





BMJ Open What are the gaps in cardiovascular risk assessment and management in primary care for Māori and Pacific people in Aotearoa New Zealand? Protocol for a systematic review

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To cite: Brewer KM, Grey C, Paynter J, *et al.* What are the gaps in cardiovascular risk assessment and management in primary care for Māori and Pacific people in Aotearoa New Zealand? Protocol for a systematic review. *BMJ Open* 2022;**12**:e060145. doi:10.1136/bmjopen-2021-060145

► Prepublication history for this paper is available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2021-060145>).

Received 13 December 2021
Accepted 26 April 2022



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ABSTRACT

Introduction In New Zealand, significant inequities exist between Māori and Pacific peoples compared with non-Māori, non-Pacific peoples in cardiovascular disease (CVD) risk factors, hospitalisations and management rates. This review will quantify and qualify already-reported gaps in CVD risk assessment and management in primary care for Māori and Pacific peoples compared with non-Māori/non-Pacific peoples in New Zealand.

Methods and analysis We will conduct a systematic search of the following electronic databases and websites from 1 January 2000 to 31 December 2021: MEDLINE (OVID), EMBASE, Scopus, CINAHL Plus, NZresearch.org, National Library Catalogue (Te Puna), Index New Zealand (INNz), Australia/New Zealand Reference Centre. In addition, we will search relevant websites such as the Ministry of Health and research organisations. Data sources will include published peer reviewed articles, reports and theses employing qualitative, quantitative and mixed methods.

Two reviewers will independently screen the titles and abstracts of the citations and grade each as eligible, not eligible or might be eligible. Two reviewers will read each full report, with one medically qualified reviewer reading all reports and two other reviewers reading half each. The final list of included citations will be compiled from the results of the full report reading and agreed on by three reviewers. Data abstracted will include authors, title, year, study characteristics and participant characteristics. Data analysis and interpretation will involve critical inquiry and a strength-based approach that is inclusive of Māori and Pacific values. This means that critical appraisal includes an assessment of quality from an Indigenous perspective.

Ethics and dissemination Ethical approval is not required. The findings will be published in a peer-reviewed journal and shared with stakeholders. This review contributes to a larger project which creates a Quality-Improvement Equity Roadmap to reduce barriers to Māori and Pacific peoples accessing evidence-based CVD care.

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ Our research team, with explicit Māori and Pacific governance, has prioritised cardiovascular disease (CVD), a health issue of considerable significance to Indigenous peoples of New Zealand and the Pacific region.
- ⇒ This protocol applies and reports against the CONSIDER statement (CONSolidated critERia for strengthening reporting of health research involving Indigenous peoples), which facilitates critique from an Indigenous perspective.
- ⇒ We anticipate heterogeneity in the literature to be included in the review, due to the mix of formats, various types of organisations/teams and different definitions (ie, ethnicity, indigenous, CVD). This may pose a challenge for comprehensive and consistent data extraction.

INTRODUCTION

Indigenous to the Pacific region, Māori and Pacific people living in Aotearoa New Zealand (hereafter called New Zealand) have much in common. Māori are the Indigenous (In this protocol, we use a capital ‘I’ when referring to Indigenous peoples and things associated with Indigenous peoples (eg, Indigenous health and Indigenous perspectives). Lowercase ‘i’ is for generic uses of the term.) people of New Zealand and comprise 16.5% of its population.¹ The Pacific ethnic group, consisting mainly of peoples from Samoa, Tonga, Cook Islands, Niue, Tokelau, Tuvalu and Fiji, makes up 8.1% of the total population of New Zealand.¹ There is a long history of people migrating to New Zealand from the Pacific Islands across the 20th and 21st centuries.² As a result, New Zealand’s Pacific population includes recent migrants alongside families with several generations born in New

Zealand. In addition, the realm of New Zealand includes the Cook Islands, Niue and Tokelau. Importantly, the number and proportion of Māori and Pacific peoples in New Zealand is growing.³

Inequities in most health conditions, including cardiovascular disease (CVD), for Māori and Pacific people are well recognised. Compared with New Zealand Europeans (who comprise approximately 70% of the total population), Māori and Pacific people have a significantly higher prevalence of CVD risk factors (eg, smoking, high blood pressure, diabetes)⁴⁻⁶ and are more likely to develop and die prematurely from CVD.⁷⁻¹⁰ Coronary heart disease is the single most important contributor to avoidable deaths in Māori and Pacific people, accounting for up to 1 year of the approximately 6–7 years difference in life expectancy between Māori and Pacific, compared with non-Māori non-Pacific people.¹¹ The reasons for these inequities are complex and multifactorial. There are well documented ethnic inequities in access to the socioeconomic determinants of health (including income, housing and education) in New Zealand, as well as high rates of unmet need for primary care and evidence-based medications among Māori and Pacific people.¹²⁻¹⁵ Inequities in socioeconomic determinants of health can adversely impact on opportunities to engage in health-promoting activities and to access high quality healthcare in a timely fashion.¹⁶

