Brief of Expert Evidence:

History of Maaori underutilisaton ACC injury treatment and rehabilitation support services, the barriers to their utilisation, and what works to improve service delivery to Maaori

Dr John Wren and Dr Peter Jansen

Given for the Wai 2644 claim of Taa Taihaakurei Durie and Rangingangana Wade

for the New Zealand Maaori Council

Before the Waitangi Tribunal

Wai 2575 Health Services and Outcomes Kaupapa Inquiry

Presiding Officer

Judge Damian Stone

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Introducing the Expert Witnesses

Dr John Wren (Ph.D, B.A Hons (1st Class), Dip Safety Management)

1. I am John Wren of Carterton, Wairarapa, currently Research Manager at Education New Zealand.
2. In addition, I currently hold an external 'Research Associate' position with the Auckland University of Technology NZ Work Research Institute.
3. For 20 years I have held research, evaluation, and policy positions up to Principal levels with a range of government agencies.
4. Research and evaluation positions I have held include:
    a. six years as Principal Research Advisor with the Accident Compensation Corporation between 2010 to 2016
    b. Principal research and Principal Evaluator positions respectively at Superu and the Education Review Office
    c. Leading the $2 million per annum Gambling Harm Minimisation Research programme at the Ministry of Health between 2017-2020.
    d. Previous to these positions, I have been a Senior Advisor (Social Epidemiology) in the then Public Health Intelligence Unit at the Ministry of Health, and Senior Policy Analyst in public health.
5. My academic qualifications and scholarships include a:
    a. Doctoral degree (Social Science) from Massey University that focused on understanding the policy and politics of the NZ Health and Safety Employment Act 1992.
    b. A post-graduate Diploma in Safety Management from Massey University, and post-graduate papers in Biostatistics & Epidemiology, and Health Promotion from the University of Otago.
    c. I have a BA (Hons, 1st class).
6. Academic scholarships include:

i. NZ Health Research Council Post-doctoral Fellowship at the Injury Prevention Research Unit, Otago University

ii. Massey University Doctoral Scholarship (accepted) (and offer of Griffiths University, Brisbane, Australia Doctoral Scholarship in 1993)

iii. Public Service Scholarship from the Department of Labour (Full salary and fees for term of study) for study in safety management.

7. At the Principal level, my roles at their core have focused on leading and significantly contributing to the collection, analysis and use of robust mixed-methods research and evaluation-based information to inform government policy and operational decision-making, and public discussion. Much of my work has predominantly been in the areas of injury prevention (both unintentional and intentional respectively), public health programme design outcomes monitoring and evaluation – including cross agency work. On behalf of the Ministry of Health I have provided expert evidence on gambling harm minimisation to the Gambling Commission, under statutory oath and under cross examination on the stand.

8. This brief of evidence is substantively informed by research I did as Principal Research Advisor for ACC in 2015, which has subsequently been released under OIA. The research was independently externally peer reviewed by health services academics at the time. This brief includes updated analysis based on academic research published since 2015, and ACC briefing papers for the current Minister of ACC recently released under OIA.

Expert Evidence Code of Conduct (Dr John Wren)

9. I have read the code of conduct for expert witnesses set out in schedule 4 of the New Zealand High Court Rules. I agree to comply with it.

10. The issues I have been asked to address are within my area of expertise in injury prevention, social epidemiology, public health service design and outcomes monitoring and evaluation, and the use of mixed-methods research to inform public policy and operational decision-making and public discussion.

Dr Peter Jansen

11. I am Peter Jansen, formerly Executive Director of Medical Services and Clinical Governance at the Illawarra Shoalhaven Local Health District, New South Wales, Australia. I was in that role from March 2020 until January 2023, when I rejoined ACC in the role of medical adviser.

12. I have extensive experience in medical management, pharmaceutical medicine and general practice in Australia and New Zealand. This includes directorships of Quality Health NZ (formerly the NZ Council of Healthcare Standards), the Counties Manukau District Health Board, and the NZ Health Quality and Safety Commission.

13. I have also been a Principal Clinical Advisor at the New Zealand Accident Compensation Corporation, leading teams focused on assessing complex claims for injury including those caused by medical treatment and teams working to prevent injury caused by treatment, until leaving to take up the role with NSW Health in March 2020.

14. Through Mauri Ora Associates I have also led and published research on Maaori access to health services, including ACC services.

Expert Evidence Code of Conduct (Dr Peter Jansen)

15. I have read the code of conduct for expert witnesses set out in schedule 4 of the New Zealand High Court Rules. I agree to comply with it.

16. The issues I have been asked to address are within my area of expertise in the delivery of medical services, public health, health service design, ACC, and research to inform policy and operational decision-making.

INTRODUCTION TO EVIDENCE BRIEF

17. ACC was established in 1974 as a comprehensive scheme that facilitates the recovery of persons who are injured due to an accident. This is achieved through funding of rehabilitation, treatment and compensation of injured persons by public and private provers and compensation for economic loss and/or permanent disabilities. .

18. These activities are funded by all residents and visitors through compulsory levies and through general taxation. To have sufficient funding for the future needs of people who are currently injured, ACC is required to invest a portion of monies to become fully funded to ensure persons injured today are able to be supported during recovery or, if needed, to mitigate any continuing incapacity.

19. The benefits of the ACC scheme are available to all NZ residents when they lodge a claim. Visitors to New Zealand can also receive support for injury occurring in New Zealand.

20. While all people in New Zealand are contributing through taxes and levies, not all New Zealander's benefit equally.

21. While the scheme is comprehensive in scope, access has favoured non-Maaori non-Pacific populations. The same has been seen in access to healthcare services. Simply put, and with limited exceptions, compared to non-Maaori non-Pacific peoples, Maaori access to, and use of, healthcare and injury services is reduced at every step of the pathway through care - from primary and pre-primary through to secondary or tertiary services and beyond. These differences exist even after controlling for other factors such as age and socio-economic factors status.

22. ACC has recently acknowledged that Maaori are not receiving access or support equitably. These inequities have been evident from ACC-funded research and internal evaluations for some 20 years (see Appendix 1), with inconsistent attempts to address aspects of inequity in access to ACC and in rehabilitation outcomes.

23. This evidence brief provides the evidence for the longstanding disparities between Maaori and non-Maaori, non-Pacific peoples and makes recommendations for addressing these issues.

24. We note that ACC is a monopsony, being a single buyer of services for accidental injury. This can introduce some efficiencies by removing unnecessary elements of tort-based injury compensation. However, this doesn't guarantee equitable access to care, treatment and rehabilitation for injured New Zealanders.

25. As a state-owned monopsony with power to raise compulsory levies there is an implicit requirement to wield that power fairly and ensure funding and policy decisions do address need, and to carefully monitor access to ensure equal access for all with similar needs especially Maaori as partners to Te Tiriti.

26. This paper presents a historical overview to the published and unpublished research on the topic of Maaori utilisation of ACC funded injury treatment and rehabilitation services (including disability). It is argued that:

    a. the preponderance of the evidence shows the existence of long-term (at least 20 years) substantive inequality and inequity in Maaori utilisation of ACC funded injury treatment and rehabilitation services including disability support, and also associated inequity in health outcomes.

    b. for those two decades the differences in access and outcome for Maaori compared to non-Maaori, non-Pacific peoples has been known by ACC

    c. there is research evidence (much of which was funded by ACC) for the existence of systemic and ACC barriers to Maaori utilisation of ACC services that are amenable to intervention

    d. the actuarial insurance perspective that underpins the operation of ACC, is at odds with the concept of fairness and equity within the health, disability and social development sectors. This has significant policy and operational implications for the design and delivery of ACC services over time.

27. The argument for substantive and inequitable utilisation of ACC funded injury treatment and rehabilitation services hinges on:

a. understanding the Maaori burden of injury related health loss compared to non-Maaori

b. analysis of ACC administrative claims and health data respectively about the utilisation of ACC funded health treatment and rehabilitation services by the population, including the health outcomes achieved through receipt of the services

c. the choice of whether to adopt a 'health equity' lens, or a 'actuarial' insurance/banking lens to interpret and understand the observed differences in Maaori compared to non-Maaori ACC service utilisation.

28. A social epidemiology and a mixed methods critical literature review research method underpins the preparation of this evidence brief. The social epidemiology approach (Honjo 2004; von dem Knesebeck 2015; Krieger 2002) provides a framework for critical thinking and interpretation of the range of quantitative and qualitative data reviewed and constructing the narrative to make sense of it in a disciplined manner. The critical literature review research method (Onwuegbuzie and Frels, Rebecca 2016; Onwuegbuzie, Gerber, and Schamroth Abrams 2017) involves the systematic collection of published and unpublished quantitative and qualitative research literature on a topic The material collected is then organised, examined, interpreted, reflected upon, competing views and types of evidence presented in the literature are acknowledged and cited where important and a sense making narrative about the topic under consideration is constructed. This research approach and key terms and concepts informing thinking about whether inequality and inequity exists are outlined in Part 1.

29. The results of the review are presented in five parts comprising:

a. Part 1 outlines the research approach and methodology informing the preparation of this evidence brief, including definitions of key terms and concepts

b. Part 2 focusses on the evidence for injury treatment and rehabilitation need in the context of the Maaori burden of injury compared to non-Maaori, and consideration of factors that could explain some of the differences.

c. Part 3 presents evidence about Maaori utilisation of ACC services from the early and mid-2000s, and more recent internal ACC briefing papers on the topic. This approach highlights the longstanding nature of the inequities in ACC services and health outcomes for Maaori. Recent published research results from the longitudinal Otago University Positive Outcomes of Injury Study (POIS) is presented that looks at health outcomes, including disability, following injury in the New Zealand population.

d. Part 3, in the context of Part 2, argues that for the Maaori population there is significant and substantive underutilisation of ACC funded services. The underutilisation represents a substantive health inequality and inequity (including disability) respectively from a 'health equity lens' perspective. It is noted that this view contrasts with the dominant ACC actuarial insurance / banking perspective where 'equity' is defined as an individual personal choice, the only obligation of the service provider is to ensure all customers have the same choice of services, it is not the obligation of the service provider to ensure customers use the services proportionate to their health needs. It is also noted that internationally the actuarial profession is still working out how to respond to the health equity lens perspective. Furthermore, it is noted that ACC as a monopsonistic scheme means that for Maaori there is no alternative provider. Consequently, there is even more of an expectation that ACC be more responsive to the diverse needs of the populations it serves and from which it collects levies. Furthermore, Crown obligations under Te Tiriti require this for Maaori.

e. Part 4 outlines the cumulative evidence over time from government agency and academic health services research about the barriers Maaori have said about their use of ACC funded services over time, and other research pointing to systemic barriers. Analysis highlights the systematic and long-term issues with ACC service design and delivery for Maaori including:

    (i) the dominance of the already mentioned actuarial banking and insurance perspective in ACC about service design and delivery that:

        a. is opposite to a health equity perspective

        b. tends to lead to a mono-service (one size fits all) type approach to service design and delivery that does not recognize differences in health and cultural service needs and delivery mechanisms.

(ii) the episodic nature over the past 20 years of the existence of specialist Maaori teams within ACC proportionate in size to the task and enabled to articulate and be heard by senior decision-makers on the topic of this evidence brief.

(iii) it is also noted that there is no reference at all in the ACC legislation to Te Tiriti obligations, and there is an absence in Crown Monitoring Reports about health inequities in ACC service utilisation and health outcomes and Te Tiriti.

(iv) while the new ACC Whaaia te Tika strategy is welcome including the reestablishment of specialist Maaori teams and a senior leadership function. However, ACC has been down this path before where specialist teams and strategies have been created and then disestablished in short order. Furthermore, a key term such as 'equity' remains undefined in Whaaia te Tika. To ensure ACC has a sustained long-term commitment to addressing the issues raised, it is recommended that legislative change is an imperative to focus ACCs attention on its Te Tiriti obligations (irrespective of Board and Snr Management composition), and this should include a focus on ensuring equitable access and (importantly) utilisation of ACC services by Maaori (and other population) groups in the context of their injury related health need (including disability) and equity in related health outcomes from an explicit health equity lens rather than leaving it open to interpretation by ACC and the adoption by default of an actuarial insurance definition. This should be supported by mandatory Crown Monitoring Reporting requirements on agencies to report on ACC progress.

(v) A requirement to achieve equitable Maaori representation on the ACC Board and ensuring the executive team is accountable for achieving equity for Maaori will also assist.

f. Part 5 presents a summary, conclusions, and recommendations based upon the research presented.

Part 1: The key issues, research method informing the evidence brief, and key terms under consideration

The key issues under consideration

30. This evidence brief presents the argument for substantive and inequitable utilisation of ACC funded injury treatment and rehabilitation services over many years by Maaori compared to non-Maaori population groups and associated injury related health outcomes (including disability). The argument hinges on:

    a. understanding the Maaori burden of injury related health loss compared to non-Maaori (which is the topic of Part 2)

    b. analysis of ACC administrative claims and health data respectively about the utilisation of ACC funded health treatment and rehabilitation services by the population (which is the topic of Part 3)

    c. the choice of whether to adopt a 'health equity' lens, or a 'actuarial' insurance/banking lens to interpret and understand the observed differences in Maaori compared to non-Maaori ACC service utilisation.

Mixed methods critical literature review and a social epidemiology approach

31. A social epidemiology and a critical mixed methods literature review approach has been adopted to examine the issues under consideration. These approaches are outlined in the following sections.

32. Social epidemiology is a branch of epidemiology. Epidemiology is a field of health research examining the incidence, distribution, causes and possible control of diseases and other factors relating to health (including the causes and prevention of unintentional and intentional injuries in the population (Quinlan, Bohle, and Lamm 2010). Historically, epidemiology has focused on biological and psychological elements of disease. However, the field has expanded to include specific topic areas such as the work place, environment, forensics, disease surveillance, screening, and the social-structural factors and

characteristics that influence a population's health. The social-structural factors is the focus of social epidemiology (Berkman, Kawachi, and Glymour 2014).

33. Specifically social epidemiological research examines the relationship between a population's health status and their social relationships including social capital and class structure, and whether a health inequality and inequity respectively exists compared to other population groups (Berkman et al. 2014; Honjo 2004). More recently these ideas have been extended to thinking about the impact of health service design on service utilisation and a population's health outcomes (von dem Knesebeck 2015; Scott and Campbell 2002). It is this perspective that has informed the narrative of this evidence brief.

34. Underpinning the narrative is a mixed methods critical literature review research method. The method involves the systematic collection of published and unpublished quantitative and qualitative research literature (a mixed methods approach) on a topic, analysis of it and the construction of a narrative that provides insight and informs a thesis. The process typically involves the organization of the material into sub-topics, analysis is undertaken and a narrative constructed where competing views and types of evidence presented in the literature are acknowledged, cited, examined, interpreted and reflected upon in terms of the validity and reliability and biases (Onwuegbuzie and Frels, Rebecca 2016; Onwuegbuzie et al. 2017; Paré and Kitsiou 2017; Snyder 2019).

35. Using the research method, published and unpublished quantitative and qualitative research literature from a range of perspectives on the topic of the Maaori experience of injury and injury treatment and rehabilitation services (including disability outcomes following injury), including recent ACC briefings to the Minister released under Official Information Act (OIA) request, has been collected and organised. Competing views and types of evidence presented in the literature are acknowledged, cited, examined, interpreted and reflected upon, and a social epidemiology narrative constructed.

36. In critically reviewing the material, attention has focused upon understanding the:

a. context and purpose for which the material was written

b. robustness of the methods used to inform the analysis

c. consistency in the findings across time and topic area

d. narrative associated with the material. For example the degree to which the material had been placed within a wider discussion about the injury and health experience of Maaori compared to non-Maaori and Maaori utilisation of publicly funded health services in general, and

e. how important terms such as equity and equality have been defined or changed in use between reports.

37. The chronological approach of the narrative in this evidence brief brings attention to how the research knowledge has strengthened over time about utilisation of ACC services and associated health outcomes, that issues under consideration in this evidence brief have been known for 20+ years, however ACCs response has been inconsistent and influenced by the government of the day and an unpinning actuarial approach to what 'equity' means, rather than a health lens. The material in the late 1990s and early 2000s indicates some uncertainty about whether underutilisation exists, and whether it represents substantive inequality and inequity. The recent health literature, including ACC briefings to the Minister for ACC, shows acceptance there are longstanding substantive inequalities and inequities in Maaori utilisation of ACC services (including disability).

