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Understanding the barriers and facilitators that influence access to quality cardiovascular care for rural Indigenous Peoples: Protocol for a scoping review

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UNDERSTANDING THE BARRIERS AND FACILITATORS THAT INFLUENCE ACCESS TO QUALITY CARDIOVASCULAR CARE FOR RURAL INDIGENOUS PEOPLES: PROTOCOL FOR A SCOPING REVIEW

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ARTICLE SUMMARY

Abstract

Introduction

Māori (the Indigenous Peoples of New Zealand) are disproportionately represented in cardiovascular disease (CVD) prevalence, morbidity, and mortality rates, and are less likely to receive evidence-based CVD healthcare. Rural Māori experience additional barriers to treatment access, poorer health outcomes, and a greater burden of CVD risk factors, compared to Non-Māori and Māori living in urban areas. Importantly, these inequities are similarly experienced by Indigenous Peoples in other nations impacted by colonisation. Given the scarcity of available literature, we are conducting a scoping review of literature exploring barriers and facilitators in accessing quality CVD healthcare for rural Māori and other Indigenous Peoples in nations impacted by colonisation.

Methods and Analysis

A scoping review will be performed in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist and will be underpinned by Kaupapa Māori Research methodology. An electronic search of MEDLINE (OVID), PubMed, Embase, SCOPUS, CINAHL Plus, Australia/New Zealand Reference Centre, NZResearch.org, and a grey literature search will be conducted on literature published between January 1990 and January 2022. Two authors will independently review and screen search results in an iterative manner. A thematic analysis using Braun and Clarke's (2006) thematic analysis approach will be used to synthesize our findings.

Ethics and Dissemination

Ethical approval has not been sought for this review as we are utilising publicly available data. We will publish this protocol and the findings of our review in an open access peer-reviewed journal. This protocol has been registered on Open Science Framework DOI:10.17605/osf.io/xruhy.

Strengths and limitations of this study

- This is the first systematic review that (to our knowledge) explores barriers and facilitators of accessing quality cardiovascular care for rural Indigenous Peoples.
- In order to ensure that this research supports health equity and strengthens research conduct on and for Indigenous Peoples, it is underpinned by Kaupapa Māori Research (KMR) methodology

and the CONSolidated critERtia for strengthening the reporting of health research involving Indigenous Peoples (CONSIDER) statement.

- The review is focused on Indigenous Peoples from New Zealand, Australia, Canada, and the United States of America and although we do expect there to be similarities and relevance, our findings may not be fully generalisable to other Indigenous Peoples impacted by colonisation.
- The review is focused on cardiovascular diseases only. Other long-term or chronic conditions (e.g., type 2 diabetes mellitus) have been excluded from the scope of this review and so our findings may not be generalisable to care associated with other long-term or chronic conditions.

INTRODUCTION

Māori, the Indigenous peoples of Aotearoa New Zealand, are disproportionately represented in cardiovascular disease (CVD) prevalence, morbidity, and mortality rates, and are less likely to receive evidence-based CVD treatment (1-3). Coronary heart disease (CHD) is also one of the biggest contributors to inequities in life expectancy for Māori, compared to non-Māori, non-Pacific people (4). These health disparities give rise to Māori experiencing a greater burden of disease and an enduring gap in life expectancy, compared to non-Māori(5, 6).

Inequities in CVD outcomes and access to quality CVD healthcare in Aotearoa New Zealand are similar to those experienced by international Indigenous Peoples, in nations impacted by colonisation. CVD disproportionately affects Indigenous Australians, American Indians, Alaska Natives, First Nations, Métis and Inuit (FNMI), and Native Hawaiians, compared to other ethnic groups within their respective nations(7-9). CVD prevalence in Indigenous Australians is one and a half times higher than non-indigenous Australians and the CVD mortality rate in Indigenous Australians is three times higher than that of non-indigenous Australians(9). Indigenous Australian patients are also 40% less likely to receive proven coronary interventions and have an in-hospital mortality rate double that of non-indigenous Australians(10). In the United States and Canada, Indigenous Peoples are disproportionately affected by CVD risk factors(11). Indigenous Peoples in the United States also have worse access to quality CVD related healthcare and receive poorer CVD related healthcare, compared to White Americans(12).

These patterns of Indigenous health disparities in Aotearoa New Zealand and internationally are influenced by the ongoing impacts of colonisation and the wider social determinants of health(7, 13, 14). The historical trauma intergenerationally experienced by Indigenous Peoples through sustained dispossession of land, cultural oppression, persistent systemic racism and social deprivation all adversely impact opportunities for Indigenous Peoples to successfully engage with their respective healthcare systems(7, 10, 14, 15). The health impacts include significant physical, psychological and structural stressors, which inherently drives inequities in CVD risk factors and CVD outcomes(16).

Māori are entitled to equitable health outcomes, derived from three key sources. Firstly, Article 2 in the Te Tiriti o Waitangi (Treaty of Waitangi), the founding document of modern Aotearoa New Zealand, asserts the protection of Māori taonga (anything valued by Māori, including health) and Māori sovereignty over those taonga(17, 18). Secondly, The New Zealand Health and Disability Act 2000 expresses a commitment to improving Māori health outcomes(19). The New Zealand Ministry of Health also recently updated their expression of the Crown's Te Tiriti o Waitangi obligations in the New Zealand health and disability system by publishing a new Te Tiriti o Waitangi Framework. The framework includes 'Mana

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3 tangata', which expresses the Crown's commitments to achieving equity in health and disability outcomes
4 for Māori(20). In fulfilling Te Tiriti o Waitangi obligations, Māori also have the right to monitor Crown
5 agencies, given the persistent and compelling disparities in health outcomes (including the wider social
6 determinants of health), consistent health system unresponsiveness, and a lack of Māori representation
7 in health workforce(21). These rights to equitable health outcomes extends to international Indigenous
8 Peoples, as stipulated in the United Nations Declaration on the Rights of Indigenous Peoples (2007), which
9 affirms that "States shall also take effective measures to ensure, as needed, that programmes for
10 monitoring, maintaining and restoring the health of indigenous peoples, as developed and implemented
11 by the peoples affected by such materials, are duly implemented"(22).

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14 Rural Māori in Aotearoa New Zealand experience additional barriers to treatment access and poorer
15 health outcomes compared to those living in urban areas (New Zealand Health and Disability System
16 Review, 2020). Lilley et al (2019) recently found that rural Māori are less likely to receive timely access to
17 emergency medical services compared to other New Zealanders(23). Evidence also shows that rural Māori
18 have a greater burden of CVD risk factors, ischaemic heart disease, heart failure and stroke mortality (35+
19 years) when compared to urban Māori or urban non-Māori(3, 24). In Te Tai Tokerau Northland (the
20 northern-most region of Aotearoa New Zealand) Māori make up 36% of the population, compared to the
21 national average of 17%(25). Te Tai Tokerau Northland also has a higher proportion of people living in the
22 highest levels of social deprivation, a significantly older population compared to the national average, and
23 a high proportion of the population live in rural areas(25, 26). In 2018, 44.3% of the Māori descendent
24 population in the Northland District Health Board (DHB) region were indicated as living in the most socially
25 deprived areas, compared to 13.3% non-Māori(27). Understanding the additional barriers experienced by
26 rural Māori communities in accessing quality CVD healthcare is therefore important to consider for
27 regions like Te Tai Tokerau Northland, where there are strong intersections between ethnicity, social
28 deprivation and rurality(27, 28). The intersectionality between communities residing in rural or remote
29 areas, low socio-economic status, high levels of psycho-social stress and disparities in CVD incidence and
30 mortality rates are also observed in Indigenous Peoples in other nations(29-31).

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33 To our knowledge, there are no known systematic reviews that explore the barriers and facilitators to
34 accessing CVD care among rural Māori or rural Indigenous Peoples in other nations. A systematic scoping
35 review is therefore needed to identify the extent that literature is available, identify any gaps in the
36 literature and map available evidence, all well maintaining rigor and transparency in our methods to
37 ensure our results are reliable(32). Given the scarcity of localised literature here in Aotearoa New Zealand,
38 and the similarities in health disparities experienced by Indigenous Peoples in colonised nations, we have
39 extended this review to include rural Indigenous Peoples in other nations(11, 33).

40 41 42 43 44 45 **METHODS AND ANALYSIS**

46
47 A scoping review approach was chosen as it best aligned with our research objectives, which are aimed at
48 mapping and summarising the extent of available literature while maintaining rigor and transparency(32).
49 This approach was also selected given that the research topic has not been comprehensively addressed
50 previously(34). The methods and analysis of this scoping review protocol is guided by the Preferred
51 Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-
52 ScR)(35).

Methodology

Kaupapa Māori Research

This scoping review will be underpinned by Kaupapa Māori Research (KMR) methodology. KMR methodology is one of many decolonising methodologies in existence that responds to traditional positivist and colonial approaches by centring indigenous world-views and epistemologies(36). Decolonising methodologies supports indigenous reclamation of self-determination and social justice in the research space, particularly for Indigenous Peoples that have been harmed by colonisation(36). By foregrounding KMR, we assert tino rangitiratanga (self-determination) and privilege Māori ways of being and understanding(36-39). KMR reconciles imbalances in power and supports social justice by challenging dominant systems, cultural deficit theories and victim-blame analyses(38, 40, 41). It can also be utilised for both quantitative and qualitative research methods, where appropriate(38). We acknowledge that there is no singular decolonising methodology that can be appropriately applied across all Indigenous Peoples, however KMR allows us to approach international literature involving Indigenous Peoples in a respectful and meaningful manner, whilst asserting our own self-determination in our research objectives(38, 42).

CONSIDER Statement

To reconcile a legacy of exploitative and inequitable health research conduct on Indigenous Peoples, it is important that this scoping review is conducted in a manner that supports health equity and strengthens research conduct on and for Indigenous Peoples(36, 43, 44). We have therefore utilised the CONSolidated critERTia for strengthening the reporting of health research involving Indigenous Peoples (CONSIDER) Statement (2019) as a tool to critically appraise our methodology in relation to strengthening indigenous research and reducing health inequities(44). Here, we summarise key points from our critical appraisal under the CONSIDER Statement framework, and have attached our full appraisal in Appendix A.

This scoping review has been conducted as part of the Manawataki: Fatu Fatu for Access for ACCESS (ACCESS Project), a research programme funded by two New Zealand national research agencies - the Heart Foundation and the National Science Challenge – Healthier Lives. Governance of the wider research programme sits with the two principal investigators, one of whom identifies as Māori. Governance of the project also includes two Māori stakeholder reference groups, one of which includes Māori consumers (people with lived or family experience of CVD), and the other which includes health workers providing care to Māori with CVD.

The objectives of this scoping review were developed by the protocol authors, based on both known gaps in empirical evidence and preliminary findings of qualitative interviews with Māori participants as part of the wider ACCESS research project. To the best of our knowledge, there are no known systematic reviews that explore the barriers and facilitators to accessing CVD healthcare among rural Māori or other rural Indigenous Peoples. A scoping review is therefore needed to identify the extent that literature is available, identify any gaps in the literature and to map available evidence related to the barriers and facilitators to CVD care access among rural Māori and rural Indigenous Peoples in other nations.

