a jump for the reader. Minor comments Abstract – add context of Victoria, Australia to abstract -Add actions developed to abstract if possible -Abstract, Results: revise phrase: "Overall, 110 local

	government…participating in…" -"…participated in training in CBSD to develop causal loop diagrams, with stakeholders…" This is an example where the wording could be clearer to indicate 'staff participated in training in CBSD to deliver GMB workshops with…. Across 13 sites. All 13 council groups developed CLDs…" Methods VLGP – define acronyms when used as subheadings Specify how many councils applied (from whom 16 were selected) Provides support to the 13 fully participating councils? (specify fully participating) Typo - Including gender equity in council spot and recreation policy Change adoption to adopting "Adoption tobacco control actions to protect children and young people" Couple of full stops missing

REVIEWER	Alexia Sawyer University of Cambridge
REVIEW RETURNED	03-Nov-2022

GENERAL COMMENTS	This well-written article could be a welcome addition to the literature. It describes a considerable amount of work with local municipalities in Victoria, Australia, documenting a very impressive application of systems thinking in public health. In terms of the specific contribution made by this paper, I hope the suggestions below could help to evidence the effectiveness of the outlined training programme and translate this work into a practicable approach which could be implemented by others. Abstract: Locally tailored action plans are discussed in the main outcomes section and from reading the abstract, one might expect them to be presented as a way to demonstrate the value of the CLDs and effectiveness of the training. I believe these are actually the subject of forthcoming publications (page 14 lines 218-220)? Results addressing research question or objective: A framework is mentioned at the end of the Introduction as the objective of the paper but it is not referred to again. I expected the presentation of a framework which would guide others in replicating this process in a structured way. It is perhaps possible for the reader to piece together a framework using Table 1 and the narrative description of the approach taken, but a more formalised framework would be useful. I expected measures of capacity building to be used to address the study objective. Although participation in the training, holding GMB workshops and producing a CLD indicates capacity building, it should be discussed whether these measures are sufficient to scrutinise the effectiveness of this approach in establishing participants' "knowledge and understanding of systems theories, tools and practice" (as stated in the conclusion). I believe the cited paper by Brown et al. (2022) includes variables which could be used to assess capacity building. If it was not possible/desirable to use similar variables to assess capacity building in this paper, this should be discussed and potentially noted as a limitation. If the authors do use participation in training, conducting GMB workshops and producing CLDs as key assessments of capacity for systems thinking, is there additional information that could be

	presented? As readers, we aren't able to assess the standard of the CLDs - is it possible to add to the analysis of the "range and scope" (line 234-236) the CLDs, for example assessing the extent to which they adhere to typical conventions? Is it possible to present results relating to Table 3, to report on the number of participants in GMB workshops and whether/which workshop objectives were met? While a clear account of the training is provided, I would appreciate more insight into the conditions needed for this training to take place and be effective. Are there conditions which led to the implementation of this training as part of VLGP and ensured good participation; might these conditions be generalisable? Articulating such conditions as part of a framework would be valuable. Strengths and limitations: It's stated that "This paper shows that there is an opportunity [...] for stakeholder informed actions to enhance the health and wellbeing of youth." It's not clear how this is demonstrated in the results of this paper. Instead, I think it is meant to read something like: "become systems thinkers in order to develop stakeholder informed actions...". A key limitation is described on page 18 lines 302-306: because measures of capacity weren't used, we don't know how effective the training was in teaching participants key skills and knowledge needed to apply systems thinking. This limitation should be repeated in the strengths and limitation section. Additional comments on the text: Page 6 lines 81-84: I think it is more accurate to say "more likely to succeed". A short definition would be welcome for "whole-of-community approaches" / "whole-of-community systems-based prevention trials". Table 1: should read "council sport" not "council spot". Page 12 line 181: full stop missing after MPHWP. Page 13 line 205: should read "of a CLD" not "of CLD". Page 14 line 211: What is meant by "de-identified"? Anonymised? Figure 1: It is not possible to read any text in the CLD in the current formatting. Page 16-17 lines 275-280: I'm afraid I struggle to understand this sentence. Page 18 lines 308-311: please check this sentence, should it read "more efficient"? References: Could add the 2022 WHO guidance: Systems thinking for noncommunicable disease prevention policy. Ref 25 Brown, Whelan, Bolton - this reference is missing "et al."

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Dr. Karla Canuto, Flinders University, South Australian Health and Medical Research Institute Limited
Comments to the Author:
This is a well-written, interesting paper that will contribute positively to the literature. I just have a couple of suggestions for the authors to consider.