38. The uncertainty in the literature in the late 1990s and early 2000s particularly reflects:

a. inconsistency in the use of key terms in the discussion, in particular disparity, equity, equality and outcomes, and a lack of awareness of how these terms could be interpreted differently between a 'health lens' view and a 'business insurance / actuarial' view. This is a key insight as the same terms are used in the literature on the topic however what they mean are quite different and have different implications for the policy options under consideration.

b. administrative data limitations making it difficult to directly measure utilisation of ACC funded services, which means proxy measures such as pre-approvals or billing are used as indicators of service use, which may not have been the case. In the case of primary health care referral, it is not possible to directly measure whether a doctor referred a client to elective surgery as in some cases referral requires an ACC case manager approval.

c. due to the nature of the literature, the reporting of methods can be incomplete, which prohibits the replication of the analysis for updating and checking the results with more recent data. In addition a range of statistical methods have been used to report results, which inhibits interpretation of results over time and between types of services

d. as robust health outcome measures such as EQ 5D[1] are not routinely used it is not possible to assess the degree to which the health status of the population of interest is impacted by utilisation differences

e. there is inconsistency across the material in the narrative about what the results mean, particularly in terms of:

    i. whether there is underutilisation
    ii. where inequities exist in utilisation of ACC entitlements, and where the inequities occur in the service pathway
    iii. the size of the problem, and in the context of the Maaori burden of injury related health loss and published literature on Maaori underutilisation of health services
    iv. individual level experience of inequity in service use compared to experience of the population group as whole. In the published literature this has been described as the existence of distribution gaps, the outcome gap and the gradient gap within and between population groups.

39. A key insight is the recognition that there has been misunderstanding over what inequality and inequity means from a health equity lens compared to an actuarial

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[1] EQ 5D is a European and internationally validated self-report survey measure of a person's health related quality of life. It measures health quality on five measures (mobility, self-care, usual activities, pain discomfit, and anxiety – depression) that together represent a holistic view of health. It includes medical definitions as well as independent physical, emotional and social functioning (Gusi, Olivares, and Rajendram 2010; Rabin and de Charro 2001). EQ-5D is also one of the handful of measures recommended for use in cost-effectiveness analyses by the Washington Panel on Cost Effectiveness in Health and Medicine (Rabin and de Charro 2001).

insurance/banking perspective, and the implications of this for policy and operational decision-making.

Defining and comparing divergent perspectives on key terms

40. The argument for underutilisation of ACC services by Maaori and whether it is important rests upon the evidence for Maaori need of injury related treatment and rehabilitation care, actual levels of utilisation of the services available, and whether the utilisation represents substantive inequality and inequity from either a 'health lens' or a 'business insurance / actuarial' perspective. These perspectives can be seen as competing world views. The following table outlines how these key terms are used in the literature. The table illustrates where there are important differences and the policy implications that arise.

Table 1: Definition of key terms: Disparity, inequity, fairness, inequality and outcome – a Health Lens approach compared to an Actuarial Insurance / banking industry approach

Health Lens approach	**Business Insurance approach**
Disparity / Difference	
Disparity and difference 'tend to be' interchangeable. • However, the term disparity tends to be reserved to describe a real (and substantive) difference in health outcomes (as measured in terms of real health loss, for example average length of years lived, or more injuries when standardised by age) between two or more population groups of	**Disparity and difference** 'are' interchangeable, and means there is a difference between the value of the products or services being compared. • The differences may be large or minor in size and importance. Any differences can be seen as representing 'fair value, or 'equity' in insurance terms.

interest (J.M.L. Rumball-Smith 2009).	
Equality, Inequity, and Fairness	
Health inequality and **Health inequity** in the health and health economics literature are related terms and historically have been contested concepts as to what they constitute and the policy implications of them (Arcaya, Arcaya, and Subramanian 2015; Bradshaw 1972; Marmot et al. 2012; Oliver and Mossialos 2004; Sen 2002; Siegrist and Marmot 2006; A. Woodward and Kawachi 2000). The terms are now commonly understood in the health literature in the following ways: **Health inequality** refers to observed differences in health status or health outcomes or health service utilisation between population groups / individual's due to : • understood bio-medical differences between population groups / individuals - for example due to sex or age that are not amenable to intervention or control • a range of socio-economic factors such (education, occupation and income) that are	Internationally, the actuarial profession is still debating the professions response to the terms health equality and equity respectively (American Academy of Actuaries n.d.; Teppema and Bender 2019). In classical actuarial terms in the insurance and banking sector: **Inequity** occurs when an insurance premium is charged that does not match the risk of a loss associated with the group of claims of interest. Consequently, cross subsidisation is an inequity. **Equity and Fairness** are interchangeable terms and is an objective of insurance pricing. **Equity and Fairness** is based upon the principle that all insureds with the same characteristics should have the same expectation of loss and should be listed under the same underwriting classification and have the same premium rating (in this case ACC Levy). Whether a service is used or not, is the economic choice of the client irrespective of

amenable to intervention and control • health service design that is amenable to intervention and control **Health inequities** arise when the observed health inequalities are substantive and cannot be explained by bio-medical differences. Health inequity involve questions of fairness and justice and arise due differences in service design, delivery and utilisation that impacts negatively upon the desired health outcome • **Equity and Fairness** are not necessarily the same things. This is because health needs are different between populations groups for a variety of well-established reasons, and thus differences in service utilisation may be expected. The presence of difference does not necessarily mean that it is unfair (Starfield 2001). Very good research over the last 10-15 years (including NZ) has consistently shown the existence of a social gradient effect on health experience where people in a lower socio-economic population groups have substantially worse health	socio-economic status and cultural views on health and modes of service delivery. **Source**: In (Wren 2015b) http://www.investopedia.com/terms/a/actuarial-equity.asp Accessed, 19 March 2015

outcomes (measured on a range of indicators) compared to those in higher socioeconomic population groups. Furthermore, where substantive inequities have been shown, then action is required to address the inequities (Health 2013a; Marmot et al. 2012; Ministry of Health 2001b; Siegrist and Marmot 2006).	
Equality: Whether an inequality exists depends upon the degree to which one population group uses more or less services and has access to the same quality of service compared to another population group in the context of their respective health needs. • **Inequality** can occur through either over or under utilisation. In situations where services are used at levels higher than the need, then the utilisation can be described as representing ‘over utilisation’, ‘service capture’, or service delivery based upon ‘want’ rather than ‘need’. Inequalities have also been described in terms of the presence of ‘vertical’ and ‘horizontal’ inequalities. • **The appearance of inequality’ in service use need not mean that**	• **Equality** is equated with 'Egalitarianism’ and associated philosophical and political views. • In general, international insurance companies resist legislative restrictions based on egalitarian principles as they are seen as counter to the promotion of equity and fairness in insurance pricing. • The closest term to equality is ‘Fair Value’. • **Fair value** can mean either: (i) the value an individual investor assigns to a company’s marketable securities based on his or her analysis of a company’s financial information (ii) the price of a product or service in the market in

an **'inequity' exists.** This is because inequalities are not always inequities as they may not be avoidable or unfair (Whitehead 1992). For example, some conditions or diseases can only occur in males or females, or some conditions are more prevalent in some ethnic groups because of their genetic makeup. • **Health inequities** do not occur naturally and are not random, but are the result of social and economic policy and practices (Ministry of Health 2004). Typically, when talking about 'health inequities' in the public health context, the narrative includes notions of the differences as being unnecessary and avoidable, as well as 'unfair and unjust' (The Royal New Zealand College of General Practitioners. 2015).	comparison to the utility (benefit) realised by the purchaser (iii) the value of assets and liabilities as defined by accounting rules. Source: In (Wren 2015b) http://www.investopedia.com/terms/e/egalitarianism.asp http://www.investopedia.com/terms/f/fairvalue.asp http://www.investopedia.com/terms/u/unisex-legislation.asp Accessed, 19 March 2015
Outcome	
• Outcome is typically used in reference to a change in health status at the individual or population group level. The change in status can be directly observed or measured in some form. For example from poor health to full health as assessed by GP, or	• Health / Wellness Outcome is defined in two senses: ○ health sense ○ cost impact • Health sense includes consideration of

measured through a test, or through epidemiological analysis.	○ Complications / morbidities ○ Presentism ○ Absence ○ Litigation / Accident ○ Costs / Disability ○ Injury rates • Cost impact involves ○ cost of health care ○ productivity ○ absence ○ property / casualty ○ workers compensation ○ disability **Source**: In (Wren 2015b) (Sibson Consulting for Society of Actuaries 2015)

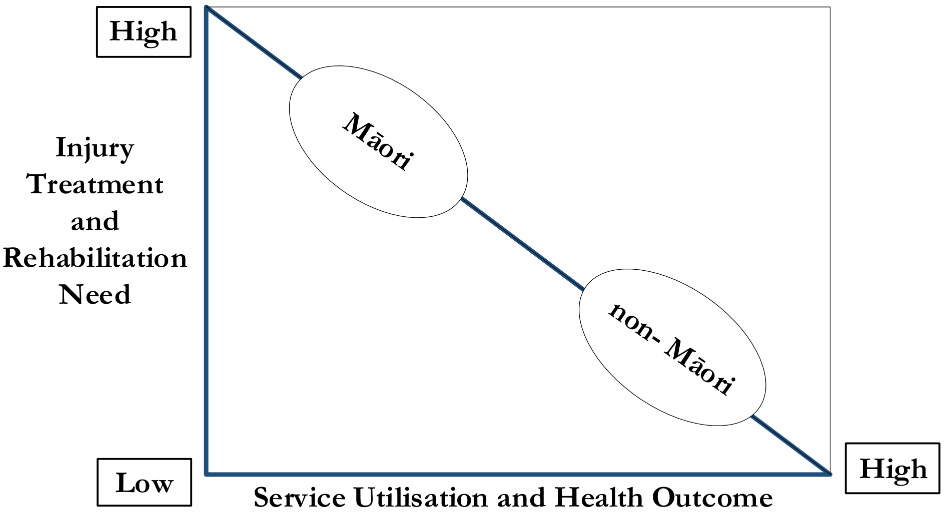
Introduction to the phenomena of underutilisation – The Inverse Health Care Law

41. The phenomena of underutilisation by populations in most need of the care has been described as the 'inverse health care law' (Hart 1971). This law says that the availability and use of good medical care tends to vary inversely with the need for it in the population. A variant of the law says that 'the concern of a population for its own health tends to vary inversely with the actual state of health of that population' (Dalrymple 2012). It has been argued that the inverse

care law is a ‘dominant feature’ of New Zealand’s primary health care system (Malcolm 2002). In addition, it has been argued that where the law is in operation in socially and economically deprived areas, health needs are higher and involve more complex care. The evidence presented in this brief suggests that inverse care law applies also to ACC related injury treatment and rehabilitation services. Application of the law to ACC services is represented in the following figure.

42. Figure 1 below illustrates the application of the inverse care law to ACC services ACC injury treatment and rehabilitation for Maaori in the context of their injury related health need, service utilisation and injury related health outcomes. The vertical axis on the left indicates the relative burden of injury and health loss, and the horizontal axis indicates the relative utilisation of injury treatment and rehabilitation services of the two population groups of interest – Maaori and non-Maaori. The position of the bubbles indicates the operation of the inverse care law at two levels. The higher position of the Maaori bubble on the left side reflects the significantly higher burden of injury borne by Maaori and thus injury treatment and rehabilitation need. However, the evidence presented latter in this brief shows that Maaori use less services and have worse injury related health (including disability) outcomes. This is also illustrated by the relative position of the bubble at the low end of service utilisation and health outcomes axis.

Figure 1: Illustration of application of Inverse Care Law to ACC injury treatment and rehabilitation by Maaori and non-Maaori populations



43. Given the presence of the inverse health care law in utilisation of ACC services argued in this brief, and the evidence presented in Section 3 about the persistent lack of attention to Maaori views and preferences by mainstream agencies in Aotearoa New Zealand, and clear institutional racist bias in the design and functioning of ACC working against Maaori and whanau views, it is a rational response for Maaori to not engage with ACC.

Part 2: Maaori injury related health loss and need for treatment

Introduction

44. This Part outlines the compelling evidence about the substantive and significant differences between the Maaori and non-Maaori burden of injury related health loss. Understanding the difference is important context for thinking about the evidence in Part 3 about whether ACC services are being accessed (utilised) at the levels that could be expected given the burden of injury and health loss described in this Part.

Maaori injury related health loss

45. The seminal work describing the Maaori burden of health and injury related loss was published in the early and mid-2000s (Ministry of Health 2001c, 2013; Ministry of Health and Accident Compensation Corporation. 2013; Statistics New Zealand. 2014).

46. The two 2013 New Zealand Burden of Disease and Injury reports are the most authoritative analyses of the differences between Maaori and non-Maaori burden of health loss due to disease and injury extant (Ministry of Health 2013; Ministry of Health and Accident Compensation Corporation. 2013). These reports focused on health and injury related health loss respectively. Both reports presented analyses of health loss by age, sex and ethnicity, and include important insights into the contribution of different risk factors for injury, such as osteoporosis, alcohol misuse and mental illness.

47. The 2013 reports were part of a World Health Organization initiative to quantify internationally the level of health loss, or ‘burden’, attributable to a comprehensive set of diseases, injuries and their risk factors, using an internationally accepted standardised approach. The impact of disease and injury was quantified in terms of both its fatal burden (impact on premature mortality) and its non-fatal burden (impact on disability), combined in a summary measure, the disability-adjusted life year (DALY). Related measures include the number of healthy years of life lost (YLL), and Quality Adjusted Life Years (QALYS) due to the event. Another key statistic was the use of the ‘standardised rate ratio’

(SSR). The meaning of DALYs and SSRs are outlined in Figures 2 and 3 below (Wren 2015b).

Figure 2: Illustrating what a DALY is:

The Disability Adjusted Life Year (DALY) metric provides a common measure by which the health impact of different diseases, injuries and risk factors can be compared equally. *One DALY represents the loss of one year of healthy life.* For example the DALY can be used to compare health loss resulting from a wide range of diseases and injuries, from fatal car crashes in adolescence to falls in the elderly (World Health Organization 2015).

Source of figure: http://en.wikipedia.org/wiki/Disability-adjusted_life_year (18 March 2015)

Figure 3: Explaining Standardised Rate Ratios

Explaining what SRRs and SRDs are in the following tables

'Standardised Rate Ratio' (SRR)

The standardised rate ratio (SRR) is a measure of difference after adjusting for differences in the age structure of the populations. For example:

- Where the SRR = 1, the rates of injury-related health loss are equal in both populations
- Where the SRR = 1.5, the rate of injury-related health loss is 50% greater in Maaori
- Where the SRR = 0.5, the rate of injury-related health loss is 50% lower in Maaori.

The SRR is calculated by dividing the rate of health loss reported for Maaori by the rate for non-Maaori, in the unit used (for example, injury related Years of Life Lost (YLL), Years Lived with Disability (YLD) or Disability Adjusted Life Years (DALYs)). In the table below the Maaori male rate is 2.0 times higher than Non-Maaori males (46.7/23.8 =1.96 (or 2 after rounding)).

Standardised Rate Difference (SRD)

The SRD is the age-standardised DALY rate in Maaori minus the age-standardised DALY rate in non-Maaori.

48. The New Zealand burden of injury study found that in terms of health years of life lost due to premature injury related death or disability, both Maaori males and Maaori females experience twice the rate of injury-related health loss compared to non-Maaori (Ministry of Health and Accident Compensation Corporation 2013). This is outlined in the following table. The table shows that in total in 2006 approximately 20,000 years (13,788 + 5,757 =19,545) years of healthy life (DALY) were lost in the Maaori population due to injury. This loss represents 12% of total health loss from all causes for Maaori, compared to 8% for the total population (including Maaori)).[2] Maaori males experienced the majority of this health loss, with 13,788 DALYs lost compared to 5,757 DALYs lost in females. Compared to non-Maaori these losses were twice the rates of

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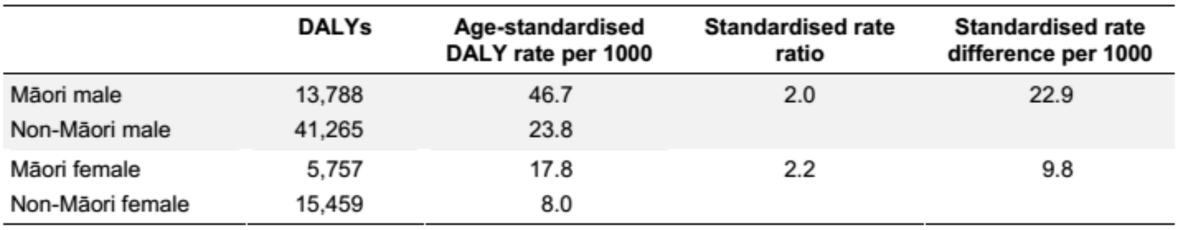
[2] Table 2, page 6, 2013 Burden of Disease and Injury Report. MOH and ACC.

non-Maaori. This difference is shown by the figure in the 'standardised rate ratio' column (Wren 2015b).