Electronic decision support systems are available in primary care in New Zealand to assess⁹ and enable optimal primary and secondary CVD risk management through behavioural change (eg, through smoking cessation interventions) and the use of CVD preventive medications where appropriate.¹⁷ New Zealand guidelines for the primary prevention of CVD recommend commencing risk assessments in men at the age of 45 and in women at age 55, but 15 years earlier for Māori, Pacific and South Asian populations¹⁸ because of their increased CVD risk.

There is a growing body of evidence that differences in access to healthcare between Māori, Pacific and other ethnic groups are an important contributor to evidence-practice gaps that may in turn lead to poorer CVD outcomes. For example, previous studies have reported evidence-practice gaps in dispensing of statins following an acute coronary event (ie, secondary prevention), with Māori and Pacific people less likely to be dispensed these medications.¹⁹ However, research to date on the access issues to primary and secondary prevention for CVD, and their impact on CVD outcomes for Māori and Pacific people, has been piecemeal and unsystematic.

Manawataki: Fatu Fatu for ACCESS (Māori and Pacific hearts in unison for Achieving Cardiovascular Care in Equity StudieS) is a Māori and Pacific-led research programme, cofunded by New Zealand's Heart Foundation and the Healthier Lives National Science Challenge, that commenced in 2020 to explore and address these CVD inequities. The study aims to identify evidence-practice gaps in CVD care along the care pathway, from primary care to prehospital and posthospital management. The ultimate outcome of the programme will be

the development of an action plan for interventions to improve CVD outcomes for Māori and Pacific peoples. One important part of the overall project is to undertake a systematic review to quantify and qualify already-reported gaps in both primary and secondary CVD risk assessment and management in primary care for Māori and Pacific peoples compared with non-Māori/non-Pacific peoples in New Zealand. Here, we describe the protocol for this systematic review.

METHODOLOGIES

A systematic review protocol, this article meets the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Protocols (PRISMA-P) criteria.²⁰ However, given the focus on Indigenous peoples' health, the structure of the protocol is based on the 'CONSoI-Dated critERia for strengthening the reporting of health research involving Indigenous Peoples' (the CONSIDER statement)²¹ and the section headings are taken from that framework. The CONSIDER statement was designed to enhance research practices and reporting to improve Indigenous health equity²¹ and introduces Indigenous-specific criteria including Indigenous governance, the prioritisation of Indigenous health issues, relationships and Indigenous workforce development. As well as using the CONSIDER statement to inform the review protocol, we adapted it as a tool for critically appraising the articles eligible for the review. This will be explained in more detail in the Analysis and Interpretation section.

The objective of this review is to quantify and qualify already-reported gaps in primary and secondary CVD risk assessment and management in primary care for Māori and Pacific peoples compared with non-Māori/non-Pacific peoples in New Zealand.

Patient and public involvement

Patient and public involvement are integral to all elements of the Manawataki: Fatu Fatu for ACCESS research programme. While patients were not directly involved in the design of this protocol, and will not be involved in the conduct of the systematic review, the ways in which Māori and Pacific patients and clinicians' priorities, experience, and preferences are incorporated in this protocol are included in the Governance, Prioritisation and Relationships sections. Dissemination of results to participants is explained in the Governance and Dissemination sections.

Governance

Indigenous governance and leadership are foundational to high quality Māori and Pacific health research. Two New Zealand national research agencies fund Manawataki: Fatu Fatu for ACCESS—the Heart Foundation and the National Science Challenge—Healthier Lives. The University of Auckland is the host. Governance of the research programme sits with the two principal investigators (one Māori, one Samoan) and four leadership team members (including one Māori, one Tongan)

who meet monthly. Five of the eight authors are Māori or Pacific, including one student (Tongan). There are three stakeholder reference groups who provide advice to the governing group: one of Māori consumers (people with lived or family experience of CVD), one with Pacific consumers, and one of health workers providing care to Māori and Pacific people with CVD.

Prioritisation

This systematic review is integral to the Manawataki: Fatu Fatu for ACCESS research programme. The research aims for this review, as part of the wider programme, were developed in response to the documented inequities in service provision and outcomes for Māori and Pacific CVD patients (as detailed in the Introduction section). Written support for Manawataki: Fatu Fatu has been received from providers of kaupapa Māori primary care services (health services provided in the Māori cultural way), Pacific health providers, Māori and Pacific community representatives. These stakeholders have all confirmed that cardiovascular health is a research priority for Māori and Pacific people. In addition, Māori and Pacific community stakeholder groups have been formed and will be available for consultation in the interpretation of the findings of the full systematic review. Significantly, the Manawataki: Fatu Fatu team is led by Māori and Pacific co-principal investigators (MH and CG) and has many Māori and Pacific members. This means that the majority of the investigators in this project are not just researchers but members of the communities in focus.