1) The limitations discussed in the discussion don’t include the limitations of this study. These should be discussed clearly, not just the limitation of existing evidence.
Page 17 Please refer to limitations of the study which has been amended.

2) Suggested edit to wording in the discussion (p14). "These types of approaches also look promising in rural Aboriginal and Torres Strait Islander communities." The wording was a little awkward.
Page 16 Lines 301-302 now reads: These types of systems thinking approaches may also support First Nation rural communities

Reviewer: 2 [SEE ATTACHED FILE]
Dr. Pippa McKelvie-Sebileau, The University of Auckland, Eastern Institute of Technology Comments to the Author:
Please see file for question on whether ethics was required for community GMB workshops
Thank you for your comment. The authors were not involved in the recruitment of the stakeholders or participant consent for the GMB workshops. Our role was to provide the training for the VLGP council facilitation teams and the structured support e.g., Connecting the Dots team comprising of regional advisors and academic and practitioner experts. We have ethics approval to use the council held records (the CLDs, action ideas and workshop participant data) from their work within VLGP and their Municipal Health and Wellbeing Plan commitments. Please refer to page 20.

In the objective the purpose of this study is described as 'to present as approach to build capacity'; a qualitative study. I wonder if it would be more clear to state that this is a methodological study, or a feasibility study, rather than to utilise the traditional structure of intro, methods, results and
discussion. The results section is very short and could in essence be combined into the methods.
However, if the purpose was to evaluate whether the proposed methodology was useful, or effective, (or another qualifier), this should also be clearly stated and the results and discussion
should reflect this.
Thank you for your suggestion regarding the study design. We have added Table 4 (Total number of participants who attended the Group Model Building workshops from the 13 partner local government authorities) to the results section and provided some examples of the action ideas. Whilst generating CLD is a qualitative approach we now consider the paper to be more accurately described as a case study design.
The objective of our paper was to describe an approach to build capacity for the use of systems science to support local communities in municipal public health and wellbeing planning. In the methods section we have described how we did this (training of council facilitation teams and delivery of GMBs to stakeholders), in the results section we have included an example of a CLD which was generated by stakeholders from one of the 13 partner councils and in the discussion, we have explained how stakeholders identified action ideas for the communities to enhance the health and wellbeing of children and young people.

In addition, at times in the manuscript it could be more clearly described which phase is being described – the training phase to build LG capacity (Block one?); or the GMB phase (block two?). For example, the main outcomes in the abstract describe phase 2 first, then phase 1.
The abstract now reads: Training in CBSD was conducted with council facilitation teams in 13 LGAs, followed by the local delivery of GMB workshops 1-3 to community stakeholders. Causal loop diagrams (CLD) representing localised drivers of mental wellbeing, healthy eating, active living or general health and wellbeing of children and young people were developed by community stakeholders. Locally tailored action ideas were generated such as developing an open space and active transport strategy, identification of gaps in sexual and reproductive health services.

Results and interpretation should be clearly described as interpretation of the feasibility of capacity building OR the effectiveness of GMB facilitated by LG staff. These are the two main questions covered in the research and they should both be discussed.
Thank you for your comment. Feasibility and effectiveness were not our research questions for this study although we think this would be an interesting focus for another paper. As noted in our manuscript there will be forthcoming publications. The objective of our paper was to present one approach to increase systems thinking capacity at the local government level e.g., the extensive training of employees in community-based systems dynamics and providing a high level of support from the regional advisors and expert academics and practitioners. As noted in our manuscript, the council facilitation teams were able to engage community stakeholders to cocreate CLDs which

showed the interconnected determinants of health and wellbeing and the development of locally tailored action ideas.

Intro – no comments

Methods
The wording 'Council core facilitation teams… delivered GMB to groups of community stakeholders
from each of the 13 partner councils' is confusing as it looks like the stakeholders were from the
council. Could you just say district? Council area?
Page 11 Lines 205-206 now reads: Council core facilitation teams delivered at least three participatory GMB workshops of ~1-3 hours to groups of community stakeholders from each of the 13 partner LGAs
The authors were not involved in the recruitment process. This was undertaken by the partner councils. The general recruitment process based on our previous experience with community-wide (we suggest you refer to a number of our publications including https://pubmed.ncbi.nlm.nih.gov/35544522/ for more details).
Page 11 lines now reads: Stakeholders were recruited by partner councils through existing networks, emails expressions of interest and advertisements.