Table 2: Relative and absolute difference in injury-related health loss per 1000 population, by sex and ethnicity, 2006



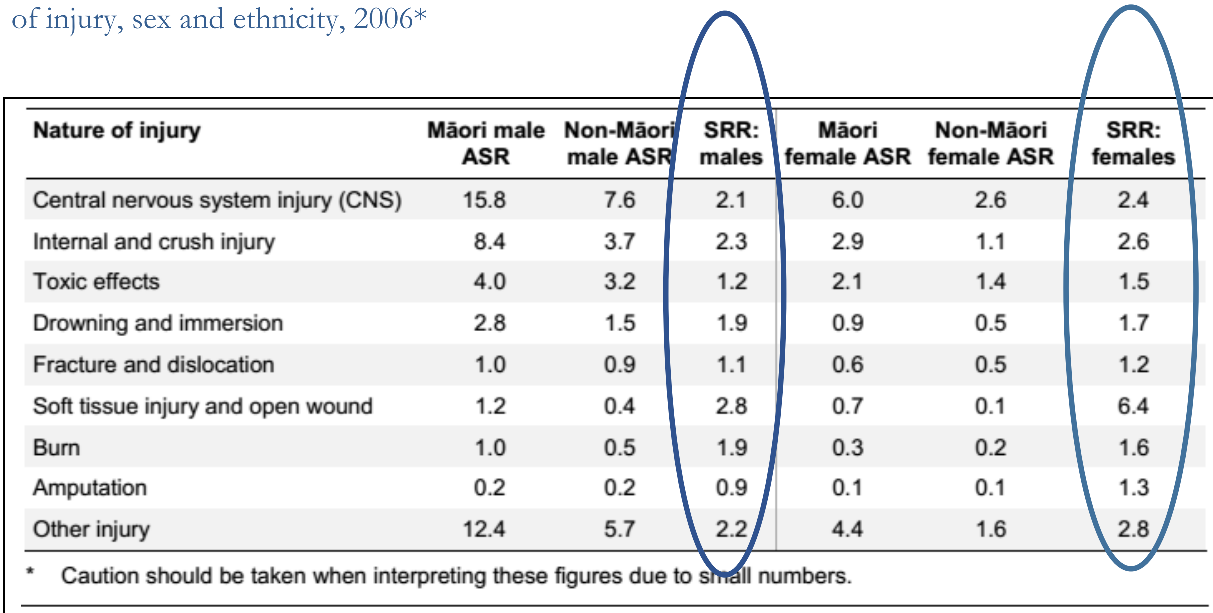
	DALYs	Age-standardised DALY rate per 1000	Standardised rate ratio	Standardised rate difference per 1000
Māori male	13,788	46.7	2.0	22.9
Non-Māori male	41,265	23.8		
Māori female	5,757	17.8	2.2	9.8
Non-Māori female	15,459	8.0		

Source: Table 23, page 24. *Ministry of Health and Accident Compensation Corporation. 2013. Injury-related Health Loss: A report from the New Zealand Burden of Diseases, Injuries and Risk Factors Study 2006–2016. Wellington: Ministry of* Health

49. Furthermore, in terms of absolute health lost, the standardised rate difference (SRD) column in Table 2 shows that Maaori males lost an extra 22.9 years of life per 1000 population compared to non-Maaori males, and Maaori females lost an extra 9.8 years compared to Non-Maaori females. Overall these losses mean Maaori experienced an additional 16 DALYs lost per 1000 population over and above the rate of health loss in non-Maaori (Wren 2015b).

50. Table 3 below shows that in 2006 the observed rates of types (nature) of injury for Maaori were typically 1.5 to 2 times those of Non-Maaori (Ministry of Health and Accident Compensation Corporation. 2013). The differences in type of injury are most evident for soft tissue injury and open wounds where the SRR for Maaori females was 6.4 and 2.8 for Maaori males compared to Non-Maaori. Maaori also experienced higher rates of internal and crush injuries and injuries to the central nervous system. This suggests that we could expect Maaori to receive significantly higher rates of ACC funded injury treatment and rehabilitation services compared to non-Maaori, given these levels of reported health need (Wren 2015b).

Table 3: Maaori and non-Maaori age-standardised rates of injury, per 1000 population, by nature of injury, sex and ethnicity, 2006*



Nature of injury	Māori male ASR	Non-Māori male ASR	SRR: males	Māori female ASR	Non-Māori female ASR	SRR: females
Central nervous system injury (CNS)	15.8	7.6	2.1	6.0	2.6	2.4
Internal and crush injury	8.4	3.7	2.3	2.9	1.1	2.6
Toxic effects	4.0	3.2	1.2	2.1	1.4	1.5
Drowning and immersion	2.8	1.5	1.9	0.9	0.5	1.7
Fracture and dislocation	1.0	0.9	1.1	0.6	0.5	1.2
Soft tissue injury and open wound	1.2	0.4	2.8	0.7	0.1	6.4
Burn	1.0	0.5	1.9	0.3	0.2	1.6
Amputation	0.2	0.2	0.9	0.1	0.1	1.3
Other injury	12.4	5.7	2.2	4.4	1.6	2.8

* Caution should be taken when interpreting these figures due to small numbers.

Source: Table 29, page 27. Ministry of Health and Accident Compensation Corporation. 2013. *Injury-related Health Loss: A report from the New Zealand Burden of Diseases, Injuries and Risk Factors Study 2006–2016*. Wellington: Ministry of Health

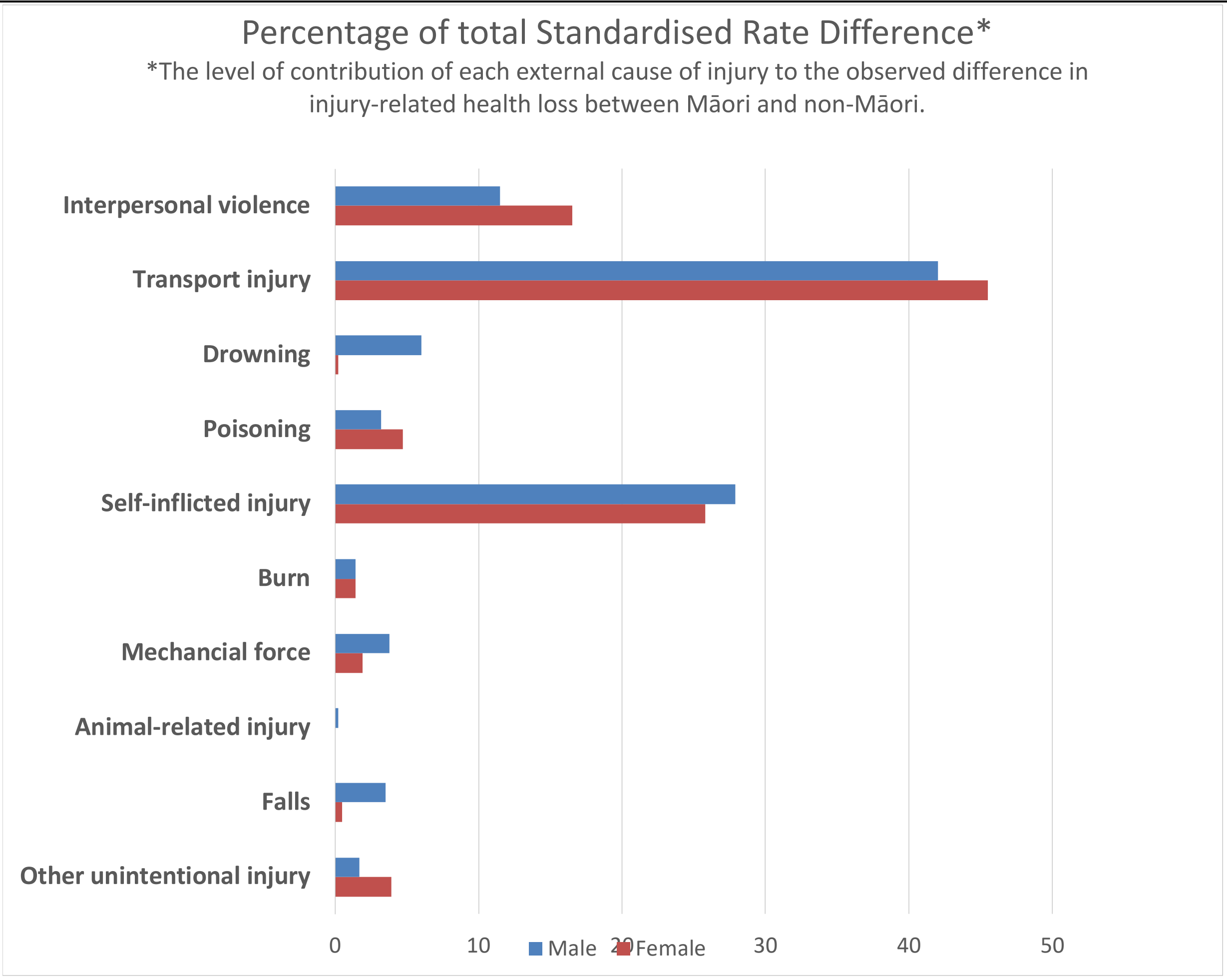
51. Figure 4 below shows the <u>relative</u> level of inequality for each external cause of injury experienced by Maaori males and females compared to non-Maaori. Differences in the burden of injury are most evident for interpersonal violence (assault injuries) and transport injuries. Maaori males are also at greater risk of health loss through drowning compared to non-Maaori males (SRR = 2.1), with Maaori females at increased risk of poisoning-related health loss (SRR = 2.3).

Figure 4: Relative (SRR) inequalities in injury-related health loss in Maaori, by external cause of injury, 2006, compared to non-Maaori

Source: Figure 10, page 25. Ministry of Health and Accident Compensation Corporation. 2013. *Injury-related Health Loss: A report from the New Zealand Burden of Diseases, Injuries and Risk Factors Study 2006–2016*. Wellington: Ministry of Health

52. Figure 5 below highlights the absolute contribution of external causes of injury to the difference between injury DALY rates in Maaori and non-Maaori (the SRD). Transport injuries were the leading cause of the observed inequality, responsible for over 40% of the excess injury-related health loss experienced by Maaori. Self-inflicted injury was responsible for approximately 25% of the observed inequality, with interpersonal violence accounting for around 15% of the difference (Wren 2015b).

Figure 5: Absolute (% of total SRD) inequalities in injury-related health loss in Maaori, by external cause of injury, 2006, compared to non-Maaori



Source: Figure 11, page 25. Ministry of Health and Accident Compensation Corporation. 2013. *Injury-related Health Loss: A report from the New Zealand Burden of Diseases, Injuries and Risk Factors Study 2006–2016*. Wellington: Ministry of Health

Other New Zealand research on the Maaori experience of injury

53. Other New Zealand research on injury has highlighted a range of other considerations when thinking about the Maaori experience of injury, which are outlined the following sections.

54. In the context of occupational related injuries, in 2004 the New Zealand National Occupational Health and Safety Advisory Committee (NOHSAC) observed that the available research from the 1990s showed that after adjusting for age differences, Maaori rates of workplace fatalities were 56% higher compared to non-Maaori. When adjusting for industry and occupation the difference, this reduced to 19% and 10% respectively indicating that the Maaori rates relative to non-Maaori were highly related to rates of Maaori employment in high risk occupations in the primary industry sector, construction and manufacturing, relative to other ethnicities in the workforce (Driscoll et al. 2004; Pearce et al. 2004).

55. The disproportionate Maaori rates of fatality and serious injury are reflected in the higher cost of injury and consequent burdens of injury for Maaori relative to non-Maaori that have been estimated (O'Dea and Wren 2012; O'Dea, Wren, and ACC 2010). In 2012 O'Dea and Wren estimated the socio-economic cost per Maaori injury fatality at $6.72 million in 2008, which was significantly higher than that of the total population at $5.74 million (O'Dea and Wren 2012). This is largely due to the younger age structure of the Maaori population and consequently a larger proportion of the population at risk, which means more years of productive life are lost by their deaths to the Maaori community and New Zealand overall.

56. In a literature review in 2005 for ACC, it was observed that the Maaori burden of injury is similar to that reported for other indigenous peoples who have much higher rates of injury compared to non-indigenous people in the country and that fire, car, violence and alcohol related injuries are common features (Cherrington and Masters 2005). Like other colonized indigenous people the pattern of consumption of alcohol by Maaori reflects a greater risk of deprivation, discrimination and a built environment with more sales outlets (Rankine 2013).

57. While more Maaori are abstinent and overall Maaori drink less often compared to European and other ethnic groups, those Maaori who do drink consume larger volumes than other populations. [Bramley, D., Broad, J., Harris, R., Reid, P., & Jackson, R. (2003). Differences in patterns of alcohol consumption between Maaori and non-Maaori in Aotearoa (New Zealand). The New Zealand

Medical Journal (Online), 116(1184). As a result there is a disproportionate burden of injury for Maaori from alcohol-related injury:

a. half of the Maaori population is aged less than 24 years, an age group in which a high level of alcohol-related harms occurs. While in general, Maaori drink less often than Pakeha and other ethnic groups, larger volumes are consumed on average by Maaori in a session (Bramley et al. 2003). This means that the Maaori population is more adversely affected by alcohol than the non-Maaori population.

b. more Maaori are abstinenet but at the same time the prevalence of severe alcohol-related problems (injury and non-injury) amongst Maaori individuals and whaanau is more than twice that among the non-Maaori population. Maaori are four times more likely than non-Maaori to die of alcohol-attributable conditions.

c. the higher rates of road crashes, suicide and assault injuries for Maaori are very likely linked to the higher prevalence of alcohol-related problems amongst the Maaori population, given the relationship between these types of injury and alcohol misuse (Proffitt and Beacham 2012).

Poorer Maaori health and disability outcomes following injury in the short and long-term

58. Historically, there has been very little published academic literature on Maaori injury outcomes (Wyeth et al. 2013). However, this is now changing with the publication of a series of longitudinal results from the Positive Outcomes of Injury Study (POIS) at Otago University. The POIS study is a prospective longitudinal study originally comprising approximately 2800 participants recruited from ACC clients (including approximately 560 Maaori). The study commenced in 2007[3], with the aim of understanding the lived experience of those following injury and to identify predictors of disability following injury (Derrett et al. 2009, 2011).

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[3] With initial funding from ACC and the Health Research Council.

59. Over the years. published results from POIS has consistently shown that Maaori have a disproportionate injury related health outcomes over time compared to non-Maaori, there a range of predictors of this that are similar to non-Maaori, with one exception - access to healthcare for injury treatment and rehabilitation.

60. In 2013, early results from the study showed that significant numbers of Maaori in the cohort had measurably poorer health outcomes three months and 12 months post injury on a wide range of measures (Maclennan et al. 2013, 2014). Three months post injury, the authors (Maclennan et al. 2013) found that:

    a. approximately 50% of Maaori have difficulty walking, ongoing psychological distress, and some form of disability

    b. approximately 75% suffer ongoing pain or discomfit

    c. while the presence of adverse outcomes increased with injury severity, a high level of them were also present for minor injuries

    d. in spite of the adverse outcomes approximately 75% reported their health as being better than 'good', and

    e. the authors argued their evidence suggests that more effort needs to be put into 'improved strategies…for appropriate rehabilitation for injured Maaori, irrespective of injury severity.'

61. Subsequent results from POIS have shown that:

    a. Maaori are 1.7 times the risk of disability after injury compared to non-Maaori (Derrett et al. 2013). Predictors for poor injury outcomes included household income, existence of prior chronic health condition, and 'accessing healthcare services for injury' (Wyeth et al. 2017).

    b. In 2019, similar results were reported for Maaori health outcomes 24 months post injury (Wyeth et al. 2019). The authors found that the prevalence of disability among Maaori at 26% was 'noticeably higher' compared to the 10% for non-Maaori who were hospitalised for injury. In addition, while there was a similar range of predictors of disability between Maaori and non-Maaori, there was one significant exception, which was 'trouble accessing healthcare services for injury'. This exception resulted in increased relative of risk of 2.58 (i.e. 2.5 times higher) of disability 24 months after injury compared to non-Maaori. The authors noted the finding was consistent with earlier POIS analyses (Derrett et al. 2012, 2013; Wyeth et al. 2017).

c. The 2019 authors went to say the results:

> ‘show that Maaori, but not non-Maaori, who have trouble accessing health care for injury related healthcare services, have poorer outcomes. This finding indicates that there is considerable work to be performed to ensure adequate access to healthcare services for Maaori in this sector of the health system to improve postinjury outcomes. We hypothesise that Maaori who have trouble accessing healthcare services for their injury initially, continue to do so for injury and rehabilitation services, which therefore impacts on, and prevents, improved post-injury outcomes such as longer term disability’ (Wyeth et al. 2019).[4]

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[4] It is worth noting that a 12 year post injury follow-up study with Maaori is planned (Wyeth et al. 2021).