Relationships

Formal ethical approval is not required for this systematic review. However, as a Māori and Pacific project, Manawataki: Fatu Fatu is bound by Indigenous ethical principles. Philosophically this means that our research promotes Māori and Pacific people to the centre of inquiry, has developed research questions that Māori and Pacific partners have signalled are essential, supports safe data sampling, utilises Māori and Pacific practices where appropriate, absolutely resists 'victim-blame' analyses, supports Māori and Pacific health research workforce development and contributes to the elimination of ethnic inequities.²² These theoretical, philosophical and capacity development approaches explicitly focus on addressing the epistemic injustices underlying inequities in healthcare.

Māori and Pacific researchers conceived the research question and design of this systematic review, which draws on the knowledge and experience of a broad team. KMB is a kaupapa Māori researcher (research methodology incorporating the knowledge, skills and values of Māori) and speech-language therapist. She has used kaupapa Māori research methodology to explore Māori experiences of communication difficulties caused by stroke and create resources for use in therapy. CG is a Samoan epidemiologist, public health physician and Pacific health researcher. JP is a Pākehā scientist and

public health researcher who has participated in Indigenous led public health or equity research projects for over 10 years. JW is a Tongan doctoral candidate, who is exploring the epidemiology and management of CVD by Pacific-specific ethnicity and country of birth using a Pacific lens. SH is a Tongan researcher with an interest in public health communication and translational research to serve whānau (extended family/ies) and communities. VS is a Pākehā epidemiologist and public health physician with expertise in inequities in CVD and supporting Māori- and Pacific-led research in this topic. SA is a Sri Lankan public health physician working in research collectives addressing inequities in Māori and Pacific health. MH is a kaupapa Māori researcher and General Practitioner.

METHODS AND ANALYSIS

Inclusion criteria

The following texts will be included:

- ▶ All study designs will be considered, including qualitative, quantitative and mixed methods.
- ▶ Literature dated from 1 January 2000 to 31 December 2021.
- ▶ Texts in all languages.
- ▶ Studies specifying that they included participants of Māori and/or Pacific ethnicity. Statistics NZ defines ethnicity as 'a measure of cultural affiliation. It is not a measure of race, ancestry, nationality or citizenship. Ethnicity is self-perceived and people can belong to more than one ethnic group'.²³ Although self-identification of ethnicity is the gold standard, it is unlikely to be possible to know if self-identification was applied in the citations, therefore, it will not be a requirement for inclusion in this review. Pacific ethnicity will include those that are indigenous to the South Pacific subregions of Niue, Cook Islands, Fiji, Hawaii, Tokelau, Kiribati, Tuvalu, Tahiti, Wallis and Futuna, Nauru, Papua New Guinea, Solomon Islands, Vanuatu, French Polynesia, Tonga, New Caledonia, Guam, Federated States of Micronesia, Palau, Pitcairn Island, Samoa, Marshall Islands, Easter Island, Rotuma.
- ▶ Studies will be included if participants' primary and secondary CVD risk assessment and/or management is indicated as per the current guidelines, or earlier versions, as relevant to the study.¹⁸

Exclusion criteria

The following texts will be excluded:

- ▶ Texts that do not pass the two screening questions in the Mixed Methods Appraisal Tool (MMAT) (ie, Are there clear research questions? Do the collected data allow to address the research questions?)²⁴
- ▶ Texts that do not have a research question or are not the primary source, for example, opinion pieces or reports that do not report new data.

Box 1 Search terms and strategy for MEDLINE (OVID)

Exp Cardiovascular diseases/or exp atrial fibrillation/or exp stroke/
or exp Heart diseases/ or exp Peripheral vascular diseases/or exp
peripheral arterial disease/or exp Myocardial infarction/ or exp heart
failure/or exp Ischaemic attack, transient/or exp arteriosclerosis/or exp
Myocardial Ischemia/ or
(stroke or transient isch?emic attack or arteriosclerosis or atrial fibril-
lation or peripheral vascular diseases or peripheral arterial disease or
cardiovascular or cardiac or coronary or heart or myocardial or cardio-
myopathy*).ti,ab,kw,kf

AND

Physicians, Primary Care/or Physicians, Family/or exp General practice/
or primary health carehealthcare/ OR (((family medicine or family doctor
or primary) adj2 care) or family practice or general practi* or whanau
ora).ti,ab,kw,kf