This scoping review and the conduct of the wider ACCESS project is underpinned by Kaupapa Māori Research Methodology (described above). This review is led by an emerging Māori health researcher, who is supported by a well-established Māori health researcher (principal investigator of the ACCESS project) and tauwiwi (non-indigenous) health researchers who have significant experience in Māori health equity

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3 research(45, 46). The wider ACCESS research team promotes Māori leadership and workforce
4 development by supporting several Māori studentships and emerging Māori researchers. To ensure equity
5 in access to our findings, we intend to publish our results in an open-access journal and on the ACCESS
6 research website. Finally, there will be no resource demands placed on indigenous communities as part
7 of this scoping review as it will be based on information already in the public domain.
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10 11 12 Objectives

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14 The aim of this scoping review is to identify and describe the extent of research available that investigates
15 the barriers and facilitators associated with accessing quality CVD healthcare for rural Indigenous Peoples.
16 Specific objectives are:
17

- 18 1. To identify the extent of research available.
- 19 2. To map and summarise main findings related to the barriers and facilitators to accessing quality
20 CVD healthcare in Māori and other rural Indigenous Peoples.
- 21 3. To identify and describe any gaps in the literature.
- 22 4. To identify and describe how further research in this area can benefit healthcare access for rural
23 Māori and other rural Indigenous Peoples.
24
25

26 27 Eligibility Criteria

28 Publications will be selected according to the criteria described below.
29

30 31 *Study Design*

32 We will include published original research studies irrespective of study type as well as a range of grey
33 literature (described below). Both qualitative and quantitative studies will be included in this review,
34 although we anticipate that our findings are likely to be presented as qualitative data.
35

36 The following literature will be excluded:
37

- 38 • Texts that do not have a research question or report new data (e.g., opinion pieces).
- 39 • Studies that do not focus on the outcomes described below.
- 40 • Studies for which the full text is not available.
41

42 43 *Participants/Population*

44 The population of interest for this scoping review includes Māori and Indigenous Peoples in other nations.
45 Given that there is no internationally recognised standard definition of Indigenous Peoples, we will instead
46 utilise three definitions of 'Indigenous Peoples' to describe the population of interest for this review.
47 Firstly, we will use two definitions from the United Nations. The first, describes Indigenous Peoples as
48 "inheritors and practitioners of unique cultures and ways of relating to people and the environment. They
49 have retained social, cultural, economic, and political characteristics that are distinct from those of the
50 dominant societies in which they live" (47). Secondly, we utilise the United Nations Working Group on
51 Indigenous Populations (2009) definition, which specifies four key factors when describing 'Indigeneity':
52 (one) "Priority in time, with respect to the occupation and use of a specific territory"; (two) "The voluntary
53 perpetuation of cultural distinctiveness, which may include the aspects of language, social organization,
54 religion and spiritual values, modes of production, laws and institutions"; (three) "Self-identification, as
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well as recognition by other groups, or by State authorities, as a distinct collectivity”; and (four) “An experience of subjugation, marginalization, dispossession, exclusion or discrimination, whether or not these conditions persist”(48). Lastly, we incorporate the 1989 International Labour Organisation’s Indigenous and Tribal Peoples Convention Policy description, which describes Indigenous Peoples as (a) “tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations”; and (b) “peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions”(49). Based on these definitions, we will include literature from New Zealand, Australia, Canada, and the United States of America. We will also focus our search on adults aged 18 years and older, as CVD is primarily a disease of adults.

We also will include literature focusing the following CVD conditions(50):

- Atherosclerotic cardiovascular disease
- Heart failure
- Coronary heart disease
- Cerebral vascular disease
- Peripheral vascular disease
- Acute coronary syndrome
- Other chronic heart diseases
- Ischaemic stroke
- Transient ischemic attack
- Other cerebrovascular diseases
- Myocardial infarction
- Unstable angina

Lastly, in absence of a universal definition for ‘rural’ populations, we have not specified definitions for the terms ‘rural’ or ‘remote’. We will instead align our rurality inclusion criteria Wilson et. al (2009) methods by including literature that uses the terms ‘rural’ and ‘remote’ when describing their participants, target population or population of interest(51).

Setting

Literature based in any care setting (including community, inpatient, and outpatient settings) providing care to adults for CVD will be included.

Outcomes

The outcomes of this scoping review will include:

- Barriers to accessing care in rural Indigenous Peoples living with CVD, reported by Indigenous Peoples and health service providers.
- Facilitators to accessing care in rural Indigenous Peoples living with CVD, reported by Indigenous Peoples and health service providers.
- Reported gaps and limitations.

Time frame

We will include literature published between January 1990 and January 2022.

Language

We will include articles reported in all languages.

Search Strategy

We will search the following databases: MEDLINE (OVID), PubMed, Embase, SCOPUS, CINAHL Plus, Australia/New Zealand Reference Centre, NZResearch.org. Literature search strategies will be tailored to individual databases (e.g., using medical subject heading (MeSH) terms). Search terms were iteratively developed by the protocol authors with support from subject librarians at the University of Auckland. A table of key search terms has been provided in Appendix B.

Grey Literature

We will conduct a Grey Literature search to promote a more comprehensive analysis, reduce publication bias, and capture emerging research areas(52). We will only include published reports from official government agencies, government funded agencies, nationally recognised charitable organisations, and publications by the World Health Organisation. We will search official governmental websites of those nations included in our scoping review (see Table 1) and carry out a Google search engine search using our search terms to locate grey literature that addresses any of the Outcomes listed in this protocol. This approach maximises our chances of identifying relevant information by using overlapping approaches(53). To focus our results, we will limit google search results to the first 30 items listed. Reports that address any of the Outcomes described above will be shortlisted by and then independently reviewed by two reviewers. To ensure that there is an appropriate level of rigour in our approach, we will evaluate grey literature using the ACCODS checklist for evaluating and critically evaluating grey literature, developed by Flinders University(54).

Table 1. Official governmental websites included in grey literature search

Country/Organisation	Link
New Zealand	https://www.health.govt.nz/
Australia	https://www.health.gov.au/
Canada	https://www.canada.ca/en/health-canada.html
United States of America	https://www.usa.gov/health
Hawaii State	https://portal.ehawaii.gov/
World Health Organisation	https://www.who.int/

Study Selection

A summary of our process for identifying relevant sources of evidence is provided in Figure 1. Firstly, the lead protocol author will conduct an electronic search based in on the search strategy. Once the search has been completed and duplicates have been removed, two of the protocol authors will screen titles and abstracts based on eligibility criteria. A full text review will then be conducted by two of the protocol authors on the remaining list of publications. Once the full text review has been completed, the remaining

list of publications will be finalised, and data will then be charted. Any disagreements throughout the screening process will be resolved via discussion with the aim to reach consensus. A member of the wider ACCESS project will be available to mediate and resolve any disagreements where consensus is unable to be reached. Literature search results will be managed through Endnote and Microsoft Excel.

Data Charting

The protocol authors will determine the appropriate variables for data extraction. A standardised data form will be created. The lead protocol author will perform data charting process and then discuss analysis and synthesis of results with the other protocol authors.

Data Items

Where available, the following data will be extracted from each eligible citation:

- a) General information
 - a. Author
 - b. Article title
 - c. Year
 - d. Country
- b) Study characteristics
 - a. Aims/objectives of study
 - b. Study design/type
 - c. Study inclusion/exclusion criteria
 - d. Recruitment procedures and sample size
- c) Participant characteristics
 - a. Sample size
 - b. Ethnicity
- d) Study outcome(s) listed in this protocol.

Critical appraisal of individual sources of evidence

Scoping reviews do not require the appraisal or synthesis of the review findings(55). However, given that our review is underpinned by Kaupapa Māori Research methodology, we may appraise literature using the CONSIDER Statement and include commentary on our findings within our scoping review.

Analysis and Synthesis

The analysis of this scoping review protocol is guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR)(35). Literature will be imported into NVivo software for thematic analysis. A thematic analysis using Braun and Clarke's (2006) thematic

analysis approach and underpinned by Kaupapa Māori Research principles(36, 56). Initial codes will be generate then collated into potential themes, followed by reviewing and then defining the themes(56).

Ethics and Dissemination

Ethical approval will not be sought for this scoping review, as it will only include publicly accessible publications. We intend to publish the results of this scoping review in an open access peer-reviewed journal and will also make our findings available to the public on the ACCESS research website. This protocol has been registered on Open Science Framework (OSF) DOI:10.17605/osf.io/xruhy.

Protocol Authors

The authors of this protocol and research team for this scoping review is comprised of two Māori researchers (TT & MH) and two tauwiwi (non-indigenous) researchers (VS & KE). TT is a population health doctoral candidate with experience conducting Kaupapa Māori research related to long term conditions. MH is an established and well-respected Kaupapa Māori researcher and General Practitioner. VS is an epidemiologist and public health physician with expertise in research associated with health inequities in CVD and supporting Māori and Pacific-led research on this topic. KE is Associate Dean Rural Health in the Faculty of Medical and Health Sciences at the University of Auckland and has extensive experience in rural health, health equity, access issues and participatory action research. The protocol authors jointly conceived the research question and design of this scoping review.

Patient and Public Involvement

The research aims were developed by the protocol authors and are based on both empirical evidence and preliminary findings of qualitative interviews with Māori living with CVD that were conducted as part of the wider ACCESS qualitative study. Governance of the wider ACCESS project includes two Māori stakeholder reference groups, one of which includes Māori consumers (people with lived or family experience of CVD), and the other which includes health workers providing care to Māori with CVD. More information regarding patient and public involvement can be found in Appendix A.

AUTHOR CONTRIBUTIONS

TT is leading protocol development, the search strategy, collection of papers, analysis and drafting the thesis chapter. VS, KE and MH are guarantors for the review and analysis. All authors will contribute to the development of the selection criteria, eligibility criteria, data extraction criteria, and will read, provide feedback, and approve the final manuscript.

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COMPETING INTERESTS

None declared.

For peer review only

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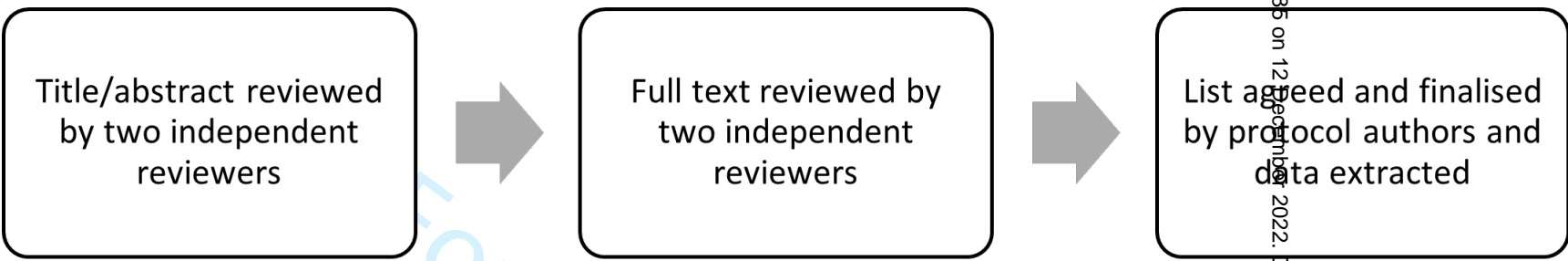


Figure 1. Process for study selection

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Appendix A. CONSIDER STATEMENT (2019)

Governance

This scoping review has been conducted as part of the Manawataki: Fatu Fatu for Access for ACCESS (ACCESS Project), a research programme funded by two New Zealand national research agencies - the Heart Foundation and the National Science Challenge – Healthier Lives. Governance of the wider research programme sits with the two principal investigators, one of whom identifies as Māori. Governance of the project also includes two Māori stakeholder reference groups, one of which includes Māori consumers (people with lived or family experience of CVD), and the other which includes health workers providing care to Māori with CVD.

Our approach to dissemination is underpinned by our foundational value of ‘Manu or Action-drive research’, which states that our research hopes to build on the gaps identified to advocated for equity. To support equitable access to any new knowledge generated, we will publish our results in an open access journal, and on our study website. We do not anticipate that this review will generate intellectual property with any commercial potential. Any intellectual property that is generated as a result of this scoping review will remain with the research team.

Prioritisation

Despite the significant disease burden and known inequities in CVD prevalence, morbidity, mortality, and access to proven treatments for Māori, little is known what barriers and facilitators influence access to CVD care for rural Māori. The aim of this scoping review is to identify and describe the extent of research available that explores the barriers and facilitators associated with accessing quality CVD healthcare for rural Indigenous Peoples. The research aims were developed by the protocol authors and are based on both empirical evidence and preliminary findings of qualitative interviews with whānau Māori living with CVD that were conducted as part of the wider ACCESS qualitative study. To the best of our knowledge, there are no known systematic reviews that explore the barriers and facilitators to accessing CVD care among rural Indigenous Peoples. A scoping review is therefore needed to identify the extent that literature is available, identify any gaps in the literature and to map available evidence.

The research team promotes Māori leadership and workforce development by recruiting and supporting Māori health researchers (including the lead author TT). This scoping review and the wider ACCESS project also uses a critical theory lens to avoid any deficit-framing or victim-blame analyses (37, 40).

