

Responsibility for evidence-based policy in cardiovascular disease in rural communities: implications for persistent rural health inequalities

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Abstract.

Objective. The aim of this study was to understand, from the perspective of policy makers, who holds the responsibility for driving evidence-based policy to reduce the high burden of cardiovascular disease (CVD) in rural Australia.

Methods. Qualitative interviews were conducted with policy makers at the local, state and federal government levels in Australia ($n = 21$). Analysis was conducted using the Conceptual Framework for Understanding Rural and Remote Health to understand perceptions of policy makers around who holds the key responsibility in driving evidence-based policy.

Results. At all levels of government, there were multiple examples of disconnect in the understanding of who is responsible for driving the generation of evidence-based policy to reduce CVD in rural areas. Policy makers suggested that the rural communities themselves, health services, health professionals, researchers and the health sector as a whole hold large responsibilities in driving evidence-based policy to address CVD in rural areas. Within government, there was also a noticeable disconnect, with local participants feeling it was the federal government that held this responsibility; however, federal government participants suggested this was largely a local government issue. Overall, there seemed to be a lack of responsibility for CVD policy, which is reflected in a lack of action in rural areas.

Conclusion. There was a lack of clarity about who is responsible for driving evidence-based policy generation to address the high burden of CVD in Australia, providing one possible explanation for the lack of policy action. Clarity among policy makers over shared roles and leadership for policy making must be addressed to overcome the current burden of CVD in rural communities.

What is known about the topic? Rural health inequalities, such as the increased burden of CVD in rural Australia are persistent. Such health inequalities are unjust, with global theory suggesting political processes have facilitated, in part, the inequalities. With similar examples observed internationally in rural areas, little is known about the influence of the perspectives of policy makers regarding who is responsible for addressing health issues in rural areas, in the government context.

What does this paper add? This paper provides empirical evidence, for all levels of government in Australia, that there is a lack of clarity in policy roles and responsibilities to address the unequal burden of CVD in rural Australia, at all levels of government. The paper provides evidence to support the urgent need for clarity within government around policy stakeholder roles. Without such clarity, it is unlikely that national-level progress in addressing rural health inequalities will be achieved in the near future.

What are the implications for practitioners? Addressing ambiguity around who is responsible for the development of evidence-based policy to address the high burden of CVD in rural areas must be a high priority to ensure health disparities do not persist for future Australian generations. The results reported here are highly relevant to the Australian context, but also reflect similar findings internationally, namely that a lack of clarity among policy stakeholders appears

to contribute to reduced action in addressing preventable health inequalities in disadvantaged populations. This paper provides evidence for policy makers and public health professionals to advocate for clear policy roles and direction in rural Australia.

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Introduction

In 2015, cardiovascular diseases (CVDs) were responsible for 18 million deaths globally¹ and for one in every three deaths in Australia.² Ischaemic heart disease (IHD), the most common CVD, remains the leading cause of mortality in Australia.² CVD burdens rural communities disproportionately compared with metropolitan areas.³ Part of the observed differences between metropolitan and rural mortality has been theorised to be due to the higher rates of IHD experienced by Aboriginal and Torres Strait Islander (ATSI) peoples, together with the increased proportion of this population in rural areas.⁴ Even when the higher CVD rates among ATSI people are accounted for, there is still a substantial gap between non-metropolitan residents and their metropolitan counterparts.⁵

Approximately 38% of the gap in IHD mortality between rural and metropolitan populations has been estimated to be due to differences in behavioural risk factors, such as poor diet, physical activity, smoking, alcohol intake and obesity, between rural and metropolitan areas.⁶ Such risk factors, at the population level, may be improved through targeted and evidence-based policy initiatives and multistakeholder engagement.^{6–8} An early international example, the North Karelia Project (Finland), showed that evidence-based policy and interventions, along with multistakeholder engagement, can lead to significant changes in population-level risk factors that resulted in large declines in CVD across the country.⁹ This included reductions in rural health disparities in the disadvantaged region of North Karelia. To date, policy focus and action on the prevention of chronic disease risk factors in Australia has lacked sustained funding, multistakeholder coordination, monitoring and evaluation.¹⁰