Part 3: Evidence for inequitable Maaori underutilisation of ACC funded injury treatment and rehabilitation services in the context of their injury related health need

Background to ACC research in the early 2000s on use of its services by the New Zealand population

62. In the period 2003-06 a suite of ACC client and business surveys showed there was widespread lack of knowledge amongst Maaori and the general public about ACC and the range of services available to them (ACC. 2007; Research New Zealand. 2005). Nearly half of those surveyed did not know ACC could pay them Weekly Compensation if they are injured and were unable to work. However, more than half didn't know ACC could help pay doctors' treatment costs. In addition, many respondents did not know they could get help at home or with childcare if they could not manage these while they recovered. Later surveys for ACC found that substantial numbers of clients and business respondents don't know the range or services available to them.

63. In the surveys Maaori indicated their use of services was inhibited by:

    a. lack of information in the community about the type and scope of services available for injury care

    b. lack of knowledge among treatment providers about ACC's services and entitlements

    c. physical isolation and lack of affordable transport

    d. attitudes/perceptions of injured people and their communities

    e. financial barriers in particular affordability of a range of primary and allied health care services (e.g. GP, Physiotherapy, Radiology) (Research New Zealand. 2005).

64. In response to the surveys, during 2005 and 2006 ACC undertook a suite of pilot projects in a number of regions and five Maaori communities to address the barriers. In addition, a major general public TV advertising campaign called 'You're Covered' was launched in February 2007 and ran through to the end of

2009. The campaign aimed to raise general public awareness of the services available via ACC.

65. Following the campaign, in 2009 the ACC Board requested information regarding Maaori uptake of entitlements once they accessed the Scheme, and whether there was any similarity between Maaori and non-Maaori utilisation of services and health outcomes. In response, over the 2009 – 2011 period a suite of unpublished internal briefing papers about Maaori utilisation of ACC services were prepared (Fawcett and Kake 2009a; Kake 2011; Kake and Allen 2011a; Kake and Dougherty 2010a; T. Kake and Hayward 2011a; Kake and Small 2010a). In addition, two reports from CBG Health Research were commissioned on General Practitioner referrals of ACC clients to elective services (CBG Health Research Ltd & ACC Research. 2014; CBG Health Research Ltd 2010). Additional telephone survey research was undertaken on ACC client experiences of receipt of elective surgery services, their return to work journey, receipt of Weekly Compensation and exit from Weekly Compensation. The research included analyses of ethnic differences in their experience and receipt of services (ACC Research 2011, 2014; Research New Zealand 2012) . In 2014/15 Wren (2015), undertook a major review of all the available internal and external quantitative and qualitative evidence and literature on the topic of ACC service utilisation (Wren 2015b, 2015a). The review incorporated analysis of the research results from the recently completed Burden of Disease and Injury study (Ministry of Health and Accident Compensation Corporation 2013) and the findings on health service use and barriers to use reported in the health services and health equity research literature. The research concluded there was substantial evidence from a health equity lens for Maaori underuitlisation of ACC services and there was a body of research that could inform decisions about the design and delivery of services to remove barriers to the utilisation of the services. The review was externally peer reviewed at the time by external academic health services experts who concluded the analysis was robust and withstood scrutiny.

Over view of the range of research informing thinking about the use of ACC services in the early – mid 2000s: A key assumption in some of the research about 'individual choice' is false

66. Wren (2015) found that while there were methodological issues with the material reviewed, the various authors of the papers consistently described patterns of systematic differences between Maaori and non-Maaori in uptake of a range of ACC funded injury treatment, rehabilitation and support services over the years. A consistent theme was that overall Maaori were substantively under-represented in receipt of a range of services in the context of their proportion of the population. In making this assessment, the authors of the papers reviewed assumed Maaori had the same injury experience as non-Maaori, and the implicit assumption being that any underutilisation was then a matter of individual choice even though the customer satisfaction research had shown that Maaori had identified a range of barriers to their use of ACC service. In 2013, further research comprehensively showed that assumption was invalid. Since the 1990s the Maaori experience of injury and associated burden of health loss has been shown to be statistically and substantially higher compared to non-Maaori (Ministry of Health and Accident Compensation Corporation. 2013). The differences are most notable in the areas of road, work, assault, sport, and suicide / intentional self-harm. There is one exception, falls related injuries, which tend to be lower in Maaori compared to non-Maaori. The differences largely reflects the much younger age structure of the Maaori population, socio economic status, cultural differences, to some degree geographic location, and higher levels of participation in high risk occupations and sport activities (Carr 2013a; Ministry of Health and Accident Compensation Corporation. 2013).

67. Wren (2015) also observed that where it was argued in some of the internal ACC briefings of the early 2000s that Maaori were over-represented in some service use with a conclusion there was no evidence of inequity. This conclusion did not account for the potential for inequitable utilization of service given the size differences in the injury experience of the two population groups.

68. In the following sections analyses of key types of ACC services at the time are reported for the following three types of ACC entitlements: home and

community support, elective surgery, and weekly compensation respectively. In 2021 in an ACC briefing to the Minister, ACC acknowledges that evidence for underutilization still remains 10 years after the original analyses (Accident Compensation Corporation 2021b). This strongly suggests there are significant systemic issues in how ACC is responding.

Home and Community Support Services: 2005-2013

69. The provision of appropriate levels of Home and Community Support Services (HCSS) is an important part in supporting people to return to work or community independence. HCSS includes support around personal care and attendant care for cognitive tasks of daily living, childcare and household duties (home help). Typically, access to HCSS starts with an accepted claim being referred to an ACC Branch or Contact Centre for a needs assessment. A less common pathway involves clients requesting HCSS through an Inquiry Centre. The HCSS needs assessment includes questions about the availability of others such as whaanau / family members to help around the home. The following sections present evidence about HCSS service use for the period 2005-2013. The observed differences are clear, systematic and statistically significant. A range of possible explanations for these differences in the literature, including individual and system effects are identified at the end of the section.

HCSS Non-serious injury clients

70. Figure 6 below shows for the 2005 – 2013 financial year period as a percentage of all accepted claims, HCSS entitlement claims range from 0.4% to 1.2%. These percentages represent claims volumes ranging from approximately 400 to 1000 per-annum for Maaori and up to 12,000 for non-Maaori. The numbers and percentages are even smaller for HCSS services associated with ACC defined serious injuries (Serious injuries are defined as typically involving the spine and traumatic brain injuries respectively).

71. Figure 7 shows the differences are statistically significant for Maaori females and the differences relate to the type of HCCS utilised: higher levels of formal care by non-Maaori compared to in-formal care by Maaori. There is no statistical difference between Maaori and non-Maaori males. It should also be noted that

the differences between males and females reflect that female rates of receipt of HCSS are double those of male rates. The gender – ethnic interaction is present in the whole time series.

Figure 6: % All Accepted Claims with HCSS Entitlements, Age-adjusted, non-serious injuries, by Ethnicity, All Claims and Female

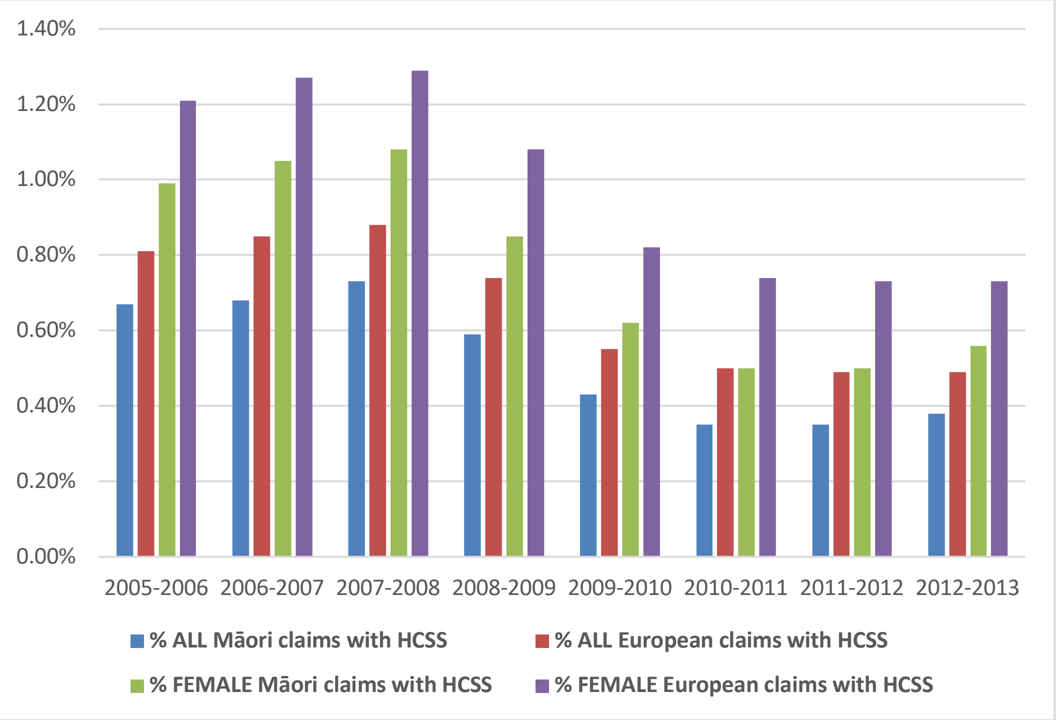
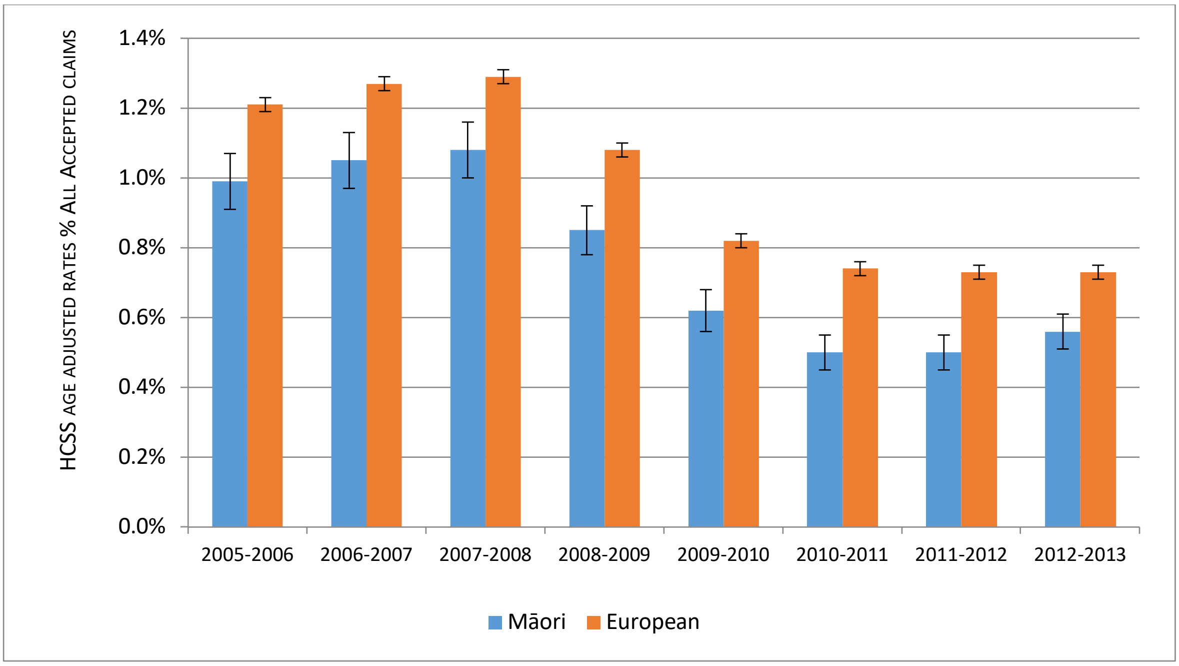


Figure 7: Age-adjusted HCSS rates for FEMALE Maaori and non-Maaori non-serious injury clients, 95% confidence interval bars



72. The following tables showing different analyses of HCSS volumes, Maaori consistently receive HCSS services at rates ranging from approximately 55% to 60% lower than the non-Maaori rates (Table 4). When adjusted for age, the differences reduce and range from approximately 17% to 30% over the time period (

73. Table 5). If Maaori were to receive the same level of HCSS service as non-Maaori, then we would expect to see approximately another 1000 claims per year (Table 4) in this time period.

74. When looking at the rates of HCSS service receipt for Maaori females and adjusting for age differences between the populations, the Maaori female rates are consistently approximately 20%-33% lower than non-Maaori females over time (Table 7). Table 6 shows that if Maaori females were to utilise HCSS services at the same level as non-Maaori females we would expect to see approximately an additional 650 claims per year.

Table 4: Claim volumes and HCSS Services received for non-serious injury claims ALL Maaori and European clients, 2005-2013

Claim volumes and HCSS Services for non-serious injury claims ALL Maaori and European clients

Lodgement year	All Accepted claims		HCSS claims volumes		% HCSS claims			
	Maaori	European	Maaori	European	% ALL Maaori claims with HCSS	% ALL European claims with HCSS	Ratio (ALL Maaori vs ALL European rate)	Expected Maaori HCSS claims if European rate applied
2005-2006	200,786	1,134,949	988	12,207	0.49	1.08	45.37	2,168
2006-2007	211,276	1,185,315	1,089	13,349	0.52	1.13	46.02	2,387
2007-2008	217,230	1,214,934	1,211	14,230	0.56	1.17	47.86	2,542
2008-2009	208,699	1,206,340	970	12,338	0.46	1.02	45.10	2,129
2009-2010	202,905	1,155,053	655	9,070	0.32	0.79	40.51	1,603
2010-2011	206,296	1,147,630	557	8,389	0.27	0.73	36.99	1,506
2011-2012	208,068	1,154,934	558	8,402	0.27	0.73	36.99	1,519
2012-2013	210,635	1,174,179	620	8,641	0.29	0.74	39.19	1,559

Table 5: Age adjusted HCSS rates for non-serious injury claims count for ALL Maaori and European clients

Age adjusted HCSS rates for Non-serious injury claims count for ALL Maaori and European clients				
Lodgement year	% ALL Maaori claims with HCSS	% ALL European claims with HCSS	Ratio (ALL Maaori vs ALL European rate)	Extra ALL Maaori claims if same level as European rate
2005-2006	0.67	0.81	82.72	638
2006-2007	0.68	0.85	80.00	707
2007-2008	0.73	0.88	82.95	701
2008-2009	0.59	0.74	79.73	574
2009-2010	0.43	0.55	78.18	461
2010-2011	0.35	0.50	70.00	474
2011-2012	0.35	0.49	71.43	462
2012-2013	0.38	0.49	77.55	412

Table 6: Claim volumes and HCSS rates for FEMALE Maaori and non-Maaori non-serious injury clients

Claim volumes and HCSS rates for FEMALE Maaori and non-Maaori non-serious injury clients								
Lodgement year	Accepted claims		HCSS claims					
	Maaori	European	Maaori	European	% Maaori claims with HCSS	% European claims with HCSS	Ratio (FEMALE Maaori vs European rate)	Expected Female Maaori HCSS claims if European rate applied
2005-2006	79,904	520,153	641	9,365	0.80	1.80	44.44	1,438
2006-2007	84,782	545,558	730	10,226	0.86	1.87	45.99	1,585
2007-2008	87,401	562,545	787	10,754	0.90	1.91	47.12	1,669
2008-2009	85,095	565,560	617	9,358	0.73	1.65	44.24	1,404
2009-2010	82,829	537,878	424	6,987	0.51	1.30	39.23	1,077
2010-2011	85,208	542,514	361	6,580	0.42	1.21	34.71	1,031
2011-2012	86,627	548,279	366	6,523	0.42	1.19	35.29	1,031
2012-2013	88,393	561,936	420	6,726	0.48	1.20	40.00	1,061

Table 7: Age adjusted HCSS rates for FEMALE Maaori and European clients for non-serious injury claims

Age adjusted HCSS rates for FEMALE Maaori and European clients for non-serious injury claims			
% FEMALE Maaori claims with HCSS	% FEMALE European claims with HCSS	Ratio (FEMALE Maaori vs FEMALE European rate)	Extra FEMALE Maaori claims if same level as European
0.99	1.21	81.82	326
1.05	1.27	82.68	347
1.08	1.29	83.72	340
0.85	1.08	78.70	302
0.62	0.82	75.61	255
0.50	0.74	67.57	270
0.50	0.73	68.49	266
0.56	0.73	76.71	225

Odds Ratios for Maaori receipt of HCSS for Non-Serious Injury Claims

75. Wren (2015) looked at several factors that may affect a client's access to HCSS, including but not only:

    a. institutional factors e.g. referral behaviour overall, service availability at urban and rural level, and regional variations in policy application or claims management process

    b. decline behaviour (including staff discretionary decisions), timeliness, information/understanding

    c. demographic factors (e.g. client age, gender, ethnicity)

    d. socio-economic and cultural / beliefs / perceptions, family circumstances including social deprivation, income, family makeup, community, transport affordability

    e. health and injury (injury severity and injury type, comorbidity)

    f. psychosocial (e.g. cross-cultural communication, health literacy).