Relationships (Indigenous stakeholders/participants and Research team)

Formal ethical approval is not required for this scoping review. This review and the wider research programme is underpinned by Kaupapa Māori Research methodology and indigenous ethical principles. This means that our research privileges and promotes Māori leadership, centres Māori health equity, practices safe data sampling, utilises Kaupapa Māori practices where appropriate, provides a critical theory lens to avoid victim-blame analyses, and supports Māori workforce development.

The authors of this protocol and research team for this scoping review is comprised of two Māori researchers (TT & MH) and two tauwiwi (non-indigenous) researcher (VS & KE). TT is a population health doctoral candidate with experience conducting Kaupapa Māori research related to long term conditions. MH is an established and well-respected Kaupapa Māori researcher and General Practitioner. VS is an

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3 epidemiologist and public health physician with expertise in research associated with health inequities
4 in CVD and supporting Māori and Pacific-led research on this topic. KE is Associate Dean Rural Health in
5 the Faculty of Medical and Health Sciences at the University of Auckland and has extensive experience in
6 rural health, health equity, access issues and participatory action research. The research team jointly
7 conceived the research question and design of this scoping review.
8
9

10 **Methodologies**

11 This scoping review and the conduct of the wider ACCESS project is underpinned by Kaupapa Māori
12 Research methodology. The methods and analysis of this scoping review is also guided by the Preferred
13 Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR)
14 (47).
15
16

17 **Participation**

18 There are no participant requirements as part of this literature review as we will be investigating
19 publicly available information.
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22 **Capacity**

23 This research is supporting TT (a Māori doctoral candidate) by way of funding and supervision support.
24
25

26 **Dissemination**

27 The research will be published in a peer-reviewed journal and available on the ACCESS project website.
28 We may also present the findings to community stakeholders, at conferences, and on other online
29 platforms. This scoping review will contribute to the overarching goal of the ACCESS project, which aims
30 to Quality-Improvement Equity Roadmap to inform the development of an action plan for interventions
31 to reduce barriers to Māori and Pacific peoples accessing evidence-based CVD care.
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Appendix B. Search Terms

Key Concept	Search Terms
Cardiovascular diseases	("cardiovascular diseases"[Title/Abstract]) OR ("atherosclerotic cardiovascular disease"[Title/Abstract]) OR ("atherosclerosis"[Title/Abstract]) OR ("heart failure"[Title/Abstract]) OR ("heart disease*"[Title/Abstract]) OR ("coronary heart disease"[Title/Abstract]) OR ("coronary disease*"[Title/Abstract]) OR ("cerebral vascular disease"[Title/Abstract]) OR ("cerebrovascular disorders"[Title/Abstract]) OR ("peripheral vascular disease*"[Title/Abstract]) OR ("acute coronary syndrome"[Title/Abstract]) OR ("acute coronary syndrome"[Title/Abstract]) OR ("other chronic heart disease*"[Title/Abstract]) OR ("ischemic stroke"[Title/Abstract]) OR ("ischemic stroke"[Title/Abstract]) OR ("transient ischemic attack"[Title/Abstract]) OR ("ischemic attack, transient"[Title/Abstract]) OR ("other cerebrovascular disease*"[Title/Abstract]) OR ("myocardial infarction"[Title/Abstract]) OR ("myocardial ischemia"[Title/Abstract]) OR ("unstable angina"[Title/Abstract]) OR ("angina, unstable"[Title/Abstract])
	AND
Barriers and facilitators to accessing care	("access"[Title/Abstract]) OR ("health care quality, access, and evaluation"[Title/Abstract]) OR ("barrier*"[Title/Abstract]) OR ("care"[Title/Abstract]) OR ("health services administration"[Title/Abstract]) OR ("disease management"[Title/Abstract]) OR ("ambulatory"[Title/Abstract]) OR ("hospital care"[Title/Abstract]) OR ("health service*"[Title/Abstract]) OR ("primary health care"[Title/Abstract]) OR ("intervention"[Title/Abstract]) OR ("community health services"[Title/Abstract]) OR ("facilitator*"[Title/Abstract]) OR ("experience*"[Title/Abstract]) OR ("issues"[Title/Abstract]) OR ("engagement"[Title/Abstract]) OR ("patient care management"[Title/Abstract]) OR ("delivery of health care"[Title/Abstract]) OR ("community participation"[Title/Abstract]) OR (affordab*[Title/Abstract]) OR (acceptab*[Title/Abstract]) OR ("appropriat*"[Title/Abstract]) OR ("availab*"[Title/Abstract]) OR ("factor*"[Title/Abstract])
	AND
Rurality	("rural"[Title/Abstract]) OR (rural population[Title/Abstract]) OR ("rural health"[Title/Abstract]) OR ("rural health service*"[Title/Abstract]) OR ("remote"[Title/Abstract]) OR ("outreach"[Title/Abstract]) OR ("health transition"[Title/Abstract])
	AND
Indigenous Peoples	("indigenous peoples"[Title/Abstract]) OR ("maori"[Title/Abstract]) OR ("aborigin*"[Title/Abstract]) OR ("indigenous"[Title/Abstract]) OR ("native American"[Title/Abstract]) OR ("first nation"[Title/Abstract]) OR (oceanic ancestry group[MeSH Terms]) OR (american native continental ancestry group[MeSH Terms]) OR ("torres strait islander"[Title/Abstract]) OR ("inuit"[Title/Abstract]) OR ("american Indian"[Title/Abstract])

SCOPUS Search Example

(ABS ("cardiovascular disease") OR ABS ("atherosclerotic cardiovascular disease") OR ABS ("atherosclerosis") OR ABS ("heart failure") OR ABS ("heart disease") OR ABS ("coronary heart disease") OR ABS ("coronary disease") OR ABS ("cerebrovascular disorders") OR ABS ("peripheral vascular disease") OR ABS ("acute coronary syndrome") OR ABS ("isch!emic stroke") OR ABS ("transient heart attack") OR ABS ("myocardial infarction") OR ABS ("unstable angina") AND ABS (indigenous) OR ABS (aborigin*) OR ABS (maori) OR ABS ("native american") OR ABS ("first nation") OR ABS ("torres strait islander") OR ABS (inuit) OR ABS ("american Indian")

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) AND ABS (rural) OR ABS (remote) AND ABS (barrier*) OR ABS (factor*) OR ABS (facilitator*) OR ABS (access) OR ABS (experience*) OR ABS (affordab*) OR ABS (engagement))

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Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	3
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	5
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	10
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	6
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	7
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Supplemental Material
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	8
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	9
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	10
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	9



SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	9
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	n/a
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	n/a
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	n/a
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	n/a
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	n/a
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	n/a
Limitations	20	Discuss the limitations of the scoping review process.	n/a
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	n/a
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	10

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: [10.7326/M18-0850](https://doi.org/10.7326/M18-0850).



BMJ Open

Understanding the barriers and facilitators that influence access to quality cardiovascular care for rural Indigenous Peoples: Protocol for a scoping review

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Primary Subject Heading:	Cardiovascular medicine
Secondary Subject Heading:	General practice / Family practice, Patient-centred medicine, Public health, Evidence based practice
Keywords:	CARDIOLOGY, HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Quality in health care < HEALTH SERVICES ADMINISTRATION & MANAGEMENT

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UNDERSTANDING THE BARRIERS AND FACILITATORS THAT INFLUENCE ACCESS TO QUALITY CARDIOVASCULAR CARE FOR RURAL INDIGENOUS PEOPLES: PROTOCOL FOR A SCOPING REVIEW

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ARTICLE SUMMARY

Abstract

Introduction

Māori (the Indigenous Peoples of New Zealand) are disproportionately represented in cardiovascular disease (CVD) prevalence, morbidity, and mortality rates, and are less likely to receive evidence-based CVD healthcare. Rural Māori experience additional barriers to treatment access, poorer health outcomes, and a greater burden of CVD risk factors, compared to Non-Māori and Māori living in urban areas. Importantly, these inequities are similarly experienced by Indigenous Peoples in other nations impacted by colonisation. Given the scarcity of available literature, we are conducting a scoping review of literature exploring barriers and facilitators in accessing quality CVD healthcare for rural Māori and other Indigenous Peoples in nations impacted by colonisation.

Methods and Analysis

A scoping review will be conducted using Arksey and O'Malley's (2005) methodological framework to identify and map the extent of research available and identify any gaps in the literature. This scoping review is underpinned by Kaupapa Māori Research methodology and will be reported in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist. A database search of MEDLINE (OVID), PubMed, Embase, SCOPUS, CINAHL Plus, Australia/New Zealand Reference Centre, and NZResearch.org will be used to explore empirical research literature. A search of government websites, the World Health Organisation website and Google search engine will also be conducted to identify any relevant grey literature. Two authors will independently review and screen search results in an iterative manner. A thematic analysis using Braun and Clarke's (2006) thematic analysis approach will be used to synthesize the findings.

Ethics and Dissemination

Ethical approval has not been sought for this review as we are utilising publicly available data. We will publish this protocol and the findings of our review in an open access peer-reviewed journal. This protocol has been registered on Open Science Framework DOI:10.17605/osf.io/xruhy.

Strengths and limitations of this study

- This is the first systematic review that (to our knowledge) explores barriers and facilitators of accessing quality cardiovascular care for rural Indigenous Peoples.
- In order to ensure that this research supports health equity and strengthens research conduct on and for Indigenous Peoples, it is underpinned by Kaupapa Māori Research (KMR) methodology

and the CONSolidated critERtia for strengthening the reporting of health research involving Indigenous Peoples (CONSIDER) statement.

- The review is focused on Indigenous Peoples from New Zealand, Australia, Canada, and the United States of America and although we do expect there to be similarities and relevance, our findings may not be fully generalisable to other Indigenous Peoples impacted by colonisation.
- The review is focused on cardiovascular diseases only. Other long-term or chronic conditions (e.g., type 2 diabetes mellitus) have been excluded from the scope of this review and so our findings may not be generalisable to care associated with other long-term or chronic conditions.
- To the best of our knowledge, there is no universally accepted definition for 'rural' populations. We have therefore not specified definitions for the terms 'rural' or 'remote' in this scoping review.

INTRODUCTION

Māori, the Indigenous Peoples of Aotearoa New Zealand, are disproportionately represented in cardiovascular disease (CVD) prevalence, morbidity, and mortality rates, and are less likely to receive evidence-based CVD treatment (1-3). Coronary heart disease (CHD) is also one of the biggest contributors to inequities in life expectancy for Māori, compared to non-Māori, non-Pacific people (4). These health disparities give rise to Māori experiencing a greater burden of disease and an enduring gap in life expectancy, compared to non-Māori(5, 6).

Inequities in CVD outcomes and access to quality CVD healthcare in Aotearoa New Zealand are similar to those experienced by international Indigenous Peoples, in nations impacted by colonisation. CVD disproportionately affects Indigenous Australians, American Indians, Alaska Natives, First Nations, Métis and Inuit (FNMI), and Native Hawaiians, compared to other ethnic groups within their respective nations(7-9). CVD prevalence in Indigenous Australians is one and a half times higher than non-Indigenous Australians and the CVD mortality rate in Indigenous Australians is three times higher than that of non-Indigenous Australians(9). Indigenous Australian patients are also 40% less likely to receive proven coronary interventions and have an in-hospital mortality rate double that of non-Indigenous Australians(10). In the United States and Canada, Indigenous Peoples are disproportionately affected by CVD risk factors(11). Indigenous Peoples in the United States also have worse access to quality CVD related healthcare and receive poorer CVD related healthcare, compared to White Americans(12).

These patterns of Indigenous health disparities in Aotearoa New Zealand and internationally are influenced by the ongoing impacts of colonisation and the wider social determinants of health(7, 13, 14). The historical trauma intergenerationally experienced by Indigenous Peoples through sustained dispossession of land, cultural oppression, persistent systemic racism and social deprivation all adversely impact opportunities for Indigenous Peoples to successfully engage with their respective healthcare systems(7, 10, 14, 15). The health impacts include significant physical, psychological and structural stressors, which inherently drives inequities in CVD risk factors and CVD outcomes(16).