AND

(Maori or tangata whenua or indigenous).ti,ab,kw,kf OR Oceanic
Ancestry Group/ OR exp pacific islands/ or exp melanesia/ or exp mi-
cronesia/ or exp polynesia/ or exp Oceanic ancestry group/ OR (Pacific
island* or Pacifica or Pasifika or Pasefika or Pan-Pacific or Melanesia*
or Micronesia* or Polynesia* or Niue* or Samoa* or Cook Island* or
Cook Island Maori or Native Hawai* or Tokelau* or Kiribati or Kanaka
Maoli or Tuvalu* or Tahiti* or Nauru* or Futuna* or Vanuatu* or French
Polynesia* or Pohnpei* or Chamorro* or Guam* or Fiji* or Papua New
Guinea* or Solomon Island* or New Caledonia* or Tonga* or Palau*
.ti,ab,kw,kf

AND

((Cardiovascular adj2 risk assessment) or CVD risk assessment).ti,ab,k-
w,kf OR Risk assessment.ti,ab,kw,kf

OR

((Cardiovascular adj2 risk management) or CVD risk management).
ti,ab,kw,kf OR Risk management.ti,ab,kw,kf

- ▶ Studies focused solely on non-cardiovascular heart disease (eg, rheumatic heart disease, for which the cause is different from atherosclerotic CVDs).
- ▶ Studies focused on specific peripheral vascular disease management techniques, for example, podiatry.
- ▶ Studies for which the full text is not available, for example, conference abstracts.
- ▶ Studies that took place outside the primary care setting in the realm of New Zealand including the three Pacific nations of Cook Islands, Niue and Tokelau (noting that the New Zealand guidelines for CVD risk assessment and management for primary care¹⁸ are only applied within New Zealand, not the realm countries).

Comparators

Where relevant (according to the study design) comparisons will be made with the hegemonic ethnicity in New Zealand (European) where available or with an ethnic group that includes Europeans (eg, non-Māori/non-Pacific).

Outcomes

Outcomes are primary and secondary CVD risk assessment or management that is clinically appropriate according to the individual's characteristics (CVD risk assessment) or

risk (management)¹⁸ and culturally appropriate and/or safe.²⁵ The outcomes for CVD risk assessment in primary care include:

- ▶ Administration of guideline-recommended CVD risk assessment, and discussions of factors that contribute to these.

The outcomes for CVD risk management in primary care include:

- ▶ Gaps in primary prevention, and discussion of factors that contribute to these.
 - Inequities in behavioural support, including.
 - Green prescription referrals (which aim to facilitate access to gyms and other exercise facilities).
 - Smoking cessation support.
 - Inequities in prescribing and use (prescription, dispensing, utilisation or adherence) of antiplatelet, antihypertensive and/or lipid-lowering therapy.
 - Inequities in interventions that address health literacy (including access to culturally appropriate resources).
- ▶ Gaps in secondary prevention, and discussion of factors that contribute to these.
 - Differences in prescription and use of antiplatelet medication.
 - Differences in prescription and use of lipid lowering medication.
 - Differences in prescription and use of blood pressure lowering medication.
- ▶ Differences in referrals for, and provision of, cardiovascular investigations and interventions (specifically angiography, percutaneous coronary intervention, coronary artery bypass graft).
- ▶ Gaps in cultural appropriateness and/or safety of CVD risk assessment in primary care.
- ▶ Gaps in cultural appropriateness and/or safety of primary CVD prevention in primary care.
- ▶ Gaps in cultural appropriateness and/or safety of secondary CVD prevention in primary care.

Recognising the unique contribution made by qualitative and mixed-methods studies, we will incorporate explanations or descriptions of factors that contribute to inequities or evidence-practice gaps, such as the patient/provider relationship, workforce issues or geographical inequities.

Published literature search

The following databases and websites will be searched:

- ▶ MEDLINE (OVID): Contents of the major medical and health journals mainly from 1946 onwards.
- ▶ EMBASE: Journal articles in all fields of medicine, biomedicine, health sciences and allied health.
- ▶ Scopus: The largest abstract and citation database of peer-reviewed literature; covers Sciences, Engineering, Medicine, Social Sciences and some Arts.
- ▶ CINAHL Plus.
- ▶ NZresearch.org.
- ▶ National Library Catalogue (Te Puna).
- ▶ Index New Zealand (INNZ).