Later on you mention 'council stakeholders' when it would be clearer to use community stakeholders throughout. This relates to earlier comment to carefully distinguish phase 1: training council staff from phase 2
council staff (and others) using newly developed systems thinking skills to deliver community workshops.
Page 14 line 257 now reads: All councils successfully created CLDs (Figure 1), with community stakeholders

Please indicate how the 13 councils were selected.
We have confirmed with VicHealth on the process for the partnership and re-worded.
Page 6 Line 137-139 now reads: The 21 submitted applications then underwent a scoring process, followed by a VicHealth assessment panel discussion. Of the 21 council applications, 16 were selected to take part in the partnership, with three in a modified partnership arrangement, which allowed one of the VLGP foundation modules to be omitted from their programme.

Please give more explanation on CLDs were deidentified as not all readers will be familiar with this
Terminology
This line has now been removed.

Were the community GMB online too, or just the training?
Page 13 lines 246-247 now reads: Workshops 1-3 were delivered face to face and online (due to COVID-19, and travel restrictions).

Patient and public involvement – were the public not involved in the GMB workshops?
Thank you for your comment. As per BMJ Open submission guidelines:
"*Authors must include a Patient and Public Involvement statement in a subsection within the Methods section of their papers.* ***We define patient and public involvement in research as involvement from patients or members of the public in the design, or conduct, or reporting, or dissemination plans of the research. This is distinct from patients and the public being participants in the research****. The statement should make the nature and extent of their involvement in the research clear."*

Please provide more information about how community stakeholders were identified and selected for GMB
Please see earlier response to stakeholder recruitment. In addition, the authors were not involved in stakeholder recruitment. This was carried out by the VLGP partner councils.

Results –

Please see earlier comments about the framing of this paper.
Please see earlier response.

Please mention GMB in the results. Eg. Did all 13 council sites host 3 GMB workshops?
Page 13 lines 247-249 now reads: All 13 partner councils hosted the GMB workshops 1-3. In some instances, workshops were combined e.g., workshop 1 combined with workshop 2 delivered together as one session (due to time constraints and capacity of council staff).

How many people in total participated in these workshops?
Page 13 lines 239 – 243 now reads: In some instances, workshops were combined e.g., workshop 1 combined with workshop 2 and delivered together as one session. Most workshops included either young people or stakeholders with the exception of workshop 3 which also included young people and stakeholders together (Table 4).
We have also included Table 4 which shows the total of number of participants per workshop.

Discussion
It would be useful to comment on the acceptability of this training for local government staff. The
first part of your article is really about feasibility – can LG staff be trained to deliver GMB? The fact
they did seems to answer that question positively, but there is little discussion on the acceptability
and perceived utility.
Thank you for your suggestion. It would be interesting to describe the acceptability and perceived utility of the training for government staff and this could be the focus of another study. An example is one by our colleague who conducted interviews with practitioners who applied systems thinking as part of the Heathy Together Victoria initiative. https://pubmed.ncbi.nlm.nih.gov/31959000/

There is also little comment on the community perceptions of participating in
GMB that was developed and led by LG staff from the community, rather than by researchers (who may often be from outside the community).
Thank you for your comment. Community perceptions is out of the scope of this paper, but we would like you to consider previous work by our team in this space that includes a 'Community Readiness to Change' (RTC) tool applied during our interventions, an example is 'It's your Move'.
https://pubmed.ncbi.nlm.nih.gov/23485797/
However, for the purposes of this paper the authors were engaged to build capacity within communities by training council teams in systems science. It is possible that councils have collected data from communities around this the topic that could be used for a future publication. In addition, the CBSD through the series of GMB workshops, allows stakeholders to describe complex problems through their own perspective through the development of CLDs, followed by identifying corresponding solutions/actions.
This seems an especially important point to make, particularly with regard to acceptability for Indigenous communities.
We agree that it is important to have the support of local communities and encourage you to consider our team's work in First Nations communities in Australia using CBSD:
https://pubmed.ncbi.nlm.nih.gov/34355056/

It would be useful to discuss whether LG are the right people to be involved in health promotion work.
Thank you for your comment. We have noted in our introduction that local governments are ideal settings for systems-based approaches due to council's wide ranging regulatory remit. We have also noted that Public Health England (UK government agency) has embedded systems approaches at the local government level to address obesity.
The VLGP involved VicHealth funded project officers based at the local councils had either previous experience in health promotion or formal qualifications in the health promotion field. Other studies that the authors have been involved with for >20 years at local government level have included Healthy Together Victoria (https://pubmed.ncbi.nlm.nih.gov/31999857/); GenR8 Change (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9094504/) WHOSTOPs (https://pubmed.ncbi.nlm.nih.gov/33950583/) to name a few.