Persistent rural health inequalities have been hypothesised to be amplified by a lack of government focus, policy and political power in these areas.^{11–13} Improvements in health policy, including a focus on policy that is evidence based, holds potential in improving the poorer health outcomes experienced by rural Australians.^{10,12} Evidence-based policy theory in health has emerged from the evidence-based medical model, where high-quality research evidence is used to inform decision making in the context of patient care.¹⁴ Evidence-based policy in the population health context translates to using the best available research on population data, monitoring or interventions to inform decision making on policy priorities, development and design.¹⁵ It is acknowledged that multiple factors affect the use of evidence in health policy making beyond research, such as decision making contexts, political processes and personal views of decision makers.^{12,14}

Improvements and increases in evidence-based policy require multistakeholder action across different levels of government and cooperation, and a clear acknowledgement of the

roles of different policy stakeholders, especially in government, where political processes have a significant effect.¹⁶ The Conceptual Framework for Understanding Rural and Remote Health also proposed that power, political processes and structural elements were key to reproducing and challenging disadvantage in rural health.¹⁷ This framework argued that change in rural health occurs through the negotiation of power at both local and broader levels.¹⁷ The framework suggests that action in rural health is enabled or constrained through geographic isolation and the (in)action of stakeholders in the rural locale, local health responses, broader health systems and broader social structures, including political, social, economic and cultural arenas.^{17,18} This paper uses this framework to analyse policy makers' perspectives (at local, state and national levels) about decision making and responsibility for driving evidence-based policy to reduce the high burden of CVD in rural Australia.

In Australia, government structure consists of three integrated levels, local, state or territory and federal; these levels have varying responsibilities, but all include responsibility for policy development that has the potential to influence the health of the Australian population.¹⁹ For example, local- and state-level governments in Victoria are responsible for policy to improve the health and well-being of communities through the *Public Health and Wellbeing Act 2008* (Vic.). That Act mandates the use of scientific evidence (i.e. reliable and relevant) when designing and implementing population health policy and interventions at local and state levels.²⁰ The Act outlines improving healthy eating, encouraging active living and reducing tobacco-related harm as focuses of policy that could contribute to the prevention of cardiovascular diseases at both local and state level. The Act does not mention specific policy focus on rural populations, but rather broad population coverage, despite different challenges within the rural context.²⁰ State governments are responsible of overseeing hospitals, health services and ambulatory care, including primary, secondary and tertiary prevention and treatment of CVDs.²¹ The federal government provides funding to the states; an example of a focus on prevention of non-communicable disease (NCD) was the National Partnership on Preventative Health (2000–15) that was initiated in 2010. The aim of this partnership was to reform the health system and focus on interventions to reduce and prevent NCDs. Although the partnership was dissolved with a change in government in 2013, there was no specific focus on the prevention of NCDs in rural areas.²²

Exploration of policy makers' views on the potential for evidence-based policy to prevent CVD in Australia has found that the rural context constrains the use of evidence in rural health policy development to prevent CVD across all levels of government.¹² The context constrains the generation of quality local evidence, engagement with political processes and the

human resources to enable policy development and implementation.¹² The reasons for this are understudied, and there has been little done to establish whether the policy makers perceive roles and responsibilities to be clear and what this means for evidence-based policy for CVD prevention in rural settings. This study examined how policy makers (at local, state and national levels) understand the roles and responsibility for driving evidence-based policy to reduce the high burden of CVD in rural Australia.

Methods

This study used qualitative interviews with policy makers and deductively analysed their responses using the framework of rural and remote health.²³ Ethics approval for the study was obtained from Deakin University's Health Ethics Advisory Group.

Recruitment

To be eligible for inclusion in the study, policy makers and advisors had to be working in a role where they were either responsible for developing or advising on rural health policy at local, state and federal government levels. Potential participants were identified through publicly available information and sent an invitation email about the study. The recruitment process also included a snowball sampling method, whereby invited participants were asked to forward the email to colleagues who met the inclusion criteria.