Mixed-Methods Systematic Review Process (Primary Care)

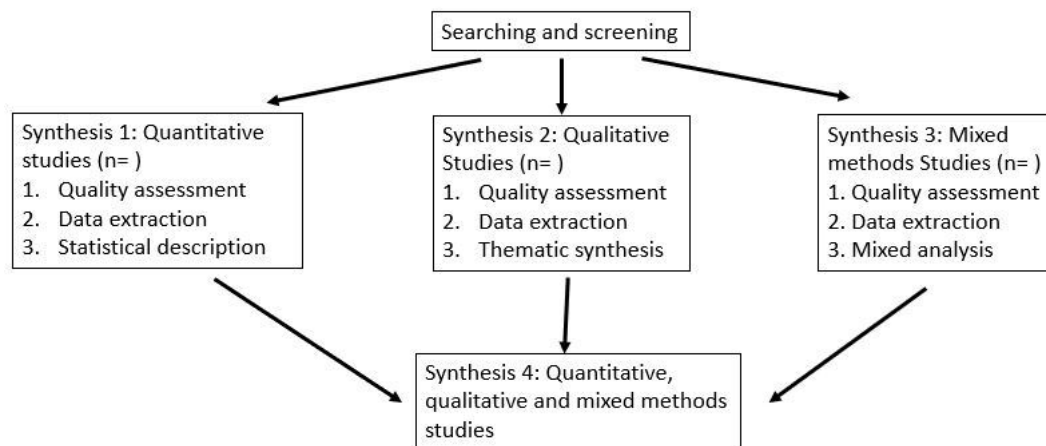


Figure 1 Data synthesis.

► Australia/New Zealand Reference Centre.

Databases will be searched using The University of Auckland library portal.

Search strategy

Literature search strategies were developed using medical subject headings (MeSH) and text words related to Māori and Pacific peoples, CVD and primary care. These were created in coordination with recognised experts from our host institution in systematic review searching.

The search strategy for MEDLINE (OVID) is detailed in [box 1](#).

Other literature search

We will include grey literature that reports data for at least one of our outcomes. Separate searches will be performed across government websites from New Zealand and its realm, such as the Ministry of Health and the Health Quality Safety Commission. We will search the websites of New Zealand research funders, non-profit organisations and charitable trusts, such as the New Zealand Heart Foundation. For any relevant funded project identified in the search, we will search the lead researcher's name as an author in Medline to check for any relevant publications. In addition, searches in Google and Google Scholar will identify any further relevant texts. Searches will include the following terms: "heart", "cardiovascular", "CVD", "CVD risk" and "CVD management" for 'Māori', 'Pacific' and 'New Zealand'. We will limit our Google search results to the first 20 items. A single reviewer (KMB) will perform the grey literature search and identify eligible texts, with verification from a second reviewer (MH).

Relevant links within documents to other sources of information will be pursued. For every text that is read in full, the reviewer will read the reference list and identify

any additional relevant cited texts to be considered for inclusion in this review.

Data management

Literature search results will be managed through Endnote.²⁶ All identified studies and systematic reviews from each information source will be exported or manually added to Endnote and duplicates removed. The deduplicated results will be exported from Endnote to MS Word to facilitate the next phases of the review. A PRISMA flow diagram will be created manually and used to depict information through the different phases of the systematic review.

Selection process

Two review authors ('reviewers') will independently screen the titles and abstracts of the citations yielded by all searches against the eligibility (inclusion and exclusion) criteria noted above. Each citation will be graded eligible, not eligible, or might be eligible through the title and abstract. Full reports will be obtained for all citations that appear to meet the inclusion criteria and do not meet any exclusion criteria, or where there is any disagreement between the two reviewers. Each full report will be read by two reviewers. MH will read all reports and KMB and JP will read half each. Recognising the unique cultural interpretations that are required, we will use the expertise of the diverse team to ensure that, as far as possible, each text is reviewed by someone of the ethnicity/ies of focus in that text. The reviewers who read the full report will jointly decide whether it meets the inclusion criteria, with input from the wider team if there is disagreement. The final list of included citations will be compiled from the results of the full report reading, and will be agreed on by three reviewers. None of the review authors will be blind to the journal titles or the study authors or institutions.