For this paper to be useful to others involved in similar work it may also be useful to discuss the
potential 'gaps in knowledge' as participants progressed from workshop training to facilitation. What are the learnings that could be shared?
Thank you for you comment. We consider that we have addressed the possible gaps in the knowledge: "*A key knowledge gap is the quality and effectiveness of the training materials used in the delivery of systems thinking facilitation, teaching of specific skills and knowledge, the training methods and participant's use of the online platform. For example, it is unknown if there were gaps in participants' knowledge as they progressed from workshop training to systems thinking facilitation*."
We do not know if there were knowledge gaps, so it is difficult to share what has been learned. However, a colleague has explored this in a qualitative study where participants from Healthy Together Victoria were interviewed. We have now included this as a reference in our manuscript. https://pubmed.ncbi.nlm.nih.gov/34104934/

Future studies – could you give context to user interface and user experience? I assume this refers to the training process using STICKE and delivering online but it's a bit of a jump for the reader.
Page 18 lines 366 now reads: What should the user interface and user experience look like? For example, could gamification, where the use of game thinking in a non-game context to engage users and to solve problems, be included as part of the systems thinking toolkit?

Minor comments
Abstract – add context of Victoria, Australia to abstract
Page 2 Lines 30-31 now reads:
Setting: Local government authorities participating in the VicHealth Local Government Partnership Victoria, Australia.

Add actions developed to abstract if possible
Page 2 lines 40-43 now reads: Locally tailored action ideas were generated such as wellbeing classes in school, faster active transport and access to free and low cost sporting programmes.

-Abstract, Results: revise phrase: "Overall, 110 local government…participating in…"
-"…participated in training in CBSD to develop causal loop diagrams, with stakeholders…"
This is an example where the wording could be clearer to indicate 'staff participated in training in CBSD to deliver GMB workshops with…. Across 13 sites. All 13 council groups developed CLDs…"
Page 3 Lines 46-51 now reads: Overall, 111 local government staff participated in CBSD training. Thirteen CLDs were developed, with the stakeholders that included children, young people and community members, who had participated in the GMB workshops across all 13 council sites. Workshop 3 had the highest total number of participants (n=301), followed by workshop 1 (n=287) and workshop 2 (n=171).

Methods
VLGP – define acronyms when used as subheadings
Page 6 line 132 now reads:
VicHealth Local Government Partnership overview and modules

Specify how many councils applied (from whom 16 were selected)
Page 7 Lines 138-139 now reads:
Of the 21 council applications, 16 were selected to take part in the partnership, with three in a modified partnership arrangement, which allowed one of the VLGP foundation modules to be omitted from their programme.

Provides support to the 13 fully participating councils? (specify fully participating)
Page 7 Lines 142-144 Reads The VLGP provides support to the 13 partner councils to develop and deliver evidence-based action to improve children and young people's health and wellbeing through the mechanism of councils' Municipal Public Health and Wellbeing Plans (MPHWP). 'Fully participating' was not included.

Typo - Including gender equity in council spot and recreation policy
Table 1 – typo corrected to ‘sport’.

Change adoption to adopting “Adoption tobacco control actions to protect children and young people”
Table 1 – typo corrected to ‘adopting’.

Couple of full stops missing
Full stops added

Reviewer: 3
Dr. Alexia Sawyer, University of Cambridge Comments to the Author:
This well-written article could be a welcome addition to the literature. It describes a considerable amount of work with local municipalities in Victoria, Australia, documenting a very impressive application of systems thinking in public health. In terms of the specific contribution made by this paper, I hope the suggestions below could help to evidence the effectiveness of the outlined training programme and translate this work into a practicable approach which could be implemented by others.