Māori are entitled to equitable health outcomes, derived from three key sources. Firstly, Article 2 in the Te Tiriti o Waitangi (Treaty of Waitangi), the founding document of modern Aotearoa New Zealand, asserts the protection of Māori taonga (anything valued by Māori, including health) and Māori sovereignty over those taonga(17, 18). Secondly, The New Zealand Health and Disability Act 2000 expresses a commitment to improving Māori health outcomes(19). The New Zealand Ministry of Health also recently

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3 updated their expression of the Crown's Te Tiriti o Waitangi obligations in the New Zealand health and
4 disability system by publishing a new Te Tiriti o Waitangi Framework. The framework includes 'Mana
5 tangata', which expresses the Crown's commitments to achieving equity in health and disability outcomes
6 for Māori(20). In fulfilling Te Tiriti o Waitangi obligations, Māori also have the right to monitor Crown
7 agencies, given the persistent and compelling disparities in health outcomes (including the wider social
8 determinants of health), consistent health system unresponsiveness, and a lack of Māori representation
9 in health workforce(21). These rights to equitable health outcomes extends to international Indigenous
10 Peoples, as stipulated in the United Nations Declaration on the Rights of Indigenous Peoples (2007), which
11 affirms that "States shall also take effective measures to ensure, as needed, that programmes for
12 monitoring, maintaining and restoring the health of Indigenous Peoples, as developed and implemented
13 by the peoples affected by such materials, are duly implemented"(22).

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17 Rural Māori in Aotearoa New Zealand experience additional barriers to treatment access and poorer
18 health outcomes compared to those living in urban areas (New Zealand Health and Disability System
19 Review, 2020). Lilley et al (2019) recently found that rural Māori are less likely to receive timely access to
20 emergency medical services compared to other New Zealanders(23). Evidence also shows that rural Māori
21 have a greater burden of CVD risk factors, ischaemic heart disease, heart failure and stroke mortality (35+
22 years) when compared to urban Māori or urban non-Māori(3, 24). In Te Tai Tokerau Northland (the
23 northern-most region of Aotearoa New Zealand) Māori make up 36% of the population, compared to the
24 national average of 17%(25). Te Tai Tokerau Northland also has a higher proportion of people living in the
25 highest levels of social deprivation, a significantly older population compared to the national average, and
26 a high proportion of the population live in rural areas(25, 26). In 2018, 44.3% of the Māori descendent
27 population in the Northland District Health Board (DHB) region were indicated as living in the most socially
28 deprived areas, compared to 13.3% non-Māori(27). Understanding the additional barriers experienced by
29 rural Māori communities in accessing quality CVD healthcare is therefore important to consider for
30 regions like Te Tai Tokerau Northland, where there are strong intersections between ethnicity, social
31 deprivation and rurality(27, 28). The intersectionality between communities residing in rural or remote
32 areas, low socio-economic status, high levels of psycho-social stress and disparities in CVD incidence and
33 mortality rates are also observed in Indigenous Peoples in other nations(29-31).

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37 To our knowledge, there are no known systematic reviews that explore the barriers and facilitators to
38 accessing CVD care among rural Māori or rural Indigenous Peoples in other nations. A systematic scoping
39 review is therefore needed to identify the extent that literature is available, identify any gaps in the
40 literature and map available evidence, all well maintaining rigor and transparency in our methods to
41 ensure our results are reliable(32). Given the scarcity of localised literature here in Aotearoa New Zealand,
42 and the similarities in health disparities experienced by Indigenous Peoples in colonised nations, we have
43 extended this review to include rural Indigenous Peoples in other nations(11, 33).

44 45 46 47 **METHODS AND ANALYSIS**

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49 A scoping review approach was chosen as it best aligned with our research objectives, which are aimed at
50 mapping and summarising the extent of available literature while maintaining rigor and transparency(32).
51 This approach was also selected given that the research topic has not been comprehensively addressed
52 previously(34). The conduct of this scoping review will be guided by Arksey and O'Malley's (2005) Scoping
53 Review Methodological Framework (35). The methods and analysis of this scoping review will also be
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reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR)(36).

Methodology

Kaupapa Māori Research

This scoping review will be underpinned by Kaupapa Māori Research (KMR) methodology. KMR methodology is one of many decolonising methodologies in existence that responds to traditional positivist and colonial approaches by centring Indigenous world-views and epistemologies(37). Decolonising methodologies supports Indigenous reclamation of self-determination and social justice in the research space, particularly for Indigenous Peoples that have been harmed by colonisation(37). By foregrounding KMR, we assert tino rangitiratanga (self-determination) and privilege Māori ways of being and understanding(37-40). KMR reconciles imbalances in power and supports social justice by challenging dominant systems, cultural deficit theories and victim-blame analyses(39, 41, 42). It can also be utilised for both quantitative and qualitative research methods, where appropriate(39). We acknowledge that there is no singular decolonising methodology that can be appropriately applied across all Indigenous Peoples, however KMR allows us to approach international literature involving Indigenous Peoples in a respectful and meaningful manner, whilst asserting our own self-determination in our research objectives(39, 43).

CONSIDER Statement

To reconcile a legacy of exploitative and inequitable health research conduct on Indigenous Peoples, it is important that this scoping review is conducted in a manner that supports health equity and strengthens research conduct on and for Indigenous Peoples(37, 44, 45). We have therefore utilised the CONSolidated critERTia for strengthening the reporting of health research involving Indigenous Peoples (CONSIDER) Statement (2019) as a tool to critically appraise our methodology in relation to strengthening Indigenous research and reducing health inequities(45). Here, we summarise key points from our critical appraisal under the CONSIDER Statement framework, and have attached our full appraisal in Appendix A.

This scoping review has been conducted as part of the Manawataki: Fatu Fatu for Access for ACCESS (ACCESS Project), a research programme funded by two New Zealand national research agencies - the Heart Foundation and the National Science Challenge – Healthier Lives. Governance of the wider research programme sits with the two principal investigators, one of whom identifies as Māori. Governance of the project also includes two Māori stakeholder reference groups, one of which includes Māori consumers (people with lived or family experience of CVD), and the other which includes health workers providing care to Māori with CVD.

The objectives of this scoping review were developed by the protocol authors, based on both known gaps in empirical evidence and preliminary findings of qualitative interviews with Māori participants as part of the wider ACCESS research project. To the best of our knowledge, there are no known systematic reviews that explore the barriers and facilitators to accessing CVD healthcare among rural Māori or other rural Indigenous Peoples. A scoping review is therefore needed to identify the extent that literature is available, identify any gaps in the literature and to map available evidence related to the barriers and facilitators to CVD care access among rural Māori and rural Indigenous Peoples in other nations.

This scoping review and the conduct of the wider ACCESS project is underpinned by Kaupapa Māori Research Methodology (described above). This review is led by an emerging Māori health researcher, who is supported by a well-established Māori health researcher (principal investigator of the ACCESS project) and tauīwi (non-Indigenous) health researchers who have significant experience in Māori health equity research(46, 47). The wider ACCESS research team promotes Māori leadership and workforce development by supporting several Māori studentships and emerging Māori researchers. To ensure equity in access to our findings, we intend to publish our results in an open-access journal and on the ACCESS research website. Finally, there will be no resource demands placed on Indigenous communities as part of this scoping review as it will be based on information already in the public domain.

Stage 1: Defining the research question

The research question for this scoping review was developed in a collaborative manner by the protocol authors. There were a number of considerations when defining parameters we were interested in, given the breadth and ambiguity of some concepts (e.g., cardiovascular diseases, healthcare services, and indigenous peoples).

Research Question

What are the barriers and facilitators associated with accessing quality CVD healthcare for rural Indigenous Peoples?

Objectives

The aim of this scoping review is to identify and describe the extent of research available that investigates the barriers and facilitators associated with accessing quality CVD healthcare for rural Indigenous Peoples. Specific objectives are:

1. To identify the extent of research available.
2. To map and summarise main findings related to the barriers and facilitators to accessing quality CVD healthcare in Māori and other rural Indigenous Peoples.
3. To identify and describe any gaps in the literature.
4. To identify and describe how further research in this area can benefit healthcare access for rural Māori and other rural Indigenous Peoples.

Stage 2: Identifying relevant studies

Eligibility Criteria

Publications will be selected according to the criteria described below.

Study Design

We will include published original research studies irrespective of study type as well as a range of grey literature (described below). Both qualitative and quantitative studies will be included in this review, although we anticipate that our findings are likely to be presented as qualitative data.

The following literature will be excluded:

- Texts that do not have a research question or report new data (e.g., opinion pieces).
- Studies that do not focus on the outcomes described below.
- Studies for which the full text is not available.

Participants/Population

The population of interest for this scoping review includes Māori and Indigenous Peoples in other nations. Given that there is no internationally recognised standard definition of Indigenous Peoples, we will instead utilise three definitions of 'Indigenous Peoples' to describe the population of interest for this review. Firstly, we will use two definitions from the United Nations. The first, describes Indigenous Peoples as "inheritors and practitioners of unique cultures and ways of relating to people and the environment. They have retained social, cultural, economic, and political characteristics that are distinct from those of the dominant societies in which they live" (48). Secondly, we utilise the United Nations Working Group on Indigenous Populations (2009) definition, which specifies four key factors when describing 'Indigeneity': (one) "Priority in time, with respect to the occupation and use of a specific territory"; (two) "The voluntary perpetuation of cultural distinctiveness, which may include the aspects of language, social organization, religion and spiritual values, modes of production, laws and institutions"; (three) "Self-identification, as well as recognition by other groups, or by State authorities, as a distinct collectivity"; and (four) "An experience of subjugation, marginalization, dispossession, exclusion or discrimination, whether or not these conditions persist"(49). Lastly, we incorporate the 1989 International Labour Organisation's Indigenous and Tribal Peoples Convention Policy description, which describes Indigenous Peoples as (a) "tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations"; and (b) "peoples in independent countries who are regarded as Indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions"(50). Based on these definitions, we will include literature from New Zealand, Australia, Canada, and the United States of America. We will also focus our search on adults aged 18 years and older, as CVD is primarily a disease of adults.

We also will include literature focusing the following CVD conditions(51):

- Atherosclerotic cardiovascular disease
- Heart failure
- Coronary heart disease
- Cerebral vascular disease
- Peripheral vascular disease
- Acute coronary syndrome
- Other chronic heart diseases
- Ischaemic stroke
- Transient ischemic attack
- Other cerebrovascular diseases
- Myocardial infarction
- Unstable angina

Lastly, in absence of a universal definition for 'rural' populations, we have not specified definitions for the terms 'rural' or 'remote'. We will instead align our rurality inclusion criteria Wilson et. al (2009) methods

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3 by including literature that uses the terms 'rural' and 'remote' when describing their participants, target
4 population or population of interest(52).
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6 *Setting*

7 Literature based in any care setting (including community, inpatient, and outpatient settings) providing
8 care to adults for CVD will be included.
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10 *Outcomes*

11 The outcomes of this scoping review will include:
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- 13 • Barriers to accessing care in rural Indigenous Peoples living with CVD, reported by Indigenous
14 Peoples and health service providers.
- 15 • Facilitators to accessing care in rural Indigenous Peoples living with CVD, reported by Indigenous
16 Peoples and health service providers.
- 17 • Reported gaps and limitations.
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21 *Time frame*

22 We will include literature published between January 1990 and January 2022. This timeframe was selected
23 as the 1990s signified the start of significant structural changes to the health system in New Zealand and
24 would allow us to identify any relevant literature pertaining to our research objectives (53).
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27 *Language*

28 While we anticipate most of the literature will be reported in English, we will also consider publications
29 reported in other languages. For publications not reported in English (e.g., publications from Canada
30 reported in French), we will attempt to locate an English version of the publication. If we are unable to
31 source an English version of the publication, translation services will be sought.
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34 *Search Strategy*

35 We will search the following databases: MEDLINE (OVID), PubMed, Embase, SCOPUS, CINAHL Plus,
36 Australia/New Zealand Reference Centre, NZResearch.org. Literature search strategies will be tailored to
37 individual databases (e.g., using medical subject heading (MeSH) terms). Search terms were iteratively
38 developed by the protocol authors with support from subject librarians at the University of Auckland. A
39 table of key search terms has been provided in Appendix B.
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43 *Grey Literature*

44 We will conduct a Grey Literature search to promote a more comprehensive analysis, reduce publication
45 bias, and capture emerging research areas(54). We will only include published reports from official
46 government agencies, government funded agencies, nationally recognised charitable organisations, and
47 publications by the World Health Organisation. We will search official governmental websites of those
48 nations included in our scoping review (see Table 1) and carry out a Google search engine search using
49 our search terms to locate grey literature that addresses any of the Outcomes listed in this protocol. This
50 approach maximises our chances of identifying relevant information by using overlapping approaches(55).
51 To focus our results, we will limit google search results to the first 30 items listed. Reports that address
52 any of the Outcomes described above will be shortlisted by and then independently reviewed by two
53 reviewers. To ensure that there is an appropriate level of rigour in our approach, we will evaluate grey
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literature using the ACCODS checklist for evaluating and critically evaluating grey literature, developed by Flinders University(56).