76. To do this an odds ratio (OR) analysis was undertaken using variables available in the ACC claim administrative data (age, gender, ethnicity, location, deprivation index, injury site and type). An odds ratio (OR) is a measure of association between an exposure and an outcome. The OR represents the odds that an outcome will occur given a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure. Odds ratios are most commonly used in case-control studies, however they can also be used in cross-sectional and cohort study designs as well (with some modifications and/or assumptions). In this case OR were calculated to estimate the odds ratios between Maaori and European non-serious injury clients receipt of HCSS services given the variables that may explain the observed differences.

77. The odds ratio estimates in Table 8 below support the findings in the age-adjusted rates analysis shown above, while also presenting the effect size and relationship of some factors to HCSS rates. Overall, unadjusted ratios indicate a very large gap in HCSS rates between Maaori and non-Maaori clients. Controlling for age alone reduces the estimated gap in rates and improves the confidence interval of the model. The key points are:

a. The unadjusted HCSS rate for Europeans is more than double that of Maaori, with the odds for European clients receiving HCSS being 2.4 times more than for Maaori clients, meaning the Maaori rate is only at 42% of European rate.

b. After controlling for differences in age and gender, the difference decreased to 1.18, meaning that the Maaori rate is at 84% of the European rate.

c. Adjusting for age, gender, deprivation, injury site, urban/rural classification of claims results in the Maaori rate being about 77% of the European rate. There is 95% confidence that the European rate is between 1.26 to 1.32 times the Maaori rate.

d. All the variations in odds ratios between Maaori and Europeans are statistically significant, meaning the observed differences do not exist by chance alone.

Table 8: Odds ratios for Non-serious Injury clients: European vs Maaori

Control variables	**European vs Maaori**			**Maaori vs European**		
	Point Estimate	**95% Confidence Limits**		**Point Estimate**	**95% Confidence Limits**	
Unadjusted	2.351	2.296	2.408	0.425	0.415	0.435
Deprivation quintile	2.554	2.492	2.617	0.392	0.382	0.401
Injury site	2.424	2.367	2.482	0.413	0.403	0.422
Injury type	2.443	2.385	2.502	0.409	0.400	0.419
Urban/rural	2.380	2.325	2.438	0.420	0.410	0.430
Gender	2.190	2.139	2.243	0.457	0.446	0.468
Age	1.221	1.192	1.251	0.819	0.799	0.839
Age and Gender	1.184	1.156	1.213	0.845	0.824	0.865
Age, Gender and Injury site	1.219	1.190	1.249	0.820	0.801	0.841
Age, Gender and Deprivation quintile	1.258	1.227	1.290	0.795	0.775	0.815
Age, Gender and Urban/rural	1.193	1.164	1.222	0.838	0.818	0.859

Age, Gender, Injury Site, Urban/Rural and Deprivation quintile	1.291	1.259	1.324	0.774	0.755	0.794

HCSS Serious injury clients

Table 9 shows that the volumes of claims in this category are very small (less than 100 per annum for Maaori and less than 200 for non-Maaori).

Table 9: Serious injury claims count and HCSS rates for ALL Maaori and European clients

Lodgement year	**Accepted claims**		**HCSS claims**					
	Maaori	**European**	**Maaori**	**European**	**% Maaori claims with HCSS**	**% European claims with HCSS**	**Ratio (Maaori vs European rate)**	**Maaori HCSS claims with European rate applied**
2005-2006	53	139	47	107	88.70	77.00	115.19	41
2006-2007	64	172	56	144	87.50	83.70	104.54	54
2007-2008	76	191	68	147	89.50	77.00	116.23	59
2008-2009	61	187	52	151	85.20	80.70	105.58	49
2009-2010	72	148	62	118	86.10	79.70	108.03	57
2010-2011	61	143	55	119	90.20	83.20	108.41	51
2011-2012	50	144	36	102	72.00	70.80	101.69	35
2012-2013	43	134	29	108	67.40	80.60	83.62	35

78. Figure 8 shows that in contrast to non-serious injuries, for ACC defined seriously injured clients there is no statistically significant difference between Maaori and non-Maaori, and this holds true even after adjusting for age differences in the population, gender, injury site, region and type of HCSS service (see Table 8). In contrast to non-serious injury HCSS claims, one explanation for this is that historically there has been a strong focus in the Serious Injury Service on evidence-based assessments, and there is less opportunity for discretionary decision-making by claims managers and clients about the services received. The data also shows that in the earlier years, pre 2009 recession, Maaori rates were higher than non-Maaori, however this is no longer so up to the time period studied by Wren in 2015.

Table 9: Serious injury claims count and HCSS rates for ALL Maaori and European clients

Lodgement year	**Accepted claims**		**HCSS claims**					
	Maaori	**European**	**Maaori**	**European**	**% Maaori claims with HCSS**	**% European claims with HCSS**	**Ratio (Maaori vs European rate)**	**Maaori HCSS claims with European rate applied**
2005-2006	53	139	47	107	88.70	77.00	115.19	41
2006-2007	64	172	56	144	87.50	83.70	104.54	54
2007-2008	76	191	68	147	89.50	77.00	116.23	59
2008-2009	61	187	52	151	85.20	80.70	105.58	49
2009-2010	72	148	62	118	86.10	79.70	108.03	57
2010-2011	61	143	55	119	90.20	83.20	108.41	51
2011-2012	50	144	36	102	72.00	70.80	101.69	35
2012-2013	43	134	29	108	67.40	80.60	83.62	35

Figure 8: HCSS age-adjusted rates for Maaori and European serious injury clients, and confidence intervals, 2005-2013

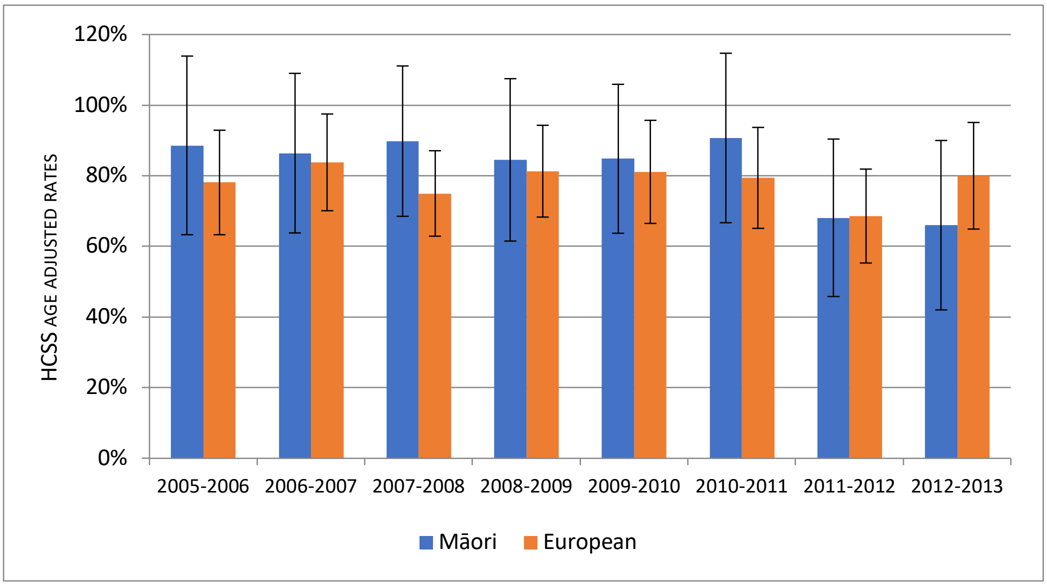


Table 10: Age-adjusted serious injury claims and HCSS rates for ALL Maaori and European clients

Age adjusted				
Maaori	**European**	**Ratio (Maaori vs European rate)**	**Maaori HCSS claims with European rate applied**	**Extra ALL Maaori claims if same level as European**
88.60%	78.10%	113.44%	41	-6
86.40%	83.80%	103.10%	54	-2
89.80%	75.00%	119.73%	57	-11
84.50%	81.30%	103.94%	50	-2
84.80%	81.10%	104.56%	58	-4
90.70%	79.40%	114.23%	48	-7
68.10%	68.60%	99.27%	34	-2
66.00%	80.00%	82.50%	34	5

Potential explanations for differences in HCSS rates

79. In summary, the observed differences are clear, systematic and statistically significant. Potential explanations for the differences in the literature for the levels of service observed include:

    a. Maaori clients may be less informed about the kinds of HCSS services are available (Nikora et al. 2004)

    b. Maaori clients may not be as assertive in communicating with staff in seeking the type of help they need and which could be made available to them

    c. there is unintended systematic bias in ACC's decision-making around HCSS claims that could be occurring at the policy and or operational level

    d. Maaori women may prefer to rely on 'informal care' to provide home support (i.e. family / whaanau / friends) rather than agency supplied staff. This may also reflect negative experiences with agencies or concerns that cultural considerations will not be respected (Collins and Wilson 2008; National Health Committee 2010; UMR 2008).

    e. system level effects arising from agency service policy settings that don't recognize intergenerational effects, larger families, and expectations of help by whanau and others at home in the provision of care (Holdaway et al. 2021).

Elective Services

80. Elective services are injury treatment and rehabilitation services involving mainly receipt of radiology, physiotherapy and orthopedic surgical intervention. The provision of services and the extent of cover (type of service and cost[5]) provided is governed by a range of factors including government regulation, contract, and policy settings. The big three categories by volume and cost for

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[5] Some elective surgery services may incur a co-payment charge depending upon the service provider and other details about the claim.

receipt of elective surgery are knees, shoulders and the spine. Treatment may be provided through a range of public and private providers under contract to ACC.

81. Prior to receipt or uptake of the service by the client, clients usually have to go through a range of assessments and may be required to undertake some rehabilitation type treatment or make some life style changes (such as weight loss) before the treatment can be provided. If a health comorbidity is present (for example diabetes, heart disease, arthritis etc.), this is likely to complicate the treatment journey as the comorbidity may have to be treated or require extra rehabilitation prior to and following receipt of the surgery.

82. In the period 2009-2012 a range of internal ACC studies looked at the levels of use of elective surgery services, and other services by Maaori and non-Maaori (Fawcett and Kake 2009b; Kake and Allen 2011b; Kake and Dougherty 2010b; T. Kake and Hayward 2011b; T Kake and Hayward 2011; Kake and Small 2010b). In addition, two reports from CBG Health Research on General Practitioner referrals of ACC clients to elective services were commissioned. These two reports combined primary health care data with ACC data to examine the rates of clients travelling through the elective surgery pathway. The analyses included examining differences by ethnicity, age, sex, type of injury, and presence of comorbidity as these were possible sources of any observed differences in receipt of these type of ACC services (CBG Health Research Ltd & ACC Research. 2014; CBG Health Research Ltd 2010).

Key findings – Elective Services

83. Internal ACC research studies in the mid-2000s all reported systematic differences in the utilisation of elective surgery services between Maaori and non-Maaori at each stage of the referral process, and by injury severity and geographic region (Fawcett and Kake 2009b; Kake and Dougherty 2010b; Kake and Small 2010b). Overall, Maaori were more likely to receive less referrals at each stage of the treatment supply journey and the differences increased throughout the process. Geographically, rates of referral were lowest in the Far North, but there was a steady gradient increase in referral rates moving southwards. The greatest gaps in the receipt of surgery were in the areas of

knee, shoulder and lower back / spine. The differences persisted after adjusting in the age structures of the population (Kake and Dougherty 2010b).

84. The 2009 ACC paper by Fawcett & Kake concluded that if Maaori were to receive the same level of service (i.e. parity or equality) as non-Maaori there would be approximately an additional 700 elective surgery claims per annum. However, the authors also noted that parity of service uptake did not mean equity in service utilisation given that in the academic injury literature the Maaori population had at the time been consistently been:

    a. Described as a 'population at high risk of injury' (Feyer and Langley 2000)

    b. reported as having higher rates of rates of injury hospitalisation of 30% to 50% compared to non-Maaori (Ministry of Health 2006; Robson and Harris 2007)

    c. 33% higher head / traumatic brain injury (Barker-Collo and Feigin 2009)

    d. 200-300% more spinal cord injuries (Dixon, Danesh, and Caradoc-Davies 1993).

85. These levels of difference in injury related health need clearly suggest that Maaori receipt of elective surgery services should be much higher than they are.

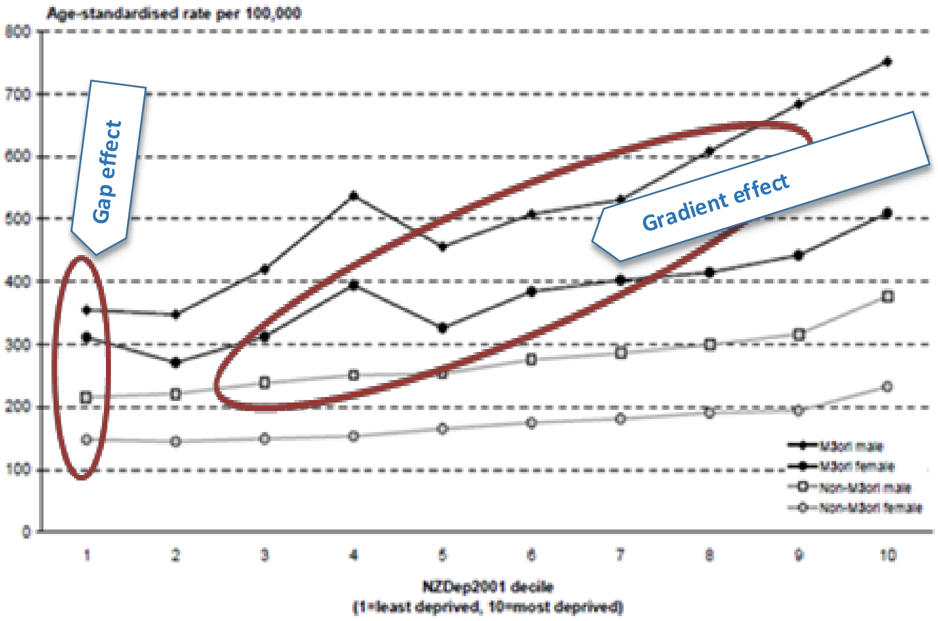
86. When specialist consultation rates by District Health Board (DHB) region where examined, Kake & Doughterty (2010) found that in 2009 there were statistically significant differences in consultation rates for elective surgery between Maaori and non-Maaori ACC clients. When looking at the differences by DHB, the authors suggested the design and methods used for primary care service delivery and secondary referral in Tairawhiti, which involve significant input from Maaori health providers, could explain the difference. The authors also concluded that the main determinant of the difference in elective surgery rates was differences in GP referral rates to specialists.

87. In a latter internal ACC research briefing paper, further regional analysis was undertaken of differences in rates of receipt elective surgery, home support services and receipt of weekly compensation (Kake and Small 2010b). The authors reported that rates for all types of services were lowest in the Northern ACC regions, and improve progressively southwards, with the highest rates of

service receipt in the South Island, and generally in the southern most region. In socio-economic terms, lower socio-economic groups were reported has having the lowest rates of surgical consultation and elective surgery, irrespective of ethnicity (however no numbers are given in the paper). The authors noted the results were consistent with the injury profile of these population groups, and the existence of income related gap and gradient effects in service use that were consistent with the then relatively new NZ evidence on the presence of these effects in the NZ population (Blakely et al. 2002; Health 2001; Ministry of Health 2002b) at the time the briefing was written.