Interviews

Interviews were conducted by one of the authors (LA) with policy makers and advisors at local, state and federal government levels ($n = 21$). Local government participants were based in rural local government areas in the state of Victoria ($n = 9$). Interviews were conducted in person and over the telephone, at the participant's convenience, using a semistructured interview format (see [Appendix 1](#)). The semistructured format allowed for participants to elaborate on specific points and discuss, in detail, their perspectives with the researcher. This allowed for themes to emerge that were not preconceived by the researchers involved. Interviews ranged in duration from 30 to 90 min and were recorded and transcribed. Interviews were conducted until saturation was reached, whereby no new themes arose from the data, along with a high level of repetition in responses among participants.

Data analysis

Data were analysed using a thematic framework analysis²⁴ to identify the perspectives of the participants and emergent themes around the use of evidence in policy making and action to address the high burden of CVD in rural Australia.¹² Data were coded according to the six components of the Conceptual Framework for Understanding Rural and Remote Health:¹⁷ geographic isolation, the rural locale, local health responses, broader health systems, broader social structures and power. NVivo software version 11 (QSR International, Melbourne, Vic., Australia) was used to generate, organise and connect themes that emerged from the transcript data for this analysis.

Results

A strong theme in the data was the disconnect between all levels of government in their perspectives as to who has the lead role of initiating, developing and driving evidence-based policy that could reduce CVD disparities in rural Australia. Examples of evidence discussed with participants included scientific literature and national data reports, such as those produced by the Australian Institute of Health and Welfare, and this was largely led by the participants. Participants discussed a range of stakeholders having responsibility for CVD policy and action, including different levels of government, health services, health professionals, academics, international governments and the rural community. However, there was no consistent perspective as to who is responsible for driving evidence-based policy to address the high burden of CVD in rural areas.

A federal-level participant highlighted that there is currently disconnect between all levels of government around who holds the responsibility for generating evidence-based policy to address CVD in rural areas:

So basically they're just trying to figure out where the Commonwealth, you know, can and should act and occupy the space within, the argument that goes, between federal, state, local; who's responsible for actually doing stuff. (Federal participant)

[Fig. 1](#) shows the connections in policy makers' descriptions of who holds the lead responsibility for improving policy to address inequalities in rural CVD. Power exists at all levels of government, and the different coloured arrows in [Fig. 1](#) identify the ideas of local, state and federal participants as to who holds predominant responsibility. For example, local government participants demonstrated a perception that it was the responsibility of rural health services, the community and state and federal governments to address the lack of evidence-based policy addressing rural CVD.

State and federal policy makers felt it was largely the local government's responsibility to address inequalities in rural CVD. They also suggested that the rural communities themselves should take a lead role in addressing the issue by generating concern, improving their health literacy, advocating effectively to local, state and federal politicians and generating political power by voting accordingly in elections. Federal government participants implied that there is responsibility in international governments to find effective, evidence-based policy solutions, because rural CVD inequalities are a global issue. In short, others were always named as responsible, leaving no particular stakeholder identified as responsible for policy development and little acknowledgement of the likely necessity of shared responsibility among many stakeholders throughout this context.

Undefined responsibility related to geographical isolation

Participants at all levels of government discussed how the effect of geographical isolation meant that there was less research evidence generated in rural areas, and the data they did have was not of high quality:

So, the stats, themselves, I think, are a disadvantage for rural. Yeah, in terms of the fact that they're done pretty badly. (Federal participant)