Table 1. Official governmental websites included in grey literature search

Country/Organisation	Link
New Zealand	https://www.health.govt.nz/
Australia	https://www.health.gov.au/
Canada	https://www.canada.ca/en/health-canada.html
United States of America	https://www.usa.gov/health
Hawaii State	https://portal.ehawaii.gov/
World Health Organisation	https://www.who.int/

Stage 3: Study selection

A summary of our process for identifying relevant sources of evidence is provided in Figure 1. Firstly, the lead protocol author will conduct an electronic search based in on the search strategy. Once the search has been completed and duplicates have been removed, two of the protocol authors will screen titles and abstracts based on eligibility criteria. A full text review will then be conducted by two of the protocol authors on the remaining list of publications. Once the full text review has been completed, the remaining list of publications will be finalised, and data will then be charted. Any disagreements throughout the screening process will be resolved via discussion with the aim to reach consensus. A member of the wider ACCESS project will be available to mediate and resolve any disagreements where consensus is unable to be reached. Literature search results will be managed through Endnote and Microsoft Excel.

Stage 4: Data extraction and charting

Data Charting

The protocol authors will determine the appropriate variables for data extraction. A standardised data form will be created. The lead protocol author will perform data charting process and then discuss analysis and synthesis of results with the other protocol authors.

Data Items

Where available, the following data will be extracted from each eligible citation:

- a) General information
 - a. Author
 - b. Article title
 - c. Year
 - d. Country
- b) Study characteristics
 - a. Aims/objectives of study

- b. Study design/type
 - c. Study inclusion/exclusion criteria
 - d. Recruitment procedures and sample size
- c) Participant characteristics
 - a. Sample size
 - b. Ethnicity
 - d) Study outcome(s) listed in this protocol.

Stage 5: Collating, summarising, and reporting findings

Critical appraisal of individual sources of evidence

Scoping reviews do not require the appraisal or synthesis of the review findings(57). However, given that our review is underpinned by Kaupapa Māori Research methodology, we may appraise literature using the CONSIDER Statement and include commentary on our findings within our scoping review results.

Analysis and Synthesis

The analysis of this scoping review will be underpinned by Kaupapa Māori Research principles and will be reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist (36, 37). Following Troung et al. (2022), we will utilise Braun and Clarke's (2006) thematic analysis approach to analyse qualitative and quantitative literature included in the final shortlist (58, 59). Initial codes will be generated then collated into potential themes, followed by reviewing and defining the themes (58). NVivo software will be used to analyse the literature.

Stage 6. Consultation

Patient and Public Involvement

Governance of the wider ACCESS project includes two Māori stakeholder reference groups, one of which includes Māori consumers (people with lived or family experience of CVD), and the other which includes health workers providing care to Māori with CVD. More information regarding patient and public involvement can be found in Appendix A.

Consultation

Consultation involving practitioners and consumers is optional but recommended in Arksey and O'Malley's methodological framework for scoping reviews (35). The research aims of this scoping review were informed by both empirical evidence and preliminary findings of qualitative interviews with Māori healthcare consumers living with CVD, conducted as part of the wider ACCESS qualitative study. We will disseminate the methods and findings of this scoping review to the ACCESS Māori stakeholder groups, who will be asked to provide feedback. We will incorporate all stakeholder feedback, where practicable.

Ethics and Dissemination

Ethical approval will not be sought for this scoping review, as it will only include publicly accessible publications. We intend to publish the results of this scoping review in an open access peer-reviewed journal and will also make our findings available to the public on the ACCESS research website. This protocol has been registered on Open Science Framework (OSF) DOI:10.17605/osf.io/xruhy.

AUTHOR CONTRIBUTIONS

TT is leading protocol development, the search strategy, collection of papers, analysis and drafting the thesis chapter. VS, KE and MH are guarantors for the review and analysis. All authors will contribute to the overall design of the scoping review, development of the selection criteria, eligibility criteria, data extraction criteria, and will read, provide feedback, and approve the final manuscript.

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COMPETING INTERESTS

None declared.

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Figure 1. Process for study selection

For peer review only

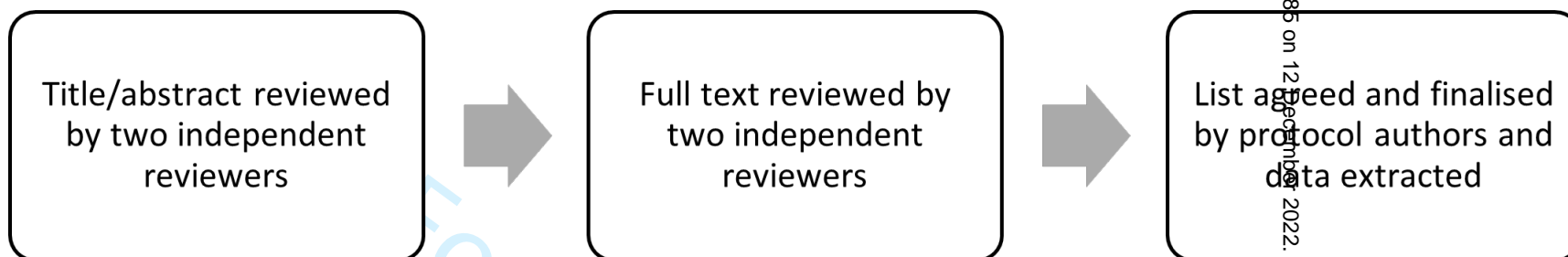


Figure 1. Process for study selection

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Appendix A. CONSIDER STATEMENT (2019)

Governance

This scoping review has been conducted as part of the Manawataki: Fatu Fatu for Access for ACCESS (ACCESS Project), a research programme funded by two New Zealand national research agencies - the Heart Foundation and the National Science Challenge – Healthier Lives. Governance of the wider research programme sits with the two principal investigators, one of whom identifies as Māori. Governance of the project also includes two Māori stakeholder reference groups, one of which includes Māori consumers (people with lived or family experience of CVD), and the other which includes health workers providing care to Māori with CVD.

Our approach to dissemination is underpinned by our foundational value of ‘Manu or Action-drive research’, which states that our research hopes to build on the gaps identified to advocated for equity. To support equitable access to any new knowledge generated, we will publish our results in an open access journal, and on our study website. We do not anticipate that this review will generate intellectual property with any commercial potential. Any intellectual property that is generated as a result of this scoping review will remain with the research team.

Prioritisation

Despite the significant disease burden and known inequities in CVD prevalence, morbidity, mortality, and access to proven treatments for Māori, little is known what barriers and facilitators influence access to CVD care for rural Māori. The aim of this scoping review is to identify and describe the extent of research available that explores the barriers and facilitators associated with accessing quality CVD healthcare for rural Indigenous Peoples. The research aims were developed by the protocol authors and are based on both empirical evidence and preliminary findings of qualitative interviews with whānau Māori living with CVD that were conducted as part of the wider ACCESS qualitative study. To the best of our knowledge, there are no known systematic reviews that explore the barriers and facilitators to accessing CVD care among rural Indigenous Peoples. A scoping review is therefore needed to identify the extent that literature is available, identify any gaps in the literature and to map available evidence.

The research team promotes Māori leadership and workforce development by recruiting and supporting Māori health researchers (including the lead author TT). This scoping review and the wider ACCESS project also uses a critical theory lens to avoid any deficit-framing or victim-blame analyses (37, 40).

Relationships (Indigenous stakeholders/participants and Research team)

Formal ethical approval is not required for this scoping review. This review and the wider research programme is underpinned by Kaupapa Māori Research methodology and indigenous ethical principles. This means that our research privileges and promotes Māori leadership, centres Māori health equity, practices safe data sampling, utilises Kaupapa Māori practices where appropriate, provides a critical theory lens to avoid victim-blame analyses, and supports Māori workforce development.

The authors of this protocol and research team for this scoping review is comprised of two Māori researchers (TT & MH) and two tauwiwi (non-indigenous) researcher (VS & KE). TT is a population health doctoral candidate with experience conducting Kaupapa Māori research related to long term conditions. MH is an established and well-respected Kaupapa Māori researcher and General Practitioner. VS is an

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3 epidemiologist and public health physician with expertise in research associated with health inequities
4 in CVD and supporting Māori and Pacific-led research on this topic. KE is Associate Dean Rural Health in
5 the Faculty of Medical and Health Sciences at the University of Auckland and has extensive experience in
6 rural health, health equity, access issues and participatory action research. The research team jointly
7 conceived the research question and design of this scoping review.
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9

10 **Methodologies**

11 This scoping review and the conduct of the wider ACCESS project is underpinned by Kaupapa Māori
12 Research methodology. The methods and analysis of this scoping review is also guided by the Preferred
13 Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR)
14 (47).
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17 **Participation**

18 There are no participant requirements as part of this literature review as we will be investigating
19 publicly available information.
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22 **Capacity**

23 This research is supporting TT (a Māori doctoral candidate) by way of funding and supervision support.
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26 **Dissemination**

27 The research will be published in a peer-reviewed journal and available on the ACCESS project website.
28 We may also present the findings to community stakeholders, at conferences, and on other online
29 platforms. This scoping review will contribute to the overarching goal of the ACCESS project, which aims
30 to Quality-Improvement Equity Roadmap to inform the development of an action plan for interventions
31 to reduce barriers to Māori and Pacific peoples accessing evidence-based CVD care.
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Appendix B. Search Terms

Key Concept	Search Terms
Cardiovascular diseases	("cardiovascular diseases"[Title/Abstract]) OR ("atherosclerotic cardiovascular disease"[Title/Abstract]) OR ("atherosclerosis"[Title/Abstract]) OR ("heart failure"[Title/Abstract]) OR ("heart disease*"[Title/Abstract]) OR ("coronary heart disease"[Title/Abstract]) OR ("coronary disease*"[Title/Abstract]) OR ("cerebral vascular disease"[Title/Abstract]) OR ("cerebrovascular disorders"[Title/Abstract]) OR ("peripheral vascular disease*"[Title/Abstract]) OR ("acute coronary syndrome"[Title/Abstract]) OR ("acute coronary syndrome"[Title/Abstract]) OR ("other chronic heart disease*"[Title/Abstract]) OR ("ischemic stroke"[Title/Abstract]) OR ("Ischemic stroke"[Title/Abstract]) OR ("transient ischemic attack"[Title/Abstract]) OR ("ischemic attack, transient"[Title/Abstract]) OR ("other cerebrovascular disease*"[Title/Abstract]) OR ("myocardial infarction"[Title/Abstract]) OR ("myocardial ischemia"[Title/Abstract]) OR ("unstable angina"[Title/Abstract]) OR ("angina, unstable"[Title/Abstract])
	AND
Barriers and facilitators to accessing care	("access"[Title/Abstract]) OR ("health care quality, access, and evaluation"[Title/Abstract]) OR ("barrier*"[Title/Abstract]) OR ("care"[Title/Abstract]) OR ("health services administration"[Title/Abstract]) OR ("disease management"[Title/Abstract]) OR ("ambulatory"[Title/Abstract]) OR ("hospital care"[Title/Abstract]) OR ("health service*"[Title/Abstract]) OR ("primary health care"[Title/Abstract]) OR ("intervention"[Title/Abstract]) OR ("community health services"[Title/Abstract]) OR ("facilitator*"[Title/Abstract]) OR ("experience*"[Title/Abstract]) OR ("issues"[Title/Abstract]) OR ("engagement"[Title/Abstract]) OR ("patient care management"[Title/Abstract]) OR ("delivery of health care"[Title/Abstract]) OR ("community participation"[Title/Abstract]) OR (affordab*[Title/Abstract]) OR (acceptab*[Title/Abstract]) OR ("appropriat*"[Title/Abstract]) OR ("availab*"[Title/Abstract]) OR ("factor*"[Title/Abstract])
	AND
Rurality	("rural"[Title/Abstract]) OR (rural population[Title/Abstract]) OR ("rural health"[Title/Abstract]) OR ("rural health service*"[Title/Abstract]) OR ("remote"[Title/Abstract]) OR ("outreach"[Title/Abstract]) OR ("health transition"[Title/Abstract])
	AND
Indigenous Peoples	("indigenous peoples"[Title/Abstract]) OR ("maori"[Title/Abstract]) OR ("aborigin*"[Title/Abstract]) OR ("indigenous"[Title/Abstract]) OR ("native American"[Title/Abstract]) OR ("first nation"[Title/Abstract]) OR (oceanic ancestry group[MeSH Terms]) OR (american native continental ancestry group[MeSH Terms]) OR ("torres strait islander"[Title/Abstract]) OR ("inuit"[Title/Abstract]) OR ("american Indian"[Title/Abstract])