88. Gradient effects occur when there are systematic differences in health service utilisation according to socio-economic status. The term 'gap effects' refers to the size difference in utilisation between different socio-economic groups. An income gap is where the differences are observed by ethnicity within the same socio-economic group. A gradient effect occurs where the size of the gap changes with the level of income, with the income gap becoming larger with each increase in the level of socio-economic deprivation. The effects are shown in Figure 9.

Figure 9: Illustrating Socio-economic Gradient and Gap Effects in Health



89. To examine further the role of GP referrals as gateway to the utilisation of ACC funded elective surgery services CBG Health Research was commissioned in 2010 and 2012 to undertake further analyses using both primary health care and ACC data (CBG Health Research Ltd & ACC Research. 2014; CBG Health Research Ltd 2010).

90. The 2010 CBG pilot study found that for the period of January 2007 to August 2010, of the 35,861 referrals by the GPs in the Counties Manukau DHB covering nine GP practices, the referral rate for Maaori was significantly lower at 68.1% of European clients. Further analyses indicated that the presence of co-morbidities (asthma, diabetes, and heart disease/failure) did not explain the lower GP referral rate for Maaori clients.

91. The 2010 pilot study sample was later expanded to include a random sample of 56 GP Practices and an analysis of 47,377 referrals written in the 2013 year (CBG Health Research Ltd & ACC Research. 2014). **Table 11** shows that in this sample of GPs, Maaori had the lowest rates of referral for of all of the main types of elective services: radiology, physiotherapy and orthopedics.[6]

Table 11: Percent (%) GP referral rates of ACC clients to elective services by ethnicity, 2013 (CBG Health Research, 2014)

N		**Prioritised Ethnicity %**			**All**
		Maaori	**Other**	**Pacific**	
		9007	34896	3474	47377
Radiology	**Mean**	6.78	9.09	8.12	8.58
Physiotherapy	**Mean**	11.3	12.3	10.7	12.0
Orthopaedics	**Mean**	1.40	1.53	1.05	1.47
Any referral	**Mean**	20.0	23.0	19.2	22.2

92. The next two tables present the same analysis by age group. It is interesting to note that the orthopedic referral rate for Maaori in the 18-24 year age group is

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[6] Orthopedics data was obtained by additional scanning of all names in letters to include all referrals to known orthopedic surgeons or services. Radiology and Physiotherapy referrals were identified by service codes, an approach which may not capture all referrals.

approximately 60% higher (1.8% versus 1.1%), which would be expected given the level of Maaori injury in this younger age group. These analyses show the importance of adjusting for age in any analysis of referral rates.

Table 12: Percent (%) GP referral rates of ACC clients to Radiology and Physiotherapy services by ethnicity and age-group, 2013 (CBG Health Research, 2014)

Age	**N (Age group)**	**Radiology**				**Physiotherapy**			
		%				**%**			
		Prioritised Ethnicity			**All**	**Prioritised Ethnicity**			**All**
		Maaori	**Other**	**Pacific**		**Maaori**	**Other**	**Pacific**	
0–5	3209	3.1	4.0	3.9	3.7	0.1	0.1	0.2	0.1
6–17	7617	6.8	10.9	8.9	9.5	4.7	6.5	4.9	5.8
18–24	4067	7.4	8.6	8.7	8.3	10.3	11.8	13.2	11.5
25–44	11229	6.8	8.6	8.2	8.2	16.3	16.4	17.0	16.4
45–64	13032	8.1	9.9	10.0	9.6	17.2	16.4	15.9	16.5
65+	8559	7.4	8.8	6.7	8.7	15.2	9.1	8.6	9.5
All	47713	6.8	9.1	8.2	8.6	11.3	12.3	10.7	12.0

Table 13: Percent (%)GP referral rates of ACC clients to Orthopaedic and Any Referral for Elective Services by ethnicity and age group, 2013 (CBG Health Research, 2014)

Age	**N (Age group)**	**Orthopaedics**				**Any referral**			
		%				**%**			
		Prioritised Ethnicity			**All**	**Prioritised Ethnicity**			**All**
		Maaori	**Other**	**Pacific**		**Maaori**	**Other**	**Pacific**	
0–5	3209	0.2	0.1	0.0	0.1	5.4	6.4	4.5	5.8
6–17	7617	0.6	1.0	0.3	0.8	13.0	18.9	14.5	16.7
18–24	4067	1.8	1.1	2.0	1.4	19.8	21.7	22.4	21.2
25–44	11229	1.8	1.9	1.5	1.9	25.9	26.7	25.6	26.4
45–64	13032	2.2	2.1	1.7	2.1	26.2	27.9	25.7	27.5
65+	8559	0.9	1.1	0.6	1.1	24.9	19.4	15.3	19.7
All	47713	1.4	1.5	1.1	1.5	20.0	23.0	19.2	22.1

Odds Ratios of GP referral for orthopedic surgery

93. Table 14 focuses upon the odds of being referred to an orthopedic surgeon if a patient is Maaori and after controlling for a range of predictors of interest that are often related to referral (age, gender, deprivation, chronic illness and injury type). The result is reported in the form of a 'Point Estimate Odds Ratio', which is the probability of a referral being made for a person of the stated ethnic group relative to people of the 'Other' ethnic group. Where the estimate is less than 1, the result indicates a lower probability of referral and where the result is greater than 1 a higher probability of referral. The probability of referral is deemed to statistically significant at the 95% confidence limit if the confidence intervals around the point estimate does not include '1' (i.e. equal odds).

94. The key finding in Table 14 is the row in grey highlight that shows after controlling for the range of predictors of interest, the odds ratio point estimate for Maaori referral to orthopedic surgery is 84% of the rate for people of 'Other' ethnicities. This means that the observed Maaori referral rates for orthopedic injury treatment surgery are 16% less than non-Maaori. However, statistically the actual referral rate could be as low as 60.3% or as high as 117% of the 'Other' ethnicity rate for this service (this is shown by the confidence limits). Given these confidence limits, statistically there is no difference between Maaori and non-Maaori referral rates for orthopedic surgery in this study.

95. In the same table the odds ratios for different injury types confirm how strongly injury type predicts referral, as expected, and further shows the importance of including injury type in an analysis of referral rates if different population groups experience different rates.

96. The question arises, does this study indicate significant inequity in referral of ACC funded elective services? The results clearly show sizable differences in GP referral of Maaori for ACC funded injury treatment elective services, particularly for orthopedic services, but also for Radiology and Physiotherapy. However the size of the difference and whether it is substantive depends on the focus of the analysis and the lens used to assess equity and inequality in terms of an insurance / actuarial or a health approach, and whether the decision focuses solely upon the statistical test of significance.

Table 14: Odds of referral for orthopaedic surgery controlling for age, gender, deprivation, chronic illness and injury type (CBG Health Research, 2014)

Odds Ratio Estimates			
Effect	**Point Estimate**	**95% Wald Confidence Limits**	
25-<45 vs 75+	2.878	1.659	4.991
45-<65 vs 75+	3.191	1.902	5.355
65-<75 vs 75+	2.215	1.256	3.905
Female vs Male	0.735	0.595	0.909
Quintile 1 vs 5	1.143	0.801	1.632
Quintile 2 vs 5	1.150	0.817	1.620
Quintile 3 vs 5	1.022	0.728	1.435
Quintile 4 vs 5	0.935	0.666	1.312
Maaori vs Other	0.842	0.603	1.174
Pacific vs Other	0.932	0.563	1.543
Heart Failure	0.881	0.353	2.201
Ischaemic Heart Disease	1.073	0.746	1.544
Diabetes	0.875	0.597	1.284
Mental Health diagnosis	1.016	0.789	1.309
Asthma	1.131	0.848	1.509
ACC Diagnosis Groups			
42 vs 99 Soft tissue vs Other	7.182	4.596	11.223
43 vs 99 Fracture / dislocation	13.456	7.980	22.691
46 vs 99 Amputation	34.217	4.120	284.186
90 vs 99 Gradual onset	16.007	9.094	28.175

97. In answer to the question posed above, one level of interpretation is, once age, gender, deprivation and common chronic illnesses and injury type is controlled for, the Maaori referral rate is 84% of the 'Other' rate – a 16% lower difference. However, this does not take into account the approximately 60% higher rates of referral of young Maaori in the 18 to 24 age group compared to non-Maaori in the same age group. This can be interpreted (particularly from an insurance / actuary definition) as a sizable inequality in favour of Maaori of this age group. Furthermore, the 95% confidence interval (0.603 – 1.174) suggests that the Maaori rate is not statistically significantly different from the 'Other' (non-

Maaori) rate, and consequently there is no difference between Maaori and Non-Maaori referral rates for injury treatment elective surgery.

98. However, from a health lens perspective, the results of Table 14 can be interpreted as presenting sufficient evidence[7] of inequities and inequalities in Maaori referrals and uptake of ACC funded services, particularly in the context of the substantive literature on Maaori injury rates presented in the next part of this brief. Furthermore, in epidemiological terms, while the statistical test indicates no difference, in the context of the wider evidence on the Maaori injury related health loss in comparison to non-Maaori where Maaori have rates of healthy life loss twice that of non-Maaori (Ministry of Health and Accident Compensation Corporation. 2013) the level of treatment need is such that it could be reasonably expected that the referral rates for the broad range of elective services – including surgery - should be much higher for Maaori than those reported in the two CBG studies, and the internal ACC studies cited.

Receipt and Duration of Weekly Compensation Services

99. Weekly compensation services involve making a claim for receipt of 80% wage compensation where there is more than five days off work due to an injury that occurred at work. The numbers of claims can be counted[8], and population rates of claiming calculated and adjusted for differences in the age structure of the populations of interest.

100. Apart from the number and rates of claims for this entitlement, another important metric is the duration of cover. This metric is measured as the number of days from when receipt of wage compensation (weekly compensation) begun and when it ceases due to return to work. The metric is known as the 'return to work' (RTW) duration time. The measure is an internationally accepted performance benchmark between workers

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[7] In the legal sense of "sufficient to establish a fact or raise a presumption unless disproved or rebutted" by conclusive evidence.

Source: www.law.cornell.edu/wex/prima_facie *and* http://definitions.uslegal.com/s/sufficient-evidence/

[8] Weekly Compensation Claim counts are typically reported in terms of "conversion". This is the number of "Accepted Claims" that transition (convert) into becoming a "Weekly Compensation" claim where the claim is accepted as being work related and involving more than five days off work.

compensation schemes, and the metric is routinely reported between Australasian injury compensation schemes.

101. Wren reports that up to 2015 a number of internal ACC analyses of receipt of weekly compensation claims and RTW duration had been undertaken at various time points (Fawcett and Kake 2009b; Kake and Allen 2011b; Kake and Small 2010b). The analyses show systematic differences over time by ethnicity, age, socio-economic status, and geographic region in the use of these services.

102. In 2009 Fawcett & Kake highlighted systematic age differences between Maaori and non-Maaori rates of receipt of weekly compensation over a number of years. The authors showed that Maaori aged over 45 years of age received weekly compensation at levels twice that of non-Maaori in the same age group. Maaori under this age-group also received weekly compensation at levels higher than their non-Maaori counterparts, however the difference was considerably closer at 22% (Fawcett and Kake 2009b).

Disparity across the spectrum' of ACC prevention, care and recovery remains in 2021

103. In May 2021 ACC acknowledged in a briefing to the Minister there was 'consistent evidence' that Maaori compared to non-Maaori for 'disparity…across the spectrum of prevention, care and recovery', Maaori have poorer long-term injury outcomes', and that there are 'inequities' in Maaori use of ACC funded services' and that these remained in 2021 (Accident Compensation Corporation 2021b)[9].

104. The briefing paper goes on to suggest that the cause of these disparities lie largely outside of ACC's control, including legislative, social, and health system constraints (Accident Compensation Corporation 2021b).[10] In addition, the paper argues that its Whaaia te Tikia strategy sets out a plan to improve ACCs cultural capability, representation on ACC Executive, creation of a Maaori Health Team. While these initiatives are welcome, ACC has previously

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[9] Quotes from paragraph 5 of ACC briefing. Paragraphs 5 to 12 outline a range of differences across the spectrum of ACC activities.

[10] See paragraphs 13 – 26 of ACC briefing.

established and disestablished these types of initiatives in the 1990s and early 2000s. As outlined in the following Parts of this evidence brief, a range of research has identified areas where ACC can act, and where the ACC related legislation could be strengthened to ensure a more consistent ACC response to its Te Tiriti obligations as a crown entity including requirements for ACC crown monitoring agencies to report on ACCs Maaori actions to reduce Maaori inequities in utilisation of ACC funded services and injury related health outcomes.

Part 4: Evidence on barriers to Maaori utilisation of ACC services and effective interventions, welcomes the current ACC Whaaia te Tika strategy, notes the inconsistency over at least 20 years in ACCs Maaori responsiveness to Maaori in addressing the inequities, and implications for the Crown in meeting its Te Tiriti responsibilities

Outline of this Part

105. This part summarises the accumulated research evidence over 20 years about the barriers to Maaori utilisation of ACC services, what works to address the barriers, and welcomes the current ACC Whaaia te Tika strategy. However, we also note the inconsistency in ACCs responsiveness to Maaori over at least 20 years and the implications of this for the Crown in meeting its Te Tiriti responsibilities.

106. The Part is organised using a chronological and topical approach. This approach draws attention to the consistency and long-term nature of the barriers identified, and the solutions that exist. The aim is to promote an informed discussion about what an appropriate Crown ACC response to Maaori could include to address the range of range of systemic, policy and operational barriers that have been identified in the published research, and some of which that have been recently acknowledged by ACC in its 2021 Briefing to the Minister (Accident Compensation Corporation 2021b).

Worthiness of Injury, Value of Work and Treatment Seeking Behaviour

107. Researchers in the area of the sociology of work have argued that the experience of industrial injuries and workers compensation claim seeking behaviour is more the product of how work is organised within society, and cultural (ethnic) and social differences about the value of work, beliefs about the causes of injuries and what an appropriate response to an injury is (Dwyer 1991; Grint 1991).

108. As an illustration of the importance of Maaori cultural values influencing decisions about the value of work and the 'worthiness' of claiming for an injury consider the following whakataukii (Maaori proverbs) (Jansen 2015b):

a. Mauri mahi, mauri ora. - A working soul is a healthy soul (or the industrious live well)

b. He toa taua, mate taua; he toa piki pari, mate pari'; he toa ngaki kai, ma te huhu tena. - The warrior is killed in war; the fearless scaler of lofty cliffs (in search of sea-fowl) can be smashed to pieces; while the industrious gardener lives long and dies peacefully of old age.

c. He toa paheke te toa taua; tena ko te toa mahi kai ekore e paheke. - The warrior stands on insecure footing; but the industrious cultivator of land will never slip or fall.

109. Each of these whakataukii speaks to the value of hard work and how warriors accept death or injury. This can be seen in some sports people attitudes to injury – where sports injuries are viewed as worthy injuries from a battle that will lead to seeking help, while a stumble in the dark at home causing similar injury might be seen as not worthy as it "is just my own mistake" – so help is not sought. An injury at work may be considered in the same way. In this context, help seeking may be influenced by the degree to which the injury is thought to the person's fault, or whether it 'was inflicted on me in honourable circumstances (is it a battle injury / paid work injury) which may be perceived as more worthy of help seeking from mainstream services (Jansen 2015b).

110. This accords with the findings of research commissioned by ACC from Clemenger BBDO in 2004 (Clemenger BBDO 2004). The Clemenger report was the precursor to the 'You're Covered' campaign that initially focused on communicating with Maaori to improve access to claims and entitlements.

111. The background provided to Clemenger BBDO was that Maaori were under-represented in claims for injury and then accessing the range of ACC entitlements for rehabilitation. ACC also wanted to understand Maaori attitudes to the concepts of injury and of 'safety culture'.

112. Maaori who had experienced injury but not sought assistance from a health professional and those who had sought help but not further assistance were interviewed with help from indigenous communications professionals.

113. The diverse realities of Maaori were identified as contributing to attitudes to injury and ACC – young vs old, Te Reo speakers vs non-speakers, rural vs

urban, perceptions of racism, comfort in te ao Maaori vs raised in te ao Pakeha, and tane vs wahine.

114. The status of the injured and severity of the injury were also identified as very important. This links to the idea of 'worthiness' with injuries from clumsy mistakes being perceived as embarrassing and self-induced therefore not worthy of seeking assistance, while workplace, road or sports injuries were seen to be more acceptable as were injuries to children. The idea of worthiness is also rooted in fears of being judged as a 'bludger' or having to seek assistance with co-payments or travel to get care.

115. The provider from which the injured Maaori person sought help was related to preexisting knowledge about the convenience, cost and comfort (cultural fit) of available services.