Table 1 Adapted CONSIDER framework for critical appraisal

Domain	Modified checklist item	Yes	No	Unclear	Criteria
Governance	Evidence of Indigenous leadership in the research (eg, Memorandum of Understanding, Data Sovereignty Group).				To meet this criterion the text must state that there was Māori and/or Pacific leadership and describe the nature of that leadership.
Prioritisation	The research aims emerged from priorities identified by Māori/Pacific stakeholders, governing bodies, funders, non-government organisation(s), stakeholders, consumers or empirical evidence				To meet this criterion the text must identify the research topic as coming from a Māori and/or Pacific source.
Relationships	Māori/Pacific stakeholders were involved in the research processes and the research adhered to and honoured Indigenous ethical guidelines, processes and practices				To meet this criterion the text must indicate the ways in which Māori and/or Pacific stakeholders were involved in the research process.
Methodologies	The research methodology incorporated consideration of the physical, social, economic and cultural environment of the participants and prospective participants (eg, impacts of colonisation, racism and social justice), as well as Māori/Pacific worldviews.				To meet this criterion the research methods must show how data collection and analysis incorporated the physical, social, economic and/or cultural environments and worldviews of the participants and prospective participants.
Participation	The research describes how Māori/Pacific participants were recruited and supported throughout the research (eg, collective consent, koha (gift or contribution), cultural support, language, consent for use of data).				To meet this criterion the text must describe how Māori/Pacific participants were recruited and supported throughout the research (eg, collective consent, koha, cultural support, language, consent for use of data).
Capacity	The research supported the development and maintenance of Indigenous research capacity and/or partnership with Indigenous stakeholders				To meet this criterion the text must describe how capacity development of this sort was included in the research.
Analysis and interpretation	Specifies how the research analysis and reporting supported critical inquiry and a strength-based approach that was inclusive of Indigenous values.				To meet this criterion the analysis and discussion must look to strengths in Māori and/or Pacific people and attribute any deficits to social justice issues such as colonisation or racism rather than within Māori and/or Pacific people or communities.
Dissemination	The text describes how findings were communicated back to Māori/Pacific participants.				To meet this criterion the text must show that the findings and/or benefits of the study were given back to the Māori/Pacific participants.
Adapted from. ¹⁰ CONSIDER, CONSollDated critERia.					

Data collection process

For studies with confirmed eligibility, the task of data extraction will be divided between three reviewers. Each reviewer will extract data from one third of the citations, using a form that includes the data items listed below. To ensure consistency between reviewers, we will pilot data extraction before beginning the data extraction. To do this, all three reviewers will extract data from the first four included citations and we will compare the results. When we have achieved consistency in data extraction, we will independently review the remainder of the citations. Data abstracted will include authors, title, year, study characteristics and participant characteristics. The results of data extraction will be compiled in a master table.

Data items

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

1. Authors
2. Article title
3. Year
4. Aims/objectives of the study

5. Study design/type/methods
6. Study inclusion/exclusion criteria
7. Focus (Māori, Pacific or both)
8. Recruitment procedures, sample size, ethnic group(s)
9. Study results
10. How does this article contribute to knowledge about the gaps in cardiovascular risk assessment and management in primary care for Māori and Pacific people in New Zealand?

Participation

As a literature review, there are no collected samples or participant data and therefore concerns about sample/data storage or use; and there are no resource demands placed on Indigenous communities.²¹

Capacity

One of the aims of Manawataki: Fatu Fatu is to significantly increase the capacity and capability of the Māori and Pacific health research workforce. Five of the seven authors of this protocol are Māori or Pacific health researchers, and, for some, this is their first systematic

review. As such, this systematic review is supporting the development of Indigenous research capacity.

Analysis and interpretation

There are unlikely to be sufficient consistent studies to undertake a meta-analysis. Therefore, for quantitative elements (including those within mixed-methods studies), we will report descriptively on sample size, sampling method, steps to minimise bias, robustness of methodology and limitations, covariables examined and any relative measures or estimates. For qualitative studies, and qualitative elements of mixed-methods studies, we will employ thematic synthesis, as described by Thomas and Harden.²⁷

Synthesis of all qualitative and quantitative data ('Synthesis 4' in figure 1) will integrate the findings from the included literature. Findings will be summarised in a table and where possible, information for each of the Outcomes (described above) will be disaggregated. Additionally, a narrative report of the findings will incorporate explanations or descriptions of factors that contribute to inequities or evidence-practice gaps. The authors will develop new and/or refine existing themes based on the data synthesis.

Quality assessment

All included studies will be critically appraised using the relevant section of the checklist in Part I of the MMAT.²⁴ Manawataki: Fatu Fatu is underpinned by Kaupapa Māori Theory²⁸ and Pacific Research Methodologies.²⁹ As such, it is decolonising and transformative.²⁸ Data analysis and interpretation will involve critical inquiry and use a strength-based approach that is inclusive of Māori and Pacific values.²¹ This means that, as well as using the MMAT,²⁴ we will also assess quality from an Indigenous perspective. There are few tools available for this purpose.³⁰ To support 'critical inquiry and a strength-based approach that (is) inclusive of Indigenous values' we will use an adapted version of the CONSIDER framework²¹ (see table 1). CONSIDER was designed as a checklist to strengthen the reporting of research involving Indigenous Peoples but for this systematic review we have adapted it to be an evaluation tool for how the research was undertaken. A similar approach has been used previously in a scoping review.³¹ For ease of use and reporting we have condensed the CONSIDER checklist to one item for each domain, based on what is of most relevance to our research question. Critical appraisal will be undertaken after data extraction is complete and before data synthesis begins.