SCOPUS Search Example

(ABS ("cardiovascular disease") OR ABS ("atherosclerotic cardiovascular disease") OR ABS ("atherosclerosis") OR ABS ("heart failure") OR ABS ("heart disease") OR ABS ("coronary heart disease") OR ABS ("coronary disease") OR ABS ("cerebrovascular disorders") OR ABS ("peripheral vascular disease") OR ABS ("acute coronary syndrome") OR ABS ("isch!emic stroke") OR ABS ("transient heart attack") OR ABS ("myocardial infarction") OR ABS ("unstable angina") AND ABS (indigenous) OR ABS (aborigin*) OR ABS (maori) OR ABS ("native american") OR ABS ("first nation") OR ABS ("torres strait islander") OR ABS (inuit) OR ABS ("american Indian")

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3) AND ABS (rural) OR ABS (remote) AND ABS (barrier*) OR ABS (factor*) OR ABS (facilitator*) OR ABS (access) OR ABS (experience*) OR ABS (affordab*) OR ABS (engagement)
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Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	3
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	6
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	10
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	6
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	8
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Supplemental Material
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	8
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	9
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	9
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	9



SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	10
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	n/a
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	n/a
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	n/a
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	n/a
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	n/a
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	n/a
Limitations	20	Discuss the limitations of the scoping review process.	n/a
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	n/a
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	10

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: [10.7326/M18-0850](https://doi.org/10.7326/M18-0850).



BMJ Open

Understanding the barriers and facilitators that influence access to quality cardiovascular care for rural Indigenous Peoples: Protocol for a scoping review

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Manuscripts

UNDERSTANDING THE BARRIERS AND FACILITATORS THAT INFLUENCE ACCESS TO QUALITY CARDIOVASCULAR CARE FOR RURAL INDIGENOUS PEOPLES: PROTOCOL FOR A SCOPING REVIEW

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ARTICLE SUMMARY

Abstract

Introduction

Māori (the Indigenous Peoples of New Zealand) are disproportionately represented in cardiovascular disease (CVD) prevalence, morbidity, and mortality rates, and are less likely to receive evidence-based CVD healthcare. Rural Māori experience additional barriers to treatment access, poorer health outcomes, and a more significant burden of CVD risk factors compared to Non-Māori and Māori living in urban areas. Importantly, these inequities are similarly experienced by Indigenous Peoples in other nations impacted by colonisation. Given the scarcity of available literature, we are conducting a scoping review of literature exploring barriers and facilitators in accessing quality CVD healthcare for rural Māori and other Indigenous Peoples in nations impacted by colonisation.

Methods and Analysis

A scoping review will be conducted to identify and map the extent of research available and identify any gaps in the literature. This review will be underpinned by Kaupapa Māori Research methodology and will be conducted using Arksey and O'Malley's (2005) methodological framework. A database search of MEDLINE (OVID), PubMed, Embase, SCOPUS, CINAHL Plus, Australia/New Zealand Reference Centre, and NZResearch.org will be used to explore empirical research literature. A grey literature search will also be conducted. Two authors will independently review and screen search results in an iterative manner. The New Zealand Ministry of Health Te Tiriti o Waitangi (Treaty of Waitangi) Framework principles will be utilised as a framework to summarise and construct a narrative of existing literature. Existing literature will also be appraised using the CONSOLIDated critERTia for strengthening the reporting of health research involving Indigenous Peoples (CONSIDER) statement.

Ethics and Dissemination

Ethical approval has not been sought for this review as we are utilising publicly available data. We will publish this protocol and the findings of our review in an open access peer-reviewed journal. This protocol has been registered on Open Science Framework DOI:10.17605/osf.io/xruhy.

Strengths and limitations of this study

- This is the first systematic review that (to our knowledge) explores barriers and facilitators of accessing quality cardiovascular care for rural Indigenous Peoples.
- To ensure that this research supports health equity and strengthens research conduct on and for Indigenous Peoples, it is underpinned by Kaupapa Māori Research (KMR) methodology and the

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CONSolidated critERTia for strengthening the reporting of health research involving Indigenous Peoples (CONSIDER) statement.

- The review is focused on Indigenous Peoples from New Zealand, Australia, Canada, and the United States of America, and although we do expect there to be similarities and relevance, our findings may not be fully generalisable to other Indigenous Peoples impacted by colonisation.
- The review is focused on cardiovascular diseases only. Other long-term or chronic conditions (e.g., type 2 diabetes mellitus) have been excluded from the scope of this review. Therefore, our findings may not be generalisable to care associated with other long-term or chronic conditions.
- To the best of our knowledge, there is no universally accepted definition for 'rural' populations. Therefore, we have not specified definitions for the terms 'rural' or 'remote' in this scoping review.

INTRODUCTION

Māori, the Indigenous Peoples of Aotearoa New Zealand, are disproportionately represented in cardiovascular disease (CVD) prevalence, morbidity, and mortality rates, and are less likely to receive evidence-based CVD treatment (1-3). Coronary heart disease (CHD) is also one of the most significant contributors to inequities in life expectancy for Māori, compared to non-Māori, non-Pacific people (4). These health disparities give rise to Māori experiencing a greater burden of disease and an enduring gap in life expectancy, compared to non-Māori(5, 6).

Inequities in CVD outcomes and access to quality CVD healthcare in Aotearoa New Zealand are similar to those experienced by international Indigenous Peoples, in nations impacted by colonisation. CVD disproportionately affects Indigenous Australians, American Indians, Alaska Natives, First Nations, Métis and Inuit (FNMI), and Native Hawaiians, compared to other ethnic groups within their respective nations(7-9). CVD prevalence in Indigenous Australians is one and a half times higher than non-Indigenous Australians, and the CVD mortality rate in Indigenous Australians is three times higher than that of non-Indigenous Australians(9). Indigenous Australian patients are also 40% less likely to receive proven coronary interventions and have an in-hospital mortality rate double that of non-Indigenous Australians(10). In the United States and Canada, Indigenous Peoples are disproportionately affected by CVD risk factors(11). Indigenous Peoples in the United States also have worse access to quality CVD-related healthcare and receive poorer CVD-related healthcare, compared to White Americans(12).

These patterns of Indigenous health disparities in Aotearoa New Zealand, and internationally are influenced by the ongoing impacts of colonisation and the wider social determinants of health(7, 13, 14). The historical trauma intergenerationally experienced by Indigenous Peoples through sustained dispossession of land, cultural oppression, persistent systemic racism and social deprivation all adversely impact opportunities for Indigenous Peoples to successfully engage with their respective healthcare systems(7, 10, 14, 15). The health impacts include significant physical, psychological and structural stressors, which inherently drive inequities in CVD risk factors and CVD outcomes(16).

Māori are entitled to equitable health outcomes, derived from three key sources. Firstly, Article 2 in the Te Tiriti o Waitangi (Treaty of Waitangi), the founding document of modern Aotearoa New Zealand, asserts the protection of Māori taonga (anything valued by Māori, including health) and Māori sovereignty over those taonga(17, 18). Secondly, The New Zealand Health and Disability Act 2000 expresses a commitment to improving Māori health outcomes(19). The New Zealand Ministry of Health also recently

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2
3 updated its expression of the Crown's Te Tiriti o Waitangi obligations in the New Zealand health and
4 disability system by publishing a new Te Tiriti o Waitangi Framework. The framework includes 'Mana
5 tangata', which expresses the Crown's commitment to achieving equity in health and disability outcomes
6 for Māori(20). In fulfilling Te Tiriti o Waitangi obligations, Māori also have the right to monitor Crown
7 agencies, given the persistent and compelling disparities in health outcomes (including the wider social
8 determinants of health), consistent health system unresponsiveness, and a lack of Māori representation
9 in health workforce(21). These rights to equitable health outcomes extends to international Indigenous
10 Peoples, as stipulated in the United Nations Declaration on the Rights of Indigenous Peoples (2007), which
11 affirms that "States shall also take effective measures to ensure, as needed, that programmes for
12 monitoring, maintaining and restoring the health of Indigenous Peoples, as developed and implemented
13 by the peoples affected by such materials, are duly implemented"(22).

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17 Rural Māori in Aotearoa New Zealand experience additional barriers to treatment access and poorer
18 health outcomes compared to those living in urban areas (New Zealand Health and Disability System
19 Review, 2020). Lilley et al. (2019) recently found that rural Māori are less likely to receive timely access
20 to emergency medical services compared to other New Zealanders(23). Evidence also shows that rural
21 Māori have a greater burden of CVD risk factors, ischaemic heart disease, heart failure and stroke
22 mortality (35+ years) when compared to urban Māori or urban non-Māori(3, 24). In Te Tai Tokerau
23 Northland (the northern-most region of Aotearoa New Zealand) Māori make up 36% of the population,
24 compared to the national average of 17%(25). Te Tai Tokerau Northland also has a higher proportion of
25 people living in the highest levels of social deprivation, a significantly older population compared to the
26 national average, and a high proportion of the population live in rural areas(25, 26). In 2018, 44.3% of the
27 Māori descendent population in the Northland District Health Board (DHB) region were indicated as living
28 in the most socially deprived areas, compared to 13.3% non-Māori(27). Understanding the additional
29 barriers experienced by rural Māori communities in accessing quality CVD healthcare is therefore essential
30 to consider for regions like Te Tai Tokerau Northland, where there are strong intersections between
31 ethnicity, social deprivation and rurality(27, 28). The intersectionality between communities residing in
32 rural or remote areas, low socio-economic status, high levels of psycho-social stress and disparities in CVD
33 incidence and mortality rates are also observed in Indigenous Peoples in other nations(29-31).

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37 To our knowledge, there are no known systematic reviews that explore the barriers and facilitators to
38 accessing CVD care among rural Māori or rural Indigenous Peoples in other nations. A systematic scoping
39 review is therefore needed to identify the extent that literature is available, identify any gaps in the
40 literature and map available evidence, all well maintaining rigor and transparency in our methods to
41 ensure our results are reliable(32). Given the scarcity of localised literature here in Aotearoa New Zealand,
42 and the similarities in health disparities experienced by Indigenous Peoples in colonised nations, we have
43 extended this review to include rural Indigenous Peoples in other nations(11, 33).

44 45 46 47 **METHODS AND ANALYSIS**

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49 A scoping review approach was chosen as it best aligned with our research objectives, which are aimed at
50 mapping and summarising the extent of available literature while maintaining rigor and transparency(32).
51 This approach was also selected because the research topic has not been comprehensively addressed
52 previously(34). The conduct of this scoping review will be guided by Arksey and O'Malley's (2005) Scoping
53 Review Methodological Framework (35).
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Methodology

Kaupapa Māori Research

This scoping review will be underpinned by Kaupapa Māori Research (KMR) methodology. KMR methodology is one of many decolonising methodologies in existence that responds to traditional positivist and colonial approaches by centring Indigenous worldviews and epistemologies(36). Decolonising methodologies support Indigenous reclamation of self-determination and social justice in the research space, particularly for Indigenous Peoples that have been harmed by colonisation(36). By foregrounding KMR, we assert tino rangitiratanga (self-determination) and privilege Māori ways of being and understanding(36-39). KMR reconciles imbalances in power and supports social justice by challenging dominant systems, cultural deficit theories and victim-blame analyses(38, 40, 41). It can also be utilised for both quantitative and qualitative research methods, where appropriate(38). We acknowledge that there is no singular decolonising methodology that can be appropriately applied across all Indigenous Peoples, however KMR allows us to approach international literature involving Indigenous Peoples in a respectful and meaningful manner, whilst asserting our own self-determination in our research objectives(38, 42).