Abstract: Locally tailored action plans are discussed in the main outcomes section and from reading the abstract, one might expect them to be presented as a way to demonstrate the value of the CLDs and effectiveness of the training. I believe these are actually the subject of forthcoming publications (page 14 lines 218-220)?
Page 2 lines 40-43 now reads: Locally tailored action ideas were generated such as wellbeing classes in school, faster active transport and access to free and low-cost sporting programmes
Page 14 lines 268 – 270 An example of a council CLD with five themes (e.g., relationships, physical activity) and nine action ideas (e.g., wellbeing classes in school, faster transportation, access to free and low-cost sporting programmes) identified by communities stakeholders is shown in Figure 1

Results addressing research question or objective:
A framework is mentioned at the end of the Introduction as the objective of the paper but it is not referred to again. I expected the presentation of a framework which would guide others in replicating this process in a structured way. It is perhaps possible for the reader to piece together a framework using Table 1 and the narrative description of the approach taken, but a more formalised framework would be useful.
Thank you for your suggestion. We have now summarised the CtD framework as a supplemental material file.
I expected measures of capacity building to be used to address the study objective. Although participation in the training, holding GMB workshops and producing a CLD indicates capacity building, it should be discussed whether these measures are sufficient to scrutinise the effectiveness of this approach in establishing participants' "knowledge and understanding of systems theories, tools and practice" (as stated in the conclusion). I believe the cited paper by Brown et al. (2022) includes variables which could be used to assess capacity building. If it was not possible/desirable to use similar variables to assess capacity building in this paper, this should be discussed and potentially noted as a limitation.
Thank you for your comment. We believe our statement in the conclusion “*This paper has provided an example of establishing the capacity of a government workforce by developing their knowledge and understanding of systems theories tools and practice knowledge and understanding of systems theories, tools and practice*" is correct as evidenced by the generation of CLDs from the 13 partner councils. Scrutinising our capacity building similar to the Theory of Change described by Brown et al is beyond the scope of this paper. However, we would like to explore this topic more in a future publication.
Our limitations now reads: A key limitation is the assessment of knowledge gap is the quality and effectiveness of the training materials used in the delivery of systems thinking facilitation, teaching of specific skills and knowledge, the training methods and participant’s use of the online platform. For example, it is unknown if there were gaps in participants’ knowledge as they progressed from workshop training to systems thinking facilitation.

If the authors do use participation in training, conducting GMB workshops and producing CLDs as key assessments of capacity for systems thinking, is there additional information that could be presented? As readers, we aren't able to assess the standard of the CLDs - is it possible to add to the analysis of the "range and scope" (line 234-236) the CLDs, for example assessing the extent to which they adhere to typical conventions? Is it possible to present results relating to Table 3, to report on the number of participants in GMB workshops and whether/which workshop objectives were met?
Thank you for you comment. For the purposes of this paper, we do not believe there is any additional information that could be presented as assessments of capacity for systems thinking. However we have now included:
Page 14 lines 263- 267 now reads: For example, each council's CLD included the typical elements of a CLD: variables (determined by stakeholders as influencing the health and wellbeing of children and young people in the community e.g., junk food), the connections between the variables, actions (e.g., banning sugary drinks from sporting clubs) and overarching themes.
We have also included Table 4 Total number of participants who attended the Group Model Building workshops from the 13 partner local government authorities. We consider that the workshop objectives have been met as at the completion of GMB 3, each council produced a finalised version of their CLD.

While a clear account of the training is provided, I would appreciate more insight into the conditions needed for this training to take place and be effective. Are there conditions which led to the implementation of this training as part of VLGP and ensured good participation; might these conditions be generalisable? Articulating such conditions as part of a framework would be valuable.
Thank you for your comment. Pivoting to online learning due to Covid restrictions and/or working from home ensured good participation in the training. Furthermore, a well-structured training manual that was written by our CtD team and based on a similar format to our previous community-based interventions allowed for the training to be standardised across the 13 partner councils. We have now added this to our strengths section on page 17.

Strengths and limitations: It's stated that "This paper shows that there is an opportunity [...] for stakeholder informed actions to enhance the health and wellbeing of youth." It's not clear how this is demonstrated in the results of this paper. Instead, I think it is meant to read something like: "become systems thinkers in order to develop stakeholder informed actions...".
Page 3 lines 60-62 now reads: We trained a novice labour force to become systems thinkers to develop community stakeholder informed actions to improve the health and wellbeing of youth.

A key limitation is described on page 18 lines 302-306: because measures of capacity weren't used, we don't know how effective the training was in teaching participants key skills and knowledge needed to apply systems thinking. This limitation should be repeated in the strengths and limitation section.
Page 3 lines 64-65 now reads: It is unknown if there were gaps in council facilitation teams' knowledge as they progressed from workshop training to systems thinking facilitation.