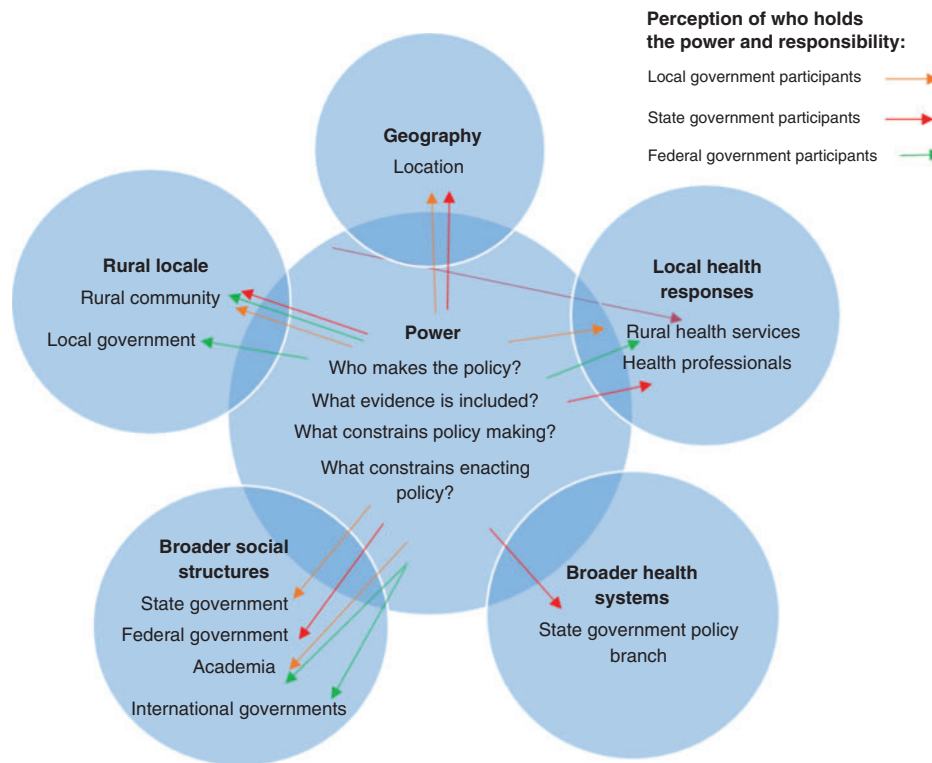


Fig. 1. Linkages made by policy makers as to who holds the responsibility for increasing evidence-based policy to address cardiovascular disease (CVD) burden in rural Australia. Arrow directions depict participants' suggestions as to who holds responsibility and power for driving evidence-based policy to prevent CVD in rural Australia.

This narrative implied that researchers were responsible for a lack of evidence to drive policy, along with the influence of geographical isolation, due to a lack of both prioritisation of rural communities and small research projects with little reliability. There was no acknowledgement of shared responsibility among stakeholders, for example how research and local government could work together to generate better evidence and therefore policy.

Responsibility at the rural locale: policy makers say it is up to the people

Throughout the responses of the local, state and federal participants, there are multiple examples of a perception that local community individuals and resources hold the responsibility in generating urgency around the high burden of CVD in their communities, and that this is not a shared responsibility between stakeholders (e.g. governments, health services and the community together). Without action from rural community members, it was suggested that initiation of policy was unable to occur and rural communities played the predominant role in driving evidence-based policy action to reduce CVD. One federal participant also felt that rural communities lack health literacy and understanding that CVD is preventable, and this reduced their action around it:

Talking to people [about CVD] who live and work in rural Australia is a bit different to the urban settings. (Federal participant)

State and federal participants viewed local governments as having a major role to play in generating evidence-based policy. One stated:

They [local government policy makers] do have a strong role to play in prevention. (Federal participant)

Another said:

They are the ones who get into the ear of the local politician. (Federal participant)

In contrast, one local government participant stated:

But to be honest, I don't see that [CVD prevention policy] as local government's core responsibility. (Local participant)

Responsibility of local health responses in rural areas

Local government participants observed a tension between the responsibility of local government and local health services. Local government participants felt that local health services were more responsible for driving policy aimed at preventing CVD because they are perceived to have more resources, not just in generating evidence-based policy, but also in prevention initiatives as a whole. A state participant suggested they should be integrated and there should be some shared responsibility:

We expect our agencies [local government and health services] to align and to look to local municipal public health and well-being plans for priorities but also to support the implementation of them. (State participant)