CONSIDER Statement

To reconcile a legacy of exploitative and inequitable health research conduct on Indigenous Peoples, it is important that this scoping review is conducted in a manner that supports health equity and strengthens research conduct on and for Indigenous Peoples(36, 43, 44). We have therefore utilised the CONSolidated critERTia for strengthening the reporting of health research involving Indigenous Peoples (CONSIDER) Statement (2019) as a tool to critically appraise our methodology in relation to strengthening Indigenous research and reducing health inequities(44). Here, we summarise key points from our critical appraisal under the CONSIDER Statement framework, and have attached our full appraisal in Appendix A.

This scoping review is being conducted as part of the Manawataki: Fatu Fatu for Access for ACCESS (ACCESS Project), a research programme funded by two New Zealand national research agencies - the Heart Foundation and the National Science Challenge – Healthier Lives. Governance of the wider research programme sits with the two principal investigators, one of whom identifies as Māori. Governance of the project also includes two Māori stakeholder reference groups, one of which includes Māori consumers (people with lived or family experience of CVD), and the other which includes health workers providing care to Māori with CVD.

The objectives of this scoping review were developed by the protocol authors, based on both known gaps in empirical evidence and preliminary findings of qualitative interviews with Māori participants as part of the wider ACCESS research project. To the best of our knowledge, there are no known systematic reviews that explore the barriers and facilitators to accessing CVD healthcare among rural Māori or other rural Indigenous Peoples. A scoping review is therefore needed to identify the extent that literature is available, identify any gaps in the literature and to map available evidence related to the barriers and facilitators to CVD care access among rural Māori and rural Indigenous Peoples in other nations.

This scoping review and the conduct of the wider ACCESS project is underpinned by Kaupapa Māori Research Methodology (described above). This review is led by an emerging Māori health researcher, who is supported by a well-established Māori health researcher (principal investigator of the ACCESS project) and tauwiwi (non-Indigenous) health researchers who have significant experience in Māori health equity

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3 research(45, 46). The wider ACCESS research team promotes Māori leadership and workforce
4 development by supporting several Māori studentships and emerging Māori researchers. To ensure equity
5 in access to our findings, we intend to publish our results in an open-access journal and on the ACCESS
6 research website. Finally, there will be no resource demands placed on Indigenous communities as part
7 of this scoping review as it will be based on information already in the public domain.
8
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10 11 12 **Stage 1: Defining the research question**

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14 The protocol authors developed the research question for this scoping review in a collaborative manner.
15 There were a number of considerations when defining parameters we were interested in, given the
16 breadth and ambiguity of some concepts (e.g., cardiovascular diseases, healthcare services, and
17 Indigenous Peoples).
18

19 20 ***Research Question***

21 What barriers and facilitators are associated with accessing quality CVD healthcare for rural Indigenous
22 Peoples?
23

24 25 ***Objectives***

26 This scoping review aims to identify and describe the extent of research available that investigates the
27 barriers and facilitators associated with accessing quality CVD healthcare for rural Indigenous Peoples.
28 Specific objectives are:
29

- 30 1. To identify the extent of research available.
- 31 2. To map and summarise main findings related to the barriers and facilitators to accessing quality
32 CVD healthcare in Māori and other rural Indigenous Peoples.
- 33 3. To identify and describe any gaps in the literature.
- 34 4. To identify and describe how further research in this area can benefit healthcare access for rural
35 Māori and other rural Indigenous Peoples.
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38 39 **Stage 2: Identifying relevant studies**

40 41 42 ***Eligibility Criteria***

43 Publications will be selected according to the criteria described below.
44

45 46 ***Study Design***

47 We will include published original research studies irrespective of study type as well as a range of grey
48 literature (described below). Both qualitative and quantitative studies will be included in this review,
49 although it is anticipated that our findings are likely to be presented as qualitative data.
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51 The following literature will be excluded:
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- 53 • Texts that do not have a research question or report new data (e.g., opinion pieces).
- 54 • Studies that do not focus on the outcomes described below.
- 55 • Studies for which the full text is not available.
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Participants/Population

The population of interest for this scoping review includes Māori and Indigenous Peoples in other nations. Given that there is no internationally recognised standard definition of Indigenous Peoples, we will instead utilise three definitions of 'Indigenous Peoples' to describe the population of interest for this review. Firstly, we will use two definitions from the United Nations. The first describes Indigenous Peoples as "inheritors and practitioners of unique cultures and ways of relating to people and the environment. They have retained social, cultural, economic, and political characteristics that are distinct from those of the dominant societies in which they live" (47). Secondly, we utilise the United Nations Working Group on Indigenous Populations (2009) definition, which specifies four key factors when describing 'Indigeneity': (one) "Priority in time, with respect to the occupation and use of a specific territory"; (two) "The voluntary perpetuation of cultural distinctiveness, which may include the aspects of language, social organization, religion and spiritual values, modes of production, laws and institutions"; (three) "Self-identification, as well as recognition by other groups, or by State authorities, as a distinct collectivity"; and (four) "An experience of subjugation, marginalization, dispossession, exclusion or discrimination, whether or not these conditions persist"(48). Lastly, we incorporate the 1989 International Labour Organisation's Indigenous and Tribal Peoples Convention Policy description, which describes Indigenous Peoples as (a) "tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations"; and (b) "peoples in independent countries who are regarded as Indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions"(49). Based on these definitions, we will include literature from New Zealand, Australia, Canada, and the United States of America. We will also focus our search on adults aged 18 years and older, as CVD is primarily a disease of adults.

We also will include literature focusing on the following CVD conditions(50):

- Atherosclerotic cardiovascular disease
- Heart failure
- Coronary heart disease
- Cerebral vascular disease
- Peripheral vascular disease
- Acute coronary syndrome
- Other chronic heart diseases
- Ischaemic stroke
- Transient ischemic attack
- Other cerebrovascular diseases
- Myocardial infarction
- Unstable angina

Lastly, in the absence of a universal definition for 'rural' populations, we have not specified definitions for the terms 'rural' or 'remote'. We will instead align our rurality inclusion criteria Wilson et al. (2009) methods by including literature that uses the terms 'rural' and 'remote' when describing their participants, target population or population of interest(51).

Setting

Literature based in any care setting (including community, inpatient, and outpatient settings) providing care to adults for CVD will be included.

Outcomes

The outcomes of this scoping review will include the following:

- Barriers to accessing care in rural Indigenous Peoples living with CVD, reported by Indigenous Peoples and health service providers.
- Facilitators to accessing care in rural Indigenous Peoples living with CVD, reported by Indigenous Peoples and health service providers.
- Reported gaps and limitations.

Time frame

We will include literature published between January 1990 and January 2022. This timeframe was selected as the 1990s signified the start of significant structural changes to the health system in New Zealand and would allow us to identify any relevant literature pertaining to our research objectives (52).

Language

While we anticipate most of the literature will be reported in English, we will also consider publications reported in other languages. For publications not reported in English (e.g., publications from Canada reported in French), we will attempt to locate an English version of the publication. If we are unable to source an English version of the publication, translation services will be sought.

Search Strategy

We will search the following databases: MEDLINE (OVID), PubMed, Embase, SCOPUS, CINAHL Plus, Australia/New Zealand Reference Centre, NZResearch.org. Literature search strategies will be tailored to individual databases (e.g., using medical subject heading (MeSH) terms). The protocol authors iteratively developed search terms with support from subject librarians at the University of Auckland. A table of key search terms has been provided in Appendix B.

Grey Literature

We will conduct a Grey Literature search to promote a more comprehensive analysis, reduce publication bias, and capture emerging research areas(53). We will only include published reports from official government agencies, government-funded agencies, nationally recognised charitable organisations, and publications by the World Health Organisation. We will search official governmental websites of those nations included in our scoping review (see Table 1) and carry out a Google search engine search using our search terms to locate grey literature that addresses any of the Outcomes listed in this protocol. This approach maximises our chances of identifying relevant information by using overlapping approaches(54). To focus our results, we will limit google search results to the first 30 items listed. Reports that address any of the Outcomes described above will be shortlisted by and then independently reviewed by two reviewers. To ensure an appropriate level of rigour in our approach, we will assess grey literature using the ACCODS checklist for critically evaluating grey literature, developed by Flinders University(55).

Table 1. Official governmental websites included in grey literature search

Country/Organisation	Link
New Zealand	https://www.health.govt.nz/
Australia	https://www.health.gov.au/
Canada	https://www.canada.ca/en/health-canada.html
United States of America	https://www.usa.gov/health
Hawaii State	https://portal.ehawaii.gov/
World Health Organisation	https://www.who.int/

Stage 3: Study selection

A summary of our process for identifying relevant sources of evidence is provided in Figure 1. Firstly, the lead protocol author will conduct an electronic search based in on the search strategy. Once the search has been completed and duplicates have been removed, two of the protocol authors will screen titles and abstracts based on eligibility criteria. A full-text review will then be conducted by two of the protocol authors on the remaining list of publications. Once the full-text review has been completed, the remaining list of publications will be finalised, and data will then be charted. Any disagreements throughout the screening process will be resolved via discussion with the aim to reach a consensus. A member of the wider ACCESS project will be available to mediate and resolve any disagreements where consensus is unable to be reached. Literature search results will be managed through Endnote and Microsoft Excel.

Stage 4: Data extraction and charting

Data Charting

The protocol authors will determine the appropriate variables for data extraction. A standardised data form will be created. The lead protocol author will perform the data charting process and then discuss the analysis and summary of findings with the other protocol authors.

Data Items

Where available, the following data will be extracted from each eligible citation:

- a) General information
 - a. Author
 - b. Article title
 - c. Year
 - d. Country
- b) Study characteristics
 - a. Aims/objectives of study
 - b. Study design/type
 - c. Study inclusion/exclusion criteria

- d. Recruitment procedures and sample size
- c) Participant characteristics
 - a. Sample size
 - b. Ethnicity
- d) Study outcome(s) listed in this protocol.

Stage 5: Collating, summarising, and reporting findings

In this review stage, we will collate and present an overview of all material included in our review (35). Given that Kaupapa Māori Methodology underpins this study, we will utilise the New Zealand Ministry of Health's Te Tiriti o Waitangi (Treaty of Waitangi) Framework principles to summarise and construct a narrative of existing literature available (20, 35). As this is a scoping review of international literature, a generic framework of Indigenous healthcare access for presenting the results was considered. However, the indigenous frameworks identified in our search were not generic and were specific to a single nation and its Indigenous Peoples (24, 56-59). Further Indigenous critique of other potential conceptual frameworks identified gaps, which are addressed in Te Tiriti o Waitangi framework (i.e., equity in funding) (60). These principles have been reframed with careful consideration of the statements within the United Nations Declaration on the Rights of Indigenous Peoples (2007)(22). The principles of Te Tiriti o Waitangi are summarised in Figure 2. Our findings will be reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist (36, 61).

Critical Appraisal using the CONSIDER Statement

Scoping reviews do not require the appraisal or synthesis of the review findings(35, 62). However, given that our review is underpinned by Kaupapa Māori Research methodology, we will appraise the literature using the CONSIDER Statement (2019) and include commentary in our scoping review findings report(44).

Stage 6. Consultation

Patient and Public Involvement

Governance of the wider ACCESS project includes two Māori stakeholder reference groups, one of which includes Māori consumers (people with lived or family experience of CVD), and the other which includes health workers providing care to Māori with CVD. More information regarding patient and public involvement can be found in Appendix A.