116. In addition a cluster of perceptions about the unhelpfulness of ACC and expectations of bias may be combined with the assessment of worthiness and knowledge about available services guiding individual decisions on whether to avoid seeking care after injury, or not.

117. These themes were also identified by Mauri Ora Associates ('He Ritenga Whakaaro: Maaori experiences of health services' 2009) and in the Research New Zealand survey (2005).

118. In summary these research findings commissioned by and shared with ACC prior to 2009 confirm that when there are perceived barriers to care, Maaori (and arguably people from similar Pasifika cultures) may judge whether to seek treatment in the context of not only is the injury worthy of taking further action, but also in the context of the prior experiences of whaanau members in similar circumstances. Where the experiences have been bad, the result may lead to delay or no presentation at mainstream services, or to a preference for self-treatment or the seeking of assistance from alternative health providers first (Jansen 2015b).

Maaori perceptions of injury severity and treatment seeking behaviour – 2005 ACC survey evidence

119. In the early 2000s ACC saw a need to improve Maaori knowledge about the Scheme in order to improve Maaori utilisation of ACC services and therefore

help meet Maaori injury treatment and rehabilitation need (Jansen 2015a). As noted above ACC commissioned Clemenger BBDO to interview Maaori with injuries to identify reasons for seeking help or not. This led to the ACC 'You're Covered' campaign (ACC. 2007). Originally it was targeted for Maaori and initially planned to run in the Maaori media alone. However, this focus was lost in 2004 when the campaign was extended across all media and the whole population.

120. In May 2005 an evaluation of the communication strategy was commissioned which included a benchmark survey of approximately 1500 Maaori clients (Research New Zealand. 2005). The survey sought to identify:

   a. who Maaori approach for injury treatment

   b. their level of awareness and understanding of ACC entitlements available to them

   c. their attitudes, beliefs and perceptions of the services.

121. The 2005 survey confirmed that perceptions about the worthiness and 'severity' of the injury (minor, moderate, major), whether it would 'self-heal', and could Maaori 'treat themselves' were important influencers of when treatment was first sought (Research New Zealand, 2005). From the survey, the following figure presents Maaori views on whether common types of injury represent a minor, moderate or major injury. The graph shows that significant numbers of respondents viewed injuries such as 'a broken nose, sore back, deep cut on the hand or leg, broken arm' as representing minor or moderate injury for which early treatment would not be necessarily be sought in a timely manner from a health service and claim management view.[11]

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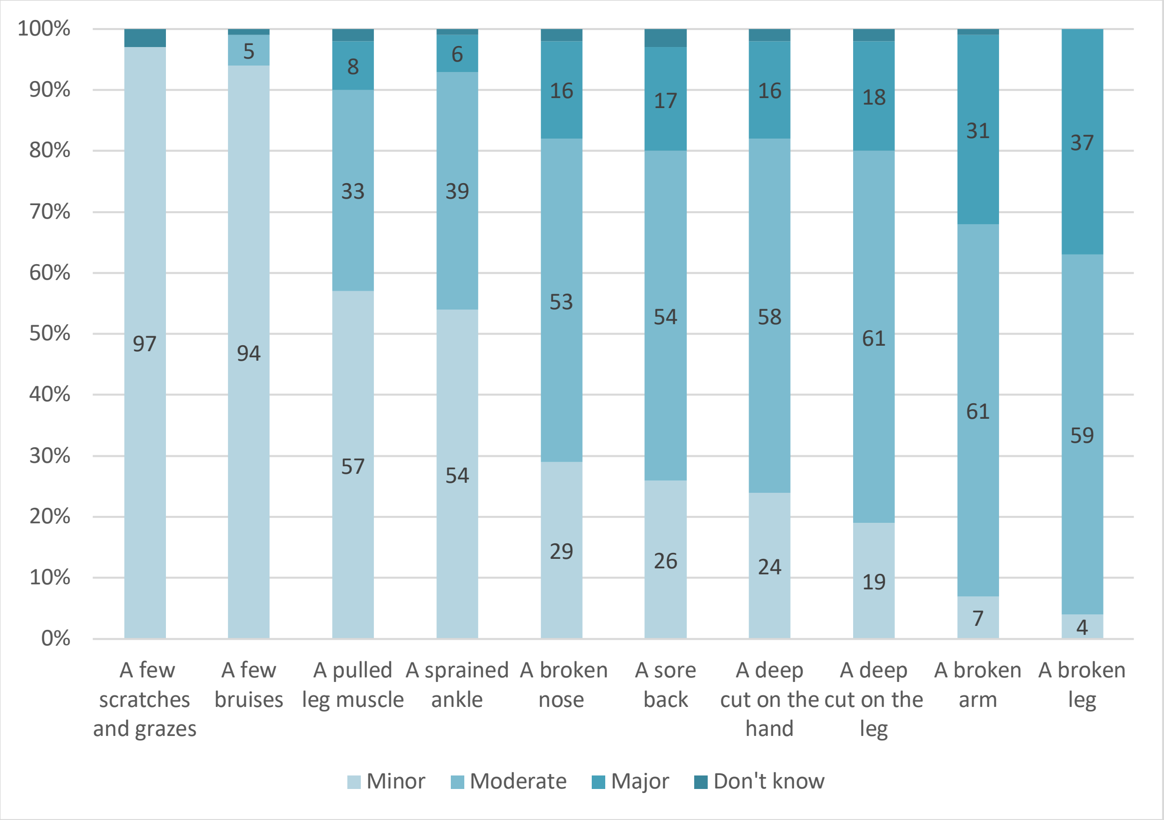
[11] Unfortunately, the survey did not include non-Maaori responses, which means it is not possible to assess how the behaviours identified might differ significantly, if at all, from other ethnic groups.

Figure 10: Maaori perceptions of injury severity, 2005



122. In addition, approximately 60% of those who defined themselves as sustaining a moderate injury reported they may initially 'elect to self-treat themselves'. This was especially the case for Maaori males. However, if self-treatment did not work, virtually all would seek initial treatment from a health provider who was usually a doctor or nurse, or from a hospital Accident & Emergency Department.

123. One implication of this is, when Maaori do seek treatment, it is likely the services required will be more complex, costly, and require longer rehabilitation. It also suggests, that many Maaori are not using ACC services for many injuries they perceive as 'minor or moderate' even though they are entitled to receive ACC funded injury treatment services for these injuries, and if treatment were received earlier there would be better health outcomes.

Awareness of ACC services, 2005

124. In addition to the above, while many respondents were aware that they could access services, significant numbers could not name what the services were. For example on an unprompted basis, approximately 65% were not aware that

patients with work related injuries could get 'income support'. Only 20% of respondents mentioned 'subsidies for visiting the doctor', and only 1% were aware of 'subsidies for dental treatment'. Even when prompted, approximately 25% of respondents were not aware of weekly compensation support, and approximately 40% were not aware of any of the other services available. In addition, it was reported that:

> 'while awareness of support services and entitlements…is clearly an issue, exacerbating this are…misconceptions about who provides these services…who is entitled to them, and on what basis' (Research New Zealand. 2005).

125. This feature of less information and discussion of treatment options and or investigation of Maaori health causes has been found recently in other health settings. For example research has shown that Maaori in palliative care have poorer access to information and are systematically given less information rather than having less health literacy compared to non-Maaori (Kidd et al. 2018). In the GP, setting a study for the Ministry of Health found that on average Maaori receive less investigative time with GPs compared to non-Maaori (13.7min for Maaori and 15.3 min for Non-Maaori) and there was a stronger emphasis on prescription writing rather than discussion about treatment options (Crengle 2000).

Barriers to use of ACC services, 2005

126. Respondents to ACC surveys in 2005 identified a range of barriers to treatment seeking from a health provider including:

    i. affordability
    ii. access
    iii. availability of providers
    iv. appropriateness of services given cultural differences (for example how Home Support Services are delivered, and how surgery is talked about)
    v. personal attitudes towards injuries and treatment
    vi. awareness and knowledge of the range of services available.

127. While cost was commonly mentioned, it is not necessarily the most significant barrier; beliefs about services, and trust and confidence in the service provider, are equally important. For example:

   i. 33% reported 'they could not afford to go' to a health professional
   ii. 37% said seeking treatment would mean 'going without essential items'
   iii. 54% of respondents believed that 'most injuries fix themselves if you give them half a chance'
   iv. 76% stated that the service provider 'must be someone I feel comfortable with and trust'
   v. 33% said it was 'too much of a hassle' to go to a doctor or health professional
   vi. 32% claimed they 'usually had to wait too long before they could get an appointment' (Research New Zealand. 2005).

128. Segmentation analysis identified that, for 44% of respondents, these issues represented a 'moderate to high' barrier to uptake of services. The most impacted group was the segment most representative of the low socio-economic groups:

   i. under 30 years of age
   ii. families with children
   iii. provincial / rural based
   iv. sole income and vulnerable workers on low incomes and in receipt of a range of government subsidised services
   v. less likely to have a regular doctor or health professional they see.

129. This segment also had the lowest knowledge of the services available, displayed less help seeking behaviour compared to the three other segments. Wren reported in 2015 that additional internal ACC survey research continued to report similar results (Wren 2015a). This suggests a pattern of consistent and long-term and issues with the way ACC services and funded treatment are

perceived by Maaori, which inhibits their utilisation of the services they are entitled to.

A key report: 'He Ritenga Whakaaro: Maaori experiences of health services' (Mauri Ora Associates 2009)

130. In 2009 'He Ritenga Whakaaro: Maaori experiences of health services' was published (Mauri Ora Associates 2009). The report has been widely referenced in a range of health sector reviews and in the health literature. The report presents the results of a thorough literature review, survey and a set of in-depth focus group interviews with Maaori about their experiences with government agencies and health providers – including ACC.

131. The authors found that what Maaori want from their service providers, including ACC, was:

    a. to be understood - more time to be listened to

    b. trusting relationships - more time for relationship building

    c. service providers communicate in ways that are clear and understandable by the patient - more assistance to assess technical aspects of their clinical treatment and associated expected outcomes; explanations in clear language about what was wrong, rather than just information on paper and in medical or organisational focused claims management language

    d. better value for their effort (including expenditure) to access and use services

    e. to see themselves in service agencies (they would like to see more Maaori in their interaction with agencies and service providers, and people who understand Maaori culture).

Perceptions of Care

132. In terms of perceptions of care, the researchers concluded that while most Maaori were getting good service from their health professionals, a sizable number of Maaori patients (20%) feel that health workers have negative attitudes towards them and this group is more likely to state they will avoid future interactions with the provider last seen. However, analysis indicated that the group with the most negative perceptions report health service use in

patterns similar to the group with more positive experiences. This finding is consistent with the health economics literature that health purchasing is relatively inelastic in New Zealand (New Zealand Institute of Economic Research. 2005b, 2005a). This means that if the health need is deemed sufficient, the person will make substantive efforts to secure treatment in spite of their views of the service. However, if they are making a substantive effort to seek care, then it is likely they will expect substantive benefit, and / or that the provider will also make an effort to meet the patient's needs. Failure to perceive such a reciprocal benefit is likely to lead to dissatisfaction and loss of trust and confidence in the service provider – including the funder of the service.

133. Additional key findings were that younger Maaori were far more likely to express strong dissatisfaction with the services compared to older Maaori. Perceptions of care, respect, and confidence appear to impact on intention to revisit, and many Maaori have low expectations for future interactions with health services.

Costs and cultural barriers to service uptake

134. A range of social, economic and institutional barriers to service uptake, and ways to improve Maaori patients' use of healthcare services, were identified by the Mauri Ora researchers. It was noted that barriers to care vary by type of provider, location and age, and it is harder for people with disability. For Maaori patients, a lack of engagement with services due to past poor experiences was an issue. Lack of engagement was due to breakdown in communication and relationships with practitioners. Cost was seen as a major barrier that crosses all areas, including:

a. cost of consultation

b. cost of prescriptions

c. cost of house calls

d. time off work

e. waiting time

f. cost of travel

g. ability to travel

h. follow-on costs

i. value for money.

135. While each of the cost barriers may be considered minimal by those in higher socio-economic categories and close to urban based services, this is not the case if the patient is on a low income, a vulnerable worker (defined in industrial relations terms), comes from a different cultural background, and / or is based in a rural community distant from services. For these client segments, such costs individually and cumulatively are a prohibitive barrier, and typically involve making trade-offs against other pressing individual and whaanau/family commitments.

136. Cultural 'fit' barriers identified included:

a. beliefs that whaanau will look after them

b. patients were frightened of the outcome - better to grin and bear it

c. tension over following the views expressed by the provider vs taking a stronger self-advocacy approach

d. poor conduct of the consultation (including Paakehaa provider attitudes and the non-allowance of whaanau/Maaori processes), which leads to misperceptions of each other, misinterpretation of discussion, confusion over expectations of behaviour and follow-up actions, and an overall bad experience.

Organisational barriers to service uptake

137. Mauri Ora identified nine organisational (systemic) factors or barriers that negatively impact on Maaori utilisation of services and health outcomes. All of these factors are reflected in ACC. Subsequent research has confirmed these findings. Mauri Ora found:

a. The universal focus of the health system in which one service for all often means that services are not culturally appropriate for Maaori patients (Barwick 2000; Baxter 2002; Ratima et al. 1993; Thomson et al. 2021).

b. Workforce composition; that is, few Maaori personnel (Barwick 2000; Baxter 2002; Cormack et al. 2005; Health Waikato 2001) and lack of cultural competence in the non-Maaori workforce (Heke, Wilson, and Came 2019).

c. The timing and availability of services (Crengle 2000) including service configuration and location (Cormack et al. 2005) and patients' lack of awareness of available services (Bryant and Campbell 1996).

d. Funding and resources, including the physical environment (Cormack et al. 2005; Health Waikato 2001).

e. Hospital based appointment systems that were viewed as rigid (Bryant and Campbell 1996).

f. A lack of relevant educational and promotional material, and appropriate (eg Maaori -specific) information (Bryant and Campbell 1996; Crengle 2000; Health Waikato 2001).

g. Failure by providers to identify and treat those in greatest need (Crengle 2000).

h. Unclear continuity of care, including follow-up and maintenance of treatment (Crengle 2000; Health Waikato 2001).

i. Lack of use of the Maaori language (Health Waikato 2001)

A Maaori client view of ACC Services: Report for the then Department of Labour (now MBIE)

138. In 2010 Mauri Ora Associates submitted to the Department of Labour (now MBIE) a report on Maaori experiences and expectations of ACC (Mauri Ora Associates. 2010). The report examined the experiences and opinions of Maaori claimants, levy payers, business people and providers towards both the ACC Scheme and the organisation. The authors were asked to construct a narrative about the Maaori experience of ACC and to give an overall picture of how changes to the Scheme proposed at the time could affect Maaori. Views were solicited through individual interviews and small group discussions, and a small number of telephone interviews.

139. The researchers found there while there was strong support for the Scheme amongst Maaori, there was a fair amount of discontent with the ACC organisation. Five key expectations that participants had of ACC were identified:

    a. Fairness – the system must achieve fair outcomes for Maaori and all New Zealanders

    b. Choice – all choices must be fair and open

    c. Improvement of services – disparities must be addressed within both the larger healthcare system and ACC

    d. Kaupapa Maaori – Maaori world views and values must be included and respected in the design and delivery of ACC services

    e. Consultation and communication – in the absence of genuine interaction and co-development, no changes to ACC will be successful.

140. In addition, the authors reported that participants believed that many Maaori had negative experiences trying to engage with ACC and were not being well served by ACC. Maaori were not aware of their entitlements, services were poorly communicated to Maaori and claims management processes were not understood or well aligned with Maaori values. Maaori are also hindered in their ability to access services because of the way services are delivered through the health care system. Consequently, not only are Maaori bearing a disproportionate burden of injury, they were less able and willing to access the treatment and rehabilitation services they need, and to which they are entitled.

ACC Return to work survey results

141. In 2015, Wren reported that in the 2010/11 Return to Work Monitor (ACC Research. 2011), ACC clients were asked about their return to work expectations and experiences. While this survey comprised only 71 Maaori respondents and 530 non-Maaori, the results were very similar reported by Mauri Ora Associates (Wren 2015a).

142. Maaori respondents reported finding ACC claims processes more complicated, and rated ACC significantly lower compared to non-Maaori on a wider range of aspects of client engagement, including:

a. providing accurate information

b. responding to enquiries

c. communicating with the worker

d. providing advice about the claim

e. being helpful in returning to work (ACC Research. 2011).

143. While the sample size is too small to draw any statistical conclusions, the results are consistent with the sentiments expressed in the 2005 survey results.