In contrast, a local government participant summarised how they see the health service having the major responsibility (not shared) in evidence-based initiatives to address CVD, but also noted a disconnect in understanding between government and the health services sector:

Healthy diets or physical activity in my view is more for the health service and I know we generally disagree on that point. (Local participant)

Local government participants also perceived that the health service expected too much from them in terms of generating evidence-based policy and taking action to prevent CVD in rural communities:

I think they [health services] sometimes expect more from, I think they expect more from me around the health policy, health promotion space. (Local participant)

Broader health system policies

Policy makers at the local government level felt that evidence-based policy to address the high burden of CVD in rural areas was more of a broader health sector responsibility than a role of local government. They believed responsibility was not just with the local health service, but also held by national data custodians and researchers in the health sector. They did not indicate shared responsibility around this from their sector:

I don't see local government as trying to specifically influence those [CVD policy]. So we would see those I think as, as a health department or a health sector rather than department [responsibility]...specifically trying to prevent those chronic diseases from occurring. (Local participant)

There was also a perception that researchers and data custodians were not fulfilling responsibility in providing adequate data and evidence to support policy makers in their role as the drivers of new policy generation. Again, there was no acknowledgement of a shared responsibility, and how the government may work with national data custodians to ensure they have the evidence they require:

Like organisations like the Bureau of Statistics are very careful, very – they're not very imaginative, they can't afford to be. (Federal participant)

Participants also suggested the health sector was not adequately communicating the issues and advocating solutions that would assist the government in developing evidence-based policy. This perception around the health sector not operating effectively suggested that policy makers felt that the health sector had a larger role to play than they did. The quote below also indicates a shared responsibility across the health sector:

One of the things we don't do well as a health community is provide do-able solutions. (Federal participant)

Another participant stated:

We need to almost put ourselves in the politician's shoes and, and understand their mentality and their way of making decisions. (Federal participant)

At the federal level, policy makers extended the responsibility of addressing the high rate of CVD in rural areas to the international context of the broader health system:

It's a global issue...every country's facing those challenges. No one's really nailed it in terms of how – how you can sort of level the playing field for rural and remote populations versus urban populations. (Federal participant)

This suggests that federal governments have a lower sense of expectation around rural CVD prevention in Australia if international examples of solutions have not been established. There is perceived responsibility of other international governments, researchers and health sectors to address CVD inequalities before the Australian government may make it a higher priority.

Broader social systems

Different ideas regarding responsibility in increasing evidence-based policy to address the high burden of CVD in rural areas was evident in the policy makers' responses at the broader social system level. At all levels of government, policy makers described researchers as having a high level of responsibility in driving evidence-based policy and decision making by generating high-quality research applicable to the rural context, communicating results effectively to policy makers and providing feasible solutions for decision makers. Without acknowledging a potential shared responsibility between researchers and government, they described academia to be largely failing at this, due to researchers prioritising publishing in journals over communicating results in an understandable form for politicians. For example, definitions of success in the academic field place a high level of focus on publishing in peer-reviewed journals, and this is not viewed as a relevant forum for policy makers.

The researcher's time all goes into being published in peer review journals which the real decision makers never read. (Federal participant)

Similarly, policy makers also suggested that federal members of parliament were responsible for a lack of focus on CVD inequalities in rural areas because social influences operating in parliament meant that they were not in touch with problems occurring in rural communities.

When you work up on the hill, like, parliament house in Canberra, it's disconnected from reality. (Federal participant)

Power

None of the participants identified their sector as ultimately responsible for preventing inequalities in rural areas. Rather, all participants inferred decision-making responsibility on another stakeholder, diffusing power and responsibility among stakeholders. The inability of policy makers to take responsibility, provide leadership and use their position of power appears to be leading to an overall lack of action around increasing evidence-based policy in CVD in rural areas. By not embracing their responsibility, policy makers are constraining, possibly unintentionally, action to drive policy that could reduce CVD in rural areas.