Dissemination

This systematic review will create intellectual property with no commercial potential. A foundational value for the programme is Manu, or action-driven research: our research will build on the gaps identified in this review to advocate for equity. The results will be owned by the research team and will be made available in ways that will facilitate the use of the information to optimise dissemination opportunities that promote improved access to

health services for Māori and Pacific peoples and their whānau. Examples include publication in open-access journals, presentations at meetings with stakeholders and availability on the study's website for both technical and general audiences. By making visible a body of evidence in heart healthcare for Māori and Pacific people, we aim to draw in other researchers and providers to our research group to collectively address inequities.

Knowledge translation and implementation is a major focus of Manawataki: Fatu Fatu for ACCESS. This systematic review is an integral part of the wider project. It contributes to the overall aim of creating a Quality-Improvement Equity Roadmap, incorporating Māori and Pacific stakeholder perspectives, to inform the development of an action plan for interventions to reduce barriers to Māori and Pacific peoples accessing evidence-based CVD care.

DISCUSSION

We have presented a systematic review protocol using the CONSIDER framework. Our research team, with explicit Māori and Pacific governance, has prioritised a health issue of considerable significance to Indigenous peoples of New Zealand and the Pacific region—CVD. Although this review protocol has focused on primary prevention and management of CVD in the community, we also plan to undertake systematic reviews across the CVD care pathway including first response care, access to and management in secondary care and management including rehabilitation for heart failure. For each 'review' we will present themes, identify gaps in knowledge and highlight potential interventions, with the ultimate aim being to improve CVD outcomes for Māori and Pacific peoples.

The CONSIDER framework has previously been used as a quality assessment tool³¹ but, as far as we are aware, this is the first study protocol to use the CONSIDER framework as a structure. This novel approach is a major strength of our study. Given our focus on Indigenous health, it was apt to use the CONSIDER framework to undertake the critical appraisal of the literature we intend to review, but also to use it when reporting our protocol. Further, we also plan to use it when reporting the findings from the review alongside more established critical appraisal principles.

One limitation is that we anticipate heterogeneity in the literature to be included in the review, due to the mix of formats, various types of organisations/teams and different definitions (ie, ethnicity, indigenous, CVD). This may pose a challenge for comprehensive and consistent data extraction.

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Contributors All authors contributed to protocol development, reviewed drafts of the manuscript, approved the final version, and agreed to be accountable for all aspects of the work. Specific contributions are as follows: KMB led protocol development, including registration, the development of the search strategy, inclusion, data extraction and critical appraisal criteria and drafted the initial manuscript. CG conceptualised the study and provided most of the content of the Introduction section. JP contributed to initial discussions on the style, methods and scope of the review, and designed the quantitative aspects of the protocol. JW-S was fundamental in the design of the protocol, particularly the search strategy and grey literature search. SH contributes to the Pacific governance of the protocol; the establishment of stakeholder groups to inform the prioritisation; Pacific knowledge and relationships. VS was instrumental in the initial development of the protocol and forming the protocol aim and outcomes. SA contributed to the development of the study protocol, particularly the grey literature search strategy. MH developed the Analysis and Interpretation section and made major contributions to writing and revising the protocol. MH is the guarantor of the review.

Funding This work was supported by a grant jointly awarded by The Heart Foundation of New Zealand and Healthier Lives National Science Challenge, grant number 1819.

Disclaimer The funders had no role in developing this protocol.

Competing interests JP receives funding from GlaxoSmithKline for research on vaccine safety and effectiveness. MH is employed as a general practitioner at a marae-based clinic and holds board memberships including the Medical Research Institute of New Zealand (MRINZ). CG holds board memberships including Vaka Tautua- a New Zealand-wide Pacific health, disability and social services provider. KMB, JW-S, SH, VS and SA report no conflicts.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