Page 17 lines 341-345 now reads: A key limitation is the assessment of the quality and effectiveness of the training materials used in the delivery of systems thinking facilitation, teaching of specific skills and knowledge, the training methods and participant's use of the online platform. For example, it is unknown if there were gaps in participants' knowledge as they progressed from workshop training to systems thinking facilitation

Additional comments on the text:
Page 6 lines 81-84: I think it is more accurate to say "more likely to succeed". A short definition would be welcome for "whole-of-community approaches" / "whole-of-community systems-based prevention trials".
Thank you for the suggestion. We think the term 'whole-of-community' has been used throughout the current literature and as such doe does not require a definition. However, we have included a reference (Allender S, Millar L, Hovmand P, et al. Whole of Systems Trial of Prevention Strategies for Childhood Obesity: WHO STOPS Childhood Obesity. *Int J Environ Res Public Health* 2016;13)
.

Page 5 lines 94-95 now reads: Several examples of whole-of-community systems-based prevention trials (communities randomised to intervention or control [15]) exist in the literature at a multi-community scale .

Table 1: should read "council sport" not "council spot".
Page 12 line 181: full stop missing after MPHWP.
Page 13 line 205: should read "of a CLD" not "of CLD".
Above has been edited.

Page 14 line 211: What is meant by "de-identified"? Anonymised?
This line has now been removed.

Figure 1: It is not possible to read any text in the CLD in the current formatting.
Thank you. We have now included a better example of a CLD with clearer formatting.

Page 16-17 lines 275-280: I'm afraid I struggle to understand this sentence.
Page 16 Lines 310-317 now reads:
This project shows that providing capacity building in systems thinking, , can support council staff to access and apply knowledge from Deakin University's >20 years' experience in complex systems thinking and community-based obesity prevention [26, 28-30.]. We observed that the strong organisational and structural factors such as researcher support and regional advisors who provided continued support allowed the novice council facilitation teams to build confidence while developing their practical know-how for systems thinking in the community setting.

Page 18 lines 308-311: please check this sentence, should it read "more efficient"?
Page 16 line 320 should read 'efficient'.
Page 16 line 309 now reads: and appears to be efficient in facilitating GMB rather than in person

References: Could add the 2022 WHO guidance: Systems thinking for noncommunicable disease prevention policy.
Thank you for the suggestion. WHO ref is now included as reference 14.

Ref 25 Brown, Whelan, Bolton - this reference is missing "et al."
Ref 25 now amended.

VERSION 2 – REVIEW

REVIEWER	Pippa McKelvie-Sebileau The University of Auckland, School of Population Health
REVIEW RETURNED	24-Nov-2022

GENERAL COMMENTS	The authors have appropriately addressed all of the comments raised during review.

REVIEWER	Alexia Sawyer University of Cambridge
REVIEW RETURNED	08-Dec-2022

GENERAL COMMENTS	Thank you for addressing my previous comments. I have no further major comments or suggestions. Typos and minor comments: Line 93: Please write out Group Model Building as it is the first use in the main text. Lines 188-190: Suggest you re-word as it's currently complicated with the double use of 'comprising'/'comprised'; should read 'comprising' rather than 'comprising of' Line 216: comma after 'Together' Line 227: Please state the contents of supplemental file 1.

	Line 296-297: please use acronym 'GMB' for consistency. Line 305: I had to read this sentence a couple of times, a comma after 'practice' might help.

VERSION 2 – AUTHOR RESPONSE

Reviewer: 3

Dr. Alexia Sawyer, University of Cambridge Comments to the Author:

Thank you for addressing my previous comments. I have no further major comments or suggestions.

Typos and minor comments:

Line 93: Please write out Group Model Building as it is the first use in the main text.

Line 82 page 4 This now reads ‘Group Model Building (GMB)

Lines 188-190: Suggest you re-word as it's currently complicated with the double use of 'comprising'/'comprised'; should read 'comprising' rather than 'comprising of'

Lines 177 page 9 This now reads ‘comprising academic and practitioner experts’

Line 216: comma after 'Together'

Line 205 page 11 a comma has been added after ‘Together’

Line 227: Please state the contents of supplemental file 1.

Line 216 page 12 now reads: see online supplemental file 1 for a summary of the Connecting the Dots framework.

Line 296-297: please use acronym 'GMB' for consistency.

Line 283 page 15 has been changed to GMB.

Line 305: I had to read this sentence a couple of times, a comma after 'practice' might help.

Line 291 page 15 a comma has been added after ‘practice’