Discussion

The findings of this study highlight three key areas that prevent evidence-based policy in CVD being developed, implemented and evaluated in rural areas. First, there is no clear level at which this policy will be developed. Rather, interviewees seemed to highlight barriers to evidence-based CVD policy and defer responsibility for policy development to other levels and other stakeholders. Participants deferred to other sectors and lacked consistency as to who was responsible for CVD prevention policy. Second, it has to be acknowledged that gaining support for policies that challenge health behaviours, choices and usual activities may not be popular. There is a reluctance at the local level to drive such policy change in rural environments without strong, community support for embracing this responsibility. Finally, policy makers suggested there is often a lack of local evidence about health outcomes relating to chronic disease and CVD in rural areas on which to base policy, and felt the health sector was responsible for this.²⁵ Together, these findings suggest that, among policy makers at the local, state and federal levels, there is unwillingness to adopt leadership roles to drive such a policy change. Further, it calls for stakeholders to embrace a post-modern perspective of power,²⁶ where diverse policy stakeholders collaborate to lead, challenge and innovate in unconventional ways for better rural health outcomes.

What is highlighted in this study is that the multiple levels of government that affect rural health can diffuse responsibility and power to produce the appropriate policy. Each policy maker expects leadership and policy development from another sector, and no one sector has the resources or leadership capacity to drive this in the context of rural health policy. There is a lack of integration of the different levels of government, service delivery, policy and research, and this reproduces further inaction, which is consistent with previous literature on the lack of progress to improve poor health outcomes and within political economy theory.^{11,12,16} Greater connection between the different levels and clarity around responsibility for policy development and roles in policy process would enable change to address the rising rates of CVD in rural areas.

Despite important differences in context (but similar patterns in rural health disparities), a study conducted in the US found similar themes and challenges for policy makers in rural areas.⁸ That study examined barriers to the development of evidenced-based policy to encourage more physical activity and healthy eating in rural communities with the longer-term outcome of preventing chronic diseases.⁸ Interviews with 15 key policy informants noted that barriers to evidence-based policy in rural areas included a lack of clarity around the government's role in the prevention of chronic diseases.⁸ That study also had similar findings to the present study in that there was a lack of clarity around the role of the community and leadership in driving the development of evidence-based policy, along with other challenges, such as small population numbers, all relevant broadly to the rural health policy context.⁸ In the present study, it emerged that participants seemed to refer to policy that would improve population-level behaviour when discussing appropriate policy to improve CVD outcomes in rural areas. Due to a high proportion of local government participants, this may be explained by the presence of the mandate on local governments

to have a Municipal Health and Wellbeing Plan in the state of Victoria, under the *Public Health and Wellbeing Act 2008* (Vic.). These plans tend to focus on health and well-being, with documents targeting population health issues such as poor diet and physical inactivity, which may explain why many of the participants discussed policy targeting behaviours and this may have influenced their perception of who is responsible for driving such policy, as opposed to other policy related to secondary prevention in hospitals or policy to address social determinants of CVD risk.

Participants of the present study highlighted the need for empowering rural community stakeholders and those working in policy to lead change, facilitate stakeholder engagement and connect local and broader political arenas. This is echoed across the literature: there is a need for improved collaboration and stakeholder engagement across all sectors to improve policy and reduce chronic disease.¹⁶ Along with the perception that the community holds responsibility in driving improvements to policy, acknowledgement of the heterogeneity of rural communities and how this affects political processes also require investigation.¹³

Strengths and limitations

A strength of the present study is that the sampling approach aimed to identify key people in rural policy, which resulted in a highly informed sample across three different levels of the Australian government. The use of the framework ensured that context specific concepts were thoroughly investigated in the participant responses. Another strength of the study is that this analysis is likely to have implications for other health inequalities in rural areas where there is a failure of policy responsibility. Limitations of this research include that the study interviewed 21 policy makers within a specific context, and the findings may lack generalisability to other sectors because we did not cover every geographical region in the state of Victoria. For example, we did not interview participants from primary health networks in rural communities who may have also provided a broader range of views around responsibility. Despite this, the perspectives of these 21 participants highlight many barriers to health policy development in rural communities and reflect international literature on this topic. Interviews were semistructured in nature, which allowed for the emergence of new themes that were not pre-empted by the researchers, such as the finding that policy roles are unclear among the participants involved in this study. This is both a strength and a limitation of the study: it is a strength as new knowledge in the policy context, which has implications for rural health generally, because policy roles remain unclear; it is a limitation in that the conversation was not specifically directed at further interrogating policy roles and how this may be improved. This could be the focus of further research, alongside exploration and comparison to non-rural contexts.