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REFERENCES

- Stats NZ. 2018 census population and dwelling counts, 2019. Available: <https://www.stats.govt.nz/information-releases/2018-census-population-and-dwelling-counts> [Accessed 23 Sep 2021].
- Sin I, Ormsby J. *The settlement experience of Pacific migrants in New Zealand: insights from LISNZ and the IDI*. Motu Economic and Public Policy Research, Te Pūnaha Matatini Centre of Research Excellence, Victoria University of Wellington, 2018.
- Stats NZ. Ethnic populations projected to grow across New Zealand, 2017. Available: <https://www.stats.govt.nz/news/ethnic-populations-projected-to-grow-across-new-zealand> [Accessed 23 Sep 2021].
- Cameron VA, Faatoese AF, Gillies MW, et al. A cohort study comparing cardiovascular risk factors in rural Māori, urban Māori and non-Māori communities in New Zealand. *BMJ Open* 2012;2:e000799.
- Grey C, Wells S, Riddell T. A comparative analysis of the cardiovascular disease risk factor profiles of Pacific peoples and Europeans living in New Zealand assessed in routine primary care: predict CVD-11. *NZ Med J* 2010;123:62–75.
- Riddell T, Jackson R, Wells S. Assessing Maori/non-Maori differences in cardiovascular disease risk and risk management in routine primary care practice using web-based clinical decision support:(PREDICT CVD-2). *N Z Med J* 2007;120.
- Grey C, Jackson R, Wells S. Trends in ischaemic heart disease: patterns of hospitalisation and mortality rates differ by ethnicity (ANZACS-QI 21). *NZ Med J* 2018;131:21–31.
- Ministry of Health. *Mortality and demographic data 2012*. Wellington: Ministry of Health, 2015.
- Pylypchuk R, Wells S, Kerr A, et al. Cardiovascular disease risk prediction equations in 400 000 primary care patients in New Zealand: a derivation and validation study. *Lancet* 2018;391:1897–907.
- Riddell T. Heart failure hospitalisations and deaths in New Zealand: patterns by deprivation and ethnicity. *N Z Med J* 2005;118.
- Walsh M, Grey C. The contribution of avoidable mortality to the life expectancy gap in Māori and Pacific populations in new Zealand—a decomposition analysis. *NZ Med J* 2019;132:46–60.
- Craig E, Dell R, Reddington A. Te Ohonga Ake: the determinants of health for Māori children and young people in New Zealand. *New Zealand Child Youth Epidemiol Ser* 2014.
- Health Quality & Safety Commission. *He matapihi te kounga o ngā manaakitanga ā-hauora o Aotearoa. A window into the quality of Aotearoa New Zealand's healthcare 2019*. Wellington: HQSC, 2019.
- Pasifika Futures. *Pasifika people in New Zealand: how are we doing, 2017*.
- Ryan D, Grey C, Mischewski B. *Tofa Salli: a review of evidence about health equity for Pacific peoples in New Zealand*. Wellington: Pacific Perspectives Ltd, 2019.
- Grady PA, Gough LL. Self-management: a comprehensive approach to management of chronic conditions. *Am J Public Health* 2014;104:e25–31.
- Wells S, Riddell T, Kerr A, et al. Cohort profile: the PREDICT cardiovascular disease cohort in New Zealand primary care (PREDICT-CVD 19). *Int J Epidemiol* 2017;46:22.
- Ministry of Health. *Cardiovascular disease risk assessment and management for primary care*. Wellington: Ministry of Health, 2018.
- Kerr AJ, Turaga M, Grey C, et al. Initiation and maintenance of statins and aspirin after acute coronary syndromes (ANZACS-QI 11). *J Prim Health Care* 2016;8:238–49.
- Moher D, Shamseer L, Clarke M, et al. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Syst Rev* 2015;4:1–9.
- Huria T, Palmer SC, Pitama S, et al. Consolidated criteria for strengthening reporting of health research involving indigenous peoples: the CONSIDER statement. *BMC Med Res Methodol* 2019;19:173.
- Reid P, Paine S-J, Curtis E, et al. Achieving health equity in Aotearoa: strengthening responsiveness to Māori in health research. *N Z Med J* 2017;130:96–103.
- Stats NZ. Ethnicity, 2021. Available: <https://www.stats.govt.nz/topics/ethnicity> [Accessed 25 May 2021].
- Hong QN, Fàbregues S, Bartlett G, et al. The mixed methods appraisal tool (MMAT) version 2018 for information professionals and researchers. *Educat Inform* 2018;34:285–91.
- Curtis E, Jones R, Tipene-Leach D, et al. Why cultural safety rather than cultural competency is required to achieve health equity: a literature review and recommended definition. *Int J Equity Health* 2019;18:1–17.
- The Endnote Team. *Endnote*. Philadelphia, PA: Clarivate, 2013.
- Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Med Res Methodol* 2008;8:45.
- Pihama L. *A conversation about Kaupapa Māori theory and research. In Kei Tua o te Pae - the challenges of Kaupapa Māori research in the 21st century*. Pipitea Marae, Wellington: Ako Aotearoa, 2011.
- Health Research Council of New Zealand. *Pacific health research guidelines*. Auckland, 2014.
- Harfield S, Pearson O, Morey K, et al. Assessing the quality of health research from an Indigenous perspective: the Aboriginal and Torres Strait Islander quality appraisal tool. *BMC Med Res Methodol* 2020;20:1–9.
- Meechan RJH, Brewer KM. Māori speech-language therapy research in Aotearoa New Zealand: a scoping review. *Speech, Language and Hearing* 2021;7:1–11.