Consultation

Consultation involving practitioners and consumers is optional but recommended in Arksey and O'Malley's methodological framework for scoping reviews (35). The research aims of this scoping review were informed by both empirical evidence and preliminary findings of qualitative interviews with Māori healthcare consumers living with CVD, conducted as part of the wider ACCESS qualitative study. We will disseminate the methods and findings of this scoping review to the ACCESS Māori stakeholder groups, who will be asked to provide feedback. We will incorporate all stakeholder feedback, where practicable.

Ethics and Dissemination

Ethical approval will not be sought for this scoping review, as it will only include publicly accessible publications. We intend to publish the results of this scoping review in an open access peer-reviewed journal and will also make our findings available to the public on the ACCESS research website. This protocol has been registered on Open Science Framework (OSF) DOI:10.17605/osf.io/xruhy.

AUTHOR CONTRIBUTIONS

TT is leading protocol development, the search strategy, collection of papers, analysis and drafting the thesis chapter. VS, KE and MH are guarantors for the review and analysis. All authors will contribute to the overall design of the scoping review, development of the selection criteria, eligibility criteria, data extraction criteria, and will read, provide feedback, and approve the final manuscript.

SUPPORT/FUNDING

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COMPETING INTERESTS

None declared.

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Figure 1. Process for study selection

Figure 2. Te Tiriti o Waitangi Framework Principles

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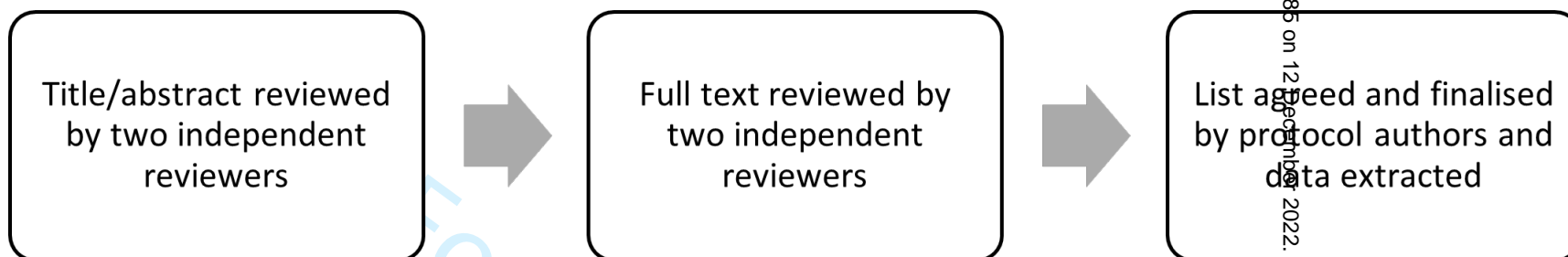


Figure 1. Process for study selection

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Tino rangatiratanga (self-determination)	The guarantee of tino rangatiratanga (self-determination), which provides for Indigenous Peoples self-determination in the design, delivery, and monitoring of health and disability services.
Equity	The principle of equity, which requires the Healthcare System to commit to achieving equitable health outcomes for Indigenous Peoples.
Active protection	The principle of active protection, which requires the Healthcare System to act, to the fullest extent practicable, to achieve equitable health outcomes for Indigenous Peoples. This includes ensuring that it, its agents, and Indigenous Peoples are well informed on the extent, and nature, of both Indigenous health outcomes and efforts to achieve health equity for Indigenous Peoples.
Options	The principle of options, which requires the Healthcare System to provide for and properly resource Indigenous health and disability services. Furthermore, the Crown is obliged to ensure that all health and disability services are provided in a culturally appropriate way that recognises and supports the expression of Indigenous models of care.
Partnership	The principle of partnership, which requires the Healthcare System and Indigenous Peoples to work in partnership in the governance, design, delivery, and monitoring of health and disability services. Indigenous Peoples must be co-designers, with the Healthcare System.

Figure 2. Te Tiriti o Waitangi Framework Principles

Appendix A. CONSIDER STATEMENT (2019)

Governance

This scoping review has been conducted as part of the Manawataki: Fatu Fatu for Access for ACCESS (ACCESS Project), a research programme funded by two New Zealand national research agencies - the Heart Foundation and the National Science Challenge – Healthier Lives. Governance of the wider research programme sits with the two principal investigators, one of whom identifies as Māori. Governance of the project also includes two Māori stakeholder reference groups, one of which includes Māori consumers (people with lived or family experience of CVD), and the other which includes health workers providing care to Māori with CVD.

Our approach to dissemination is underpinned by our foundational value of ‘Manu or Action-drive research’, which states that our research hopes to build on the gaps identified to advocated for equity. To support equitable access to any new knowledge generated, we will publish our results in an open access journal, and on our study website. We do not anticipate that this review will generate intellectual property with any commercial potential. Any intellectual property that is generated as a result of this scoping review will remain with the research team.

Prioritisation

Despite the significant disease burden and known inequities in CVD prevalence, morbidity, mortality, and access to proven treatments for Māori, little is known what barriers and facilitators influence access to CVD care for rural Māori. The aim of this scoping review is to identify and describe the extent of research available that explores the barriers and facilitators associated with accessing quality CVD healthcare for rural Indigenous Peoples. The research aims were developed by the protocol authors and are based on both empirical evidence and preliminary findings of qualitative interviews with whānau Māori living with CVD that were conducted as part of the wider ACCESS qualitative study. To the best of our knowledge, there are no known systematic reviews that explore the barriers and facilitators to accessing CVD care among rural Indigenous Peoples. A scoping review is therefore needed to identify the extent that literature is available, identify any gaps in the literature and to map available evidence.

The research team promotes Māori leadership and workforce development by recruiting and supporting Māori health researchers (including the lead author TT). This scoping review and the wider ACCESS project also uses a critical theory lens to avoid any deficit-framing or victim-blame analyses (37, 40).

Relationships (Indigenous stakeholders/participants and Research team)

Formal ethical approval is not required for this scoping review. This review and the wider research programme is underpinned by Kaupapa Māori Research methodology and indigenous ethical principles. This means that our research privileges and promotes Māori leadership, centres Māori health equity, practices safe data sampling, utilises Kaupapa Māori practices where appropriate, provides a critical theory lens to avoid victim-blame analyses, and supports Māori workforce development.

The authors of this protocol and research team for this scoping review is comprised of two Māori researchers (TT & MH) and two tauwiwi (non-indigenous) researcher (VS & KE). TT is a population health doctoral candidate with experience conducting Kaupapa Māori research related to long term conditions. MH is an established and well-respected Kaupapa Māori researcher and General Practitioner. VS is an

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3 epidemiologist and public health physician with expertise in research associated with health inequities
4 in CVD and supporting Māori and Pacific-led research on this topic. KE is Associate Dean Rural Health in
5 the Faculty of Medical and Health Sciences at the University of Auckland and has extensive experience in
6 rural health, health equity, access issues and participatory action research. The research team jointly
7 conceived the research question and design of this scoping review.
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10 **Methodologies**

11 This scoping review and the conduct of the wider ACCESS project is underpinned by Kaupapa Māori
12 Research methodology. The methods and analysis of this scoping review is also guided by the Preferred
13 Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR)
14 (47).
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17 **Participation**

18 There are no participant requirements as part of this literature review as we will be investigating
19 publicly available information.
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22 **Capacity**

23 This research is supporting TT (a Māori doctoral candidate) by way of funding and supervision support.
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26 **Dissemination**

27 The research will be published in a peer-reviewed journal and available on the ACCESS project website.
28 We may also present the findings to community stakeholders, at conferences, and on other online
29 platforms. This scoping review will contribute to the overarching goal of the ACCESS project, which aims
30 to Quality-Improvement Equity Roadmap to inform the development of an action plan for interventions
31 to reduce barriers to Māori and Pacific peoples accessing evidence-based CVD care.
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Appendix B. Search Terms

Key Concept	Search Terms
Cardiovascular diseases	("cardiovascular diseases"[Title/Abstract]) OR ("atherosclerotic cardiovascular disease"[Title/Abstract]) OR ("atherosclerosis"[Title/Abstract]) OR ("heart failure"[Title/Abstract]) OR ("heart disease*"[Title/Abstract]) OR ("coronary heart disease"[Title/Abstract]) OR ("coronary disease*"[Title/Abstract]) OR ("cerebral vascular disease"[Title/Abstract]) OR ("cerebrovascular disorders"[Title/Abstract]) OR ("peripheral vascular disease*"[Title/Abstract]) OR ("acute coronary syndrome"[Title/Abstract]) OR ("acute coronary syndrome"[Title/Abstract]) OR ("other chronic heart disease*"[Title/Abstract]) OR ("ischemic stroke"[Title/Abstract]) OR ("Ischemic stroke"[Title/Abstract]) OR ("transient ischemic attack"[Title/Abstract]) OR ("ischemic attack, transient"[Title/Abstract]) OR ("other cerebrovascular disease*"[Title/Abstract]) OR ("myocardial infarction"[Title/Abstract]) OR ("myocardial ischemia"[Title/Abstract]) OR ("unstable angina"[Title/Abstract]) OR ("angina, unstable"[Title/Abstract])
	AND
Barriers and facilitators to accessing care	("access"[Title/Abstract]) OR ("health care quality, access, and evaluation"[Title/Abstract]) OR ("barrier*"[Title/Abstract]) OR ("care"[Title/Abstract]) OR ("health services administration"[Title/Abstract]) OR ("disease management"[Title/Abstract]) OR ("ambulatory"[Title/Abstract]) OR ("hospital care"[Title/Abstract]) OR ("health service*"[Title/Abstract]) OR ("primary health care"[Title/Abstract]) OR ("intervention"[Title/Abstract]) OR ("community health services"[Title/Abstract]) OR ("facilitator*"[Title/Abstract]) OR ("experience*"[Title/Abstract]) OR ("issues"[Title/Abstract]) OR ("engagement"[Title/Abstract]) OR ("patient care management"[Title/Abstract]) OR ("delivery of health care"[Title/Abstract]) OR ("community participation"[Title/Abstract]) OR (affordab*[Title/Abstract]) OR (acceptab*[Title/Abstract]) OR ("appropriat*"[Title/Abstract]) OR ("availab*"[Title/Abstract]) OR ("factor*"[Title/Abstract])
	AND
Rurality	("rural"[Title/Abstract]) OR (rural population[Title/Abstract]) OR ("rural health"[Title/Abstract]) OR ("rural health service*"[Title/Abstract]) OR ("remote"[Title/Abstract]) OR ("outreach"[Title/Abstract]) OR ("health transition"[Title/Abstract])
	AND
Indigenous Peoples	("indigenous peoples"[Title/Abstract]) OR ("maori"[Title/Abstract]) OR ("aborigin*"[Title/Abstract]) OR ("indigenous"[Title/Abstract]) OR ("native American"[Title/Abstract]) OR ("first nation"[Title/Abstract]) OR (oceanic ancestry group[MeSH Terms]) OR (american native continental ancestry group[MeSH Terms]) OR ("torres strait islander"[Title/Abstract]) OR ("inuit"[Title/Abstract]) OR ("american Indian"[Title/Abstract])

SCOPUS Search Example

(ABS ("cardiovascular disease") OR ABS ("atherosclerotic cardiovascular disease") OR ABS ("atherosclerosis") OR ABS ("heart failure") OR ABS ("heart disease") OR ABS ("coronary heart disease") OR ABS ("coronary disease") OR ABS ("cerebrovascular disorders") OR ABS ("peripheral vascular disease") OR ABS ("acute coronary syndrome") OR ABS ("isch!emic stroke") OR ABS ("transient heart attack") OR ABS ("myocardial infarction") OR ABS ("unstable angina") AND ABS (indigenous) OR ABS (aborigin*) OR ABS (maori) OR ABS ("native american") OR ABS ("first nation") OR ABS ("torres strait islander") OR ABS (inuit) OR ABS ("american Indian")

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3) AND ABS (rural) OR ABS (remote) AND ABS (barrier*) OR ABS (factor*) OR ABS (facilitator*) OR ABS (access) OR ABS (experience*) OR ABS (affordab*) OR ABS (engagement)
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Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	3
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	6
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	10
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	6
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	8
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Supplemental Material
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	8
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	9
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	9
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	10



SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	10
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	n/a
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	n/a
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	n/a
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	n/a
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	n/a
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	n/a
Limitations	20	Discuss the limitations of the scoping review process.	n/a
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	n/a
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	11

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

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