Conclusions

This analysis demonstrates that there is a lack of responsibility for driving evidence-based policy generation to address the high burden of CVD in rural Australia. Policy makers perceived that multiple stakeholders, including different levels of government,

rural communities, health services and researchers, have substantial responsibility to drive the development of evidence-based policy to address rural CVD. If responsibility remains unclear, the lack of policy action, and therefore the persistent inequality in CVD burden experienced by rural communities, is likely to continue.

Competing interests

There are no competing interests to declare.

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Appendix 1. Semistructured interview schedule **Interview schedule (semistructured)**

Interviews were conducted by the lead author (LA) and were either conducted in person ($n = 4$) or via telephone ($n = 17$) at the convenience of the participant. Interview duration ranged from 30 to 90 min.

Questions were open ended, and the researcher questioned the participant further if relevant data were emerging. Interviews were conducted from June until September 2017 and were transcribed by an external contractor (Transcription Australia); the resulting transcript was checked for accuracy before analysis commenced.

An introduction of the study was discussed with the participants, followed by the interview schedule, which was as follows:

1. Tell me about your current/previous roles and how this could relate to prevention of heart disease in rural areas.
2. How does policy fit into your current/previous role?
3. What do you view as the major health concerns for the rural population currently?
4. Ischaemic heart disease rates are known to be higher outside of major cities; in your experience, how is this increased burden viewed? Is it a prominent concern for policy makers or people in your area of work?
5. Can you give examples of past policies, or policy changes that are likely to influence heart disease in rural areas?
6. What do you see as 'evidence' that you might use as information to make a decision related to policy/prevention?
7. Do you feel that priority is placed on reviewing the scientific evidence before making decisions on rural health policy?
8. In your experience, to what extent is the scientific evidence consulted when making decisions about policy/prevention in rural areas? (If participant is unsure of what is meant by 'scientific evidence': definition of what is meant by 'scientific evidence': published research studies, national data sources (e.g. mortality data), and government reports such as those provided by the Australian Bureau of Statistics and Australian Institute of Health and Welfare.)
9. What are the barriers to applying the scientific evidence when designing policy to reduce heart disease in rural areas, if any?
10. Do you feel that you have access to the evidence you need to understand rural health issues? What about specifically for heart disease?
11. How confident do you feel in using and interpreting the scientific evidence on health inequalities in rural Australians, when making decisions or acting on policy?
12. Why/why not? Is there room for improvement if the answer is yes?
13. Do you feel you could benefit from more support in understanding the scientific evidence on this issue? (In terms of support, this could be access to expert researchers in the field, or further education in interpreting scientific papers, data etc.)
14. I have here several examples of types of evidence from different sources. I would like you to have a look at these and think about which types of evidence you see as the most powerful.
Please arrange the cards in order from most to least [significant], and explain as you go why you have ranked different options highly or poorly.
15. If you could choose one risk factor that you think would make the biggest impact on reducing heart disease in rural areas, which one would it be? How much would you expect to be able to reduce it by through policy changes?

Notes, the interview schedule was flexible, was not always strictly followed in the order above and was used as a guide. Some participants went into more detail in answering some questions, but not others. Many participants went into detail about the barriers to evidence-based policy, such as not having clarity around what level of government should be leading on this issue. If appropriate, participants were asked for more information or to explain further as necessary and appropriate. The types of evidence presented to participants included national health survey data, cross-sectional studies, modelling studies or case studies.