144. In 2014 a similar survey with a larger samples size was undertaken. The survey had a total response of 705 participants and statistical weights were applied to the Maaori responses to improve confidence about the statistical significance[12] of the observed differences between Maaori and non-Maaori. The survey also asked where treatment services were initially sought, and whether respondents were aware of any referral for specialist services such as elective services and advanced imaging. Analysis showed clear differences in key areas of service utilisation and expectations about recovery between Maaori and non-Maaori (Wren 2015a):

a. Maaori and non-Maaori sought their initial injury treatment at similar levels from the same providers

    i. 45% of Maaori going to an Accident & Emergency service, compared to 48% for non-Maaori, and 52% for Other ethnicities

    ii. 36% of Maaori going to a GP compare to 35% of European and 38% for Other ethnicities

b. approximately half of claimants were subsequently referred for additional treatment from either a specialist (48%), or a physiotherapist (47%)

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[12] Statistical significance refers to whether any differences observed between groups being studied are 'real' or whether they are simply due to chance. Mathematical tests are used to establish the probability about whether the differences are 'real' and these are typically presented in term of 95% confidence intervals.

    i. however Maaori were statistically significantly less likely to be referred to a specialist or physiotherapist compared to non-Maaori[13]
    ii. 34% of Maaori were referred to Specialist services compared to 48% of New Zealand European and 59% of Other ethnicities
    iii. 30% of Maaori were referred to Physiotherapy services compared to 46% of New Zealand European and 60% of Other ethnicities

c. 95% of those referred for additional treatment reported that they experienced no difficulties in accessing this treatment

d. a significantly smaller proportion of Maaori rated their own health as 'excellent' prior to the injury compared to non-Maaori (21% vs. 38%); there were no significant differences following their injury

e. there were significant differences between expectations about recovery, with Maaori expecting to recover sooner at levels much higher than European and Other (48% compared to 32% and 11% respectively)

f. a greater proportion of Maaori reported returning to similar levels of hours of work compared to European and Other (56% compared to 46% and 43% respectively),
    i. and only 7% of Maaori reported taking extra time off work after first returning to work compared to 11% of European and 18% of Other ethnicities

g. there was no difference between Maaori (5%) and European (4%) about whether they felt 'physically' not ready to return to work; in contrast 12% of Other reported feeling not ready

h. there was little difference between Maaori and European over how they felt 'emotionally' about returning to work

i. interestingly Maaori reported higher levels of motivation for return to work as coming from 'themselves' and 'whaanau / friends' and less so 'GP'

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[13] It is worth noting that there is an incentive for hospitals to completed ACC claim forms to fund non-acute care. Emergency and acute funding is funded by bulk transfer of dollars via the Public Hospital Acute Services agreements.

compared to European and Other ethnic groups (refer Table 15 and highlighted blue lines). It is also interesting to note the influence of 'the boss' and 'ACC representative' for 'Other' ethnicities is significantly higher compared to Maaori and European.

Table 15: Key sources of return to work decisions, by ethnicity, 2014

Influencer	Maaori (%)	European (%)	Other (%)
Other health professional	35	40	30
Themselves	20	14	13
Whaanau and/or friends	21	11	14
GP	12	7	7
The 'boss'	5	6	11
ACC representative	9	5	13

j. there was little difference between the ethnicities in terms of belief about the benefits of returning to work for their recovery

    i. however, twice as many Maaori (35%) reported returning to work because 'it provides structure' compared to non-Maaori (17%).

145. The above body of research shows a pattern over time of consistent health service design barriers to ACC services and negative perceptions of ACC services by Maaori that help to contribute to understanding the poor utilisation of ACC services that continues to exist today.

There is no legislative requirements regarding ACC Te Tiriti obligations, and mainstream monopolistic services are insufficient of themselves

146. A central tenet to guiding various Governments' responses to addressing Maaori health inequities is the Crown's obligations under Te Tiriti. These obligations include principles about relating to each other in good faith with mutual respect,

co-operation and trust. Over the years, these obligations have been extended in specific legislation beyond central agencies to include a wider set of state agencies and Crown entities.

147. However, these expectations have not been extended to ACC, where there is no reference to Te Tiriti obligations in the current ACC legislation, nor any reference in current ACC Crown monitoring reports about Te Tiriti or addressing health inequities in ACC services.[14]

History shows inconsistency in ACC responsiveness to Maaori

148. Furthermore, history shows long-term inconsistency in ACCs responsiveness to Maaori. For example, reports by the Office of the Auditor-General (Office of the Auditor-General 2004, 2020) into ACC case management practices noted that in terms of ACC Maaori responsiveness[15] that as far back as 1998 a Te Puni Kokiri (TPK)[16] review found deficiencies in ACCs case management delivery to Maaori. Among the deficiencies, TPK review reported that ACC's strategic direction for Maaori was not sufficiently focused, and that '… (m)eaningful and specific objectives for Maaori are not widely included in business plans'. The report also noted that Maaori were under-represented among ACC staff, and that … 'service delivery initiatives focused on Maaori have been small scale and ad hoc'. The Office of the Auditor-General also noted that a TPK follow-up report in 2001 found that, overall, ACC had made significant progress in addressing the findings of the 1998 review. However, the TPK 2001 report said ACC still needed to work on areas such as 'the recruitment of more Maaori staff and staff with an understanding of Maaori'. To help address this, ACC in May 2003 appointed Pou Arahi (General Manager Maaori Development), and associated specialist teams). However, these roles were disestablished by ACC in latter restructurings in the 2015-2017 period.

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[14] Note ACC is not listed in Schedule 2 of the Public Services Act.

[15] Page 51 of 2004 Auditor-General Report.

[16] Te Puni Kokiri, Review of the Adequacy of ACC's Service Delivery to Maori, January 1998, page 8. 29. And Te Puni Kokiri, Follow up Review of the Accident Compensation Corporation's Service Delivery to Maori, 2001, page 4.

149. 20 years later, history is repeating itself with ACCs responsiveness. The current ACC Whaaia te Tika strategy, while highly laudable in itself, the discussion and reporting of progress on it in the 2020 and 2021 ACC Annual Reports (Accident Compensation Corporation 2020, 2021a)[17] illustrates the long-term nature of the issues and an ebb and flow in ACCs responsiveness over time. This points to a need for a more systemic legislative and crown agency monitoring response from Government to ensure ACC meets its obligations and addresses the issues raised over the medium and long-term.

150. Another reason for a stronger set of actions is that given ACC is a monopolistic provider this means users of Scheme services really have only two choices, which are to either use or not use Scheme services as there are no other alternative providers.

151. In addition, as previous evidence in front of the Waitangi Tribunal has shown, reliance upon mainstream programmes to close the significant gaps in health experience between Maaori and non-Maaori has clearly failed. In the context of disability services, which has relevance for ACC and injury related disability, Ratima in *Hauora* argues that:

    a. 'The needs-based case for distinctive strategies is clear in light of the wide inequalities between Maaori and non-Maaori in the disability sector that have not been addressed by homogenous approaches. Key points of difference in addressing Maaori needs will relate to the disadvantaged position of Maaori within New Zealand society and cultural requirements' (Ratima 2007).

152. Mainstream services, such as ACC, are insufficient because:

    a. 'same' does not mean 'fair', when responding to significant disparities and inequities such as those that have been shown to exist with ACC services.

    b. as a Crown agency operating in the health sector, there is a reasonable expectation by Maaori that ACC should abide by Crown obligations under the Treaty of Waitangi in similar ways to other Crown agencies operating in the health and social services areas. This includes examples of:

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[17] See pages 28 to 33 in the 2021 Annual Report.

i. services by Maaori for Maaori, and

ii. the design and delivery of services specifically with Maaori in mind in order to close the disparities and inequities in health experience (Ratima 2007).

153. The need for a distinctive ACC Maaori response was identified back in 2010 by Mauri Ora Associates in a 2010 report for the Department of Labour on Maaori views of ACC (Mauri Ora Associates. 2010). The Mauri Ora researchers commented that:

> "disparities research demonstrates that treating everyone 'the same' does not lead to similar results for underserved and vulnerable populations. It would not be 'fair' to hand everyone the same sheet of written instructions if half the group is visually impaired. Similarly, 'fairness' in a health system (which ACC is part of) requires that attention be paid to the physical, emotional , spiritual, social and cultural needs of its target population….
>
> There is evidence that when programmes to improve health are focused at the 'average' consumer, who is invariably a member of the majority culture, levels of access or quality of care for the mainstream community may rise, but those for underserved groups generally lag behind, thereby widening disparities. By contrast, if communications are customised and directed at those groups who are most disenfranchised, then they, along with the mainstream population, benefit from the programmes, thus reducing disparities as well as improving the status of everyone" (Mauri Ora Associates. 2010).

Evidence about what works

Responding to ACCs 2021 arguments to the Minister

154. ACC in its 2021 briefing to the Minister on delivery to Maaori suggests that much of the causes of poor Maaori utilisation of the Scheme lies outside the control of ACC because they are related to (Accident Compensation Corporation 2021b):

a. on-going impacts of colonization (paragraphs 15 to 17 of ACC Briefing)

b. quality health care may not be available to Maaori, including cost barriers and co-payment charges by providers (paragraphs 18 to 20 of ACC Briefing)

c. ACC claims management is dependent upon the information supplied by health care providers, and much of ACCs claims management involves little active management (paragraphs 21 of ACC Briefing), and

d. scheme settings around definitions of injury, eligibility for weekly compensation, and entitlements are individual focused not whanau (paragraph 25 - 26 of ACC Briefing).

155. The issues raised by ACC in its Briefing are not new. The topics of colonization and health care quality have been considered previously by the Waitangi Tribunal and by the recent Government review of the health system (Health and Disability System Review 2020). The issues are also not that unique to ACC in that they have been and are faced by other state organisations in the social sector. In many instances, responses have included a range of legislative, policy and operational changes – the question is to what degree should similar changes be recommended for ACC. The evidence for what works is briefly summarized in the following sections. It is not exhaustive, and is intended to provide an evidence base for discussion. Implications for ACC, based on the evidence presented are outlined. The question arises as to what ACC as an organization has learnt and applied from the research that is available, and given the acceptance of the issues, there is a clear need for a stronger response by the Crown to the systemic issues that have been identified.

Early ACC lessons about removing financial barriers

156. In the early 2000s ACC undertook a pilot intervention focused upon ‘affordability’ and tested whether providing higher subsidies to GPs and radiologists would increase the use of these services by injured people on low incomes and other low users of primary care services. Subsidies were raised in the Whangarei, Rotorua, Wanganui, Wellington, Nelson and Dunedin regions, with the rest of New Zealand providing a control against which results were measured. The subsidy for injury-related visits to GPs was raised by $10, and the radiology subsidy was increased by $8.53. At the end of the pilot, a 3% overall increase in GP visits was recorded in the pilot sites, with radiology visits

up 2.3%. The rate of increase among Maaori, Pasifika, Asian and people on low incomes was not significantly higher than that recorded by other sectors of the population. Maaori and low-income people did make slightly more use of radiologists during the trial than other users, but no group recorded a significantly higher increase in GP visits than any other. While the relatively small behavioural change shown by Maaori, Pasifika, Asian and people on low incomes was disappointing, there may be a number of reasons why these groups didn't respond more positively during the pilot compared to those in the second pilot intervention group (Accident Compensation Corporation 2007; Wren 2015a).

ACC lessons about removing non-financial barriers

157. Pilot interventions were also initiated with five contracted providers in Maaori communities, and aimed to identify key non-financial barriers that prevented community members from accessing ACC's primary care services (Accident Compensation Corporation 2007; Wren 2015a). The communities involved were Tui Ora Limited (Taranaki), Ruakura Hauora o Tainui (Waikato), Arai te Uru Whare Hauora (Dunedin), Korowai Aoha Trust (Rotorua) and Te Ha o Te Whaanau (Opotiki). Potential barriers identified during the studies included:

    a. lack of information in the community about the type and scope of services available for injury care

    b. lack of knowledge among treatment providers about ACC's services and entitlements

    c. physical isolation and lack of affordable transport

    d. attitudes / perceptions of injured people and their communities.

158. Each contracted community was responsible for developing their own solutions to the barriers identified. Key findings that emerged from the pilots were that communities responded well to information and advice delivered by providers based within their community, rather than by outside government agencies. It was also clear that communications material needs to be specifically designed for these types of communities. The studies highlighted the nature of the message, and when and how it is delivered, are all important points to consider when designing communications.

Lessons from other government agency initiatives have been in existence for a number years that ACC could draw upon: the research based challenge

159. Williams and Cram in a 2012 seminal report for the Department of Corrections reviewed the published literature from the areas of economic development, education, health, and whaanau and wellness, to identify what works for improving Maaori life outcomes. Lessons for organisations and programme design were identified. The authors concluded that there is good evidence across all the areas looked at, and considerable consistency about what works for programmes aimed at responding to Maaori (Williams and Cram 2012a).

160. Specifically, what works is recognition of the centrality of whaanau (Maaori family system) as a major influence on individual whaanau members[18], and extending outward to hapuu, iwi and particularly to community organisations. Associated with whaanau effects was the importance of the kaupapa Maaori (by Maaori, for Maaori) approach to service provision and to understanding what works and how. The authors commented these effects were pervasive across types of intervention and government agency.

161. The evidence reviewed showed particular success for Maaori designed community programmes that were associated with a promise of establishing greater integration with mainstream organisations. A central theme to these effects was recognition of culture and respect for a Maaori world view, values and beliefs, the importance of relationships, and acknowledgement of the merit and necessity of enabling some self-determination by seeking more direct involvement by Maaori in programmes affecting Maaori.

162. Williams and Cram (2012) suggest that the challenge for organisations is to integrate the following characteristics according to their own contexts, and to continue to develop their operations in evidence-informed ways so that they can ensure their responsiveness to and for Maaori is ongoing and sustainable.

163. The characteristics of successful Maaori programmes identified by Williams and Cram in 2012 were:

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[18] In this context, the results of the 2014 ACC Return to Work Monitor Survey are consistent with the published literature showing the importance of whaanau in influencing early return to work decisions.

Organisational

a. 'Leadership that is effective in establishing clear goals, objectives, strategies and processes of implementation as well as fostering a strong sense of responsibility and of shared values.

b. An inclusive and participatory style of management.

c. Communications systems that effectively flow through all levels of the organisation and include partners, stakeholders and appropriate community groups.

d. Professional development for staff and succession planning.

e. Building and maintaining appropriate resources (finance, people, facilities).

f. Self-review and external review mechanisms for ongoing evaluation….' (Williams and Cram 2012a).

Successful programmes also:

g. 'Recognise the authenticity of Maaori, its culture, its philosophy, its principles and values.

h. Build relationships through understanding, a sense of equality, mutual respect and trust.

i. Ensure that Maaori participate fully in delivery and governance.

j. Provide opportunities for Maaori to develop their own priorities and kaupapa as part of mainstream organisations.

k. Incorporate language and culture into policy, management and delivery.

l. Ensure strong links and communication with Maaori communities.

m. Tailor services to Maaori needs and preferences.

n. Ensure that the tools of measurement and evaluation are reliable and valid for use with Maaori - particularly when they are utilised to assess perceptual, attitudinal and cognitive behaviours' (Williams and Cram 2012a).We note that the recent Health & Disability System review also discusses this.

164. Similarly, Cherrington & Masters (Cherrington and Masters 2005), in their review for ACC of Maaori models, frameworks and strategies that could inform Maaori health promotion, including injury prevention, concluded that it was important to have a Maaori model which places emphasis upon adopting a holistic approach incorporating elements of both spirituality (wairuatanga) and whaanau (family). Furthermore successful indigenous people's injury prevention and health promotion programmes require community consultation, a sense of community ownership, holistic approach and co-ordinators with strong community networks.

165. This knowledge though is not new, they have been articulated as far back as 1995 in *He Anga Whakamana* (Ratima 2007) in regard to the delivery of disability support services for Maaori. Ratima et al (2007) emphasised that:

> 'Key features of the approach are that services need to be based on Maaori concepts of health (therefore service goals and measures would be reflective of Maaori notions of health), reflect client, caregiver, and whaanau participation and preferences, and be linked to wider Maaori development initiatives (and therefore have relationships with Maaori institutions) if needs based care is to be delivered adequately. [Furthermore it is] recommended that enhanced function and client participation in the community should be primary drivers of disability support services for Maaori, and that services need to meet high professional and cultural standards. In order to meet these standards, a technically and culturally competent workforce would be necessary' (Ratima 2007).

166. In regard to case management, as noted by the Office of the Auditor-General, TPK raised issues in 1998 about ACCs case management approach. The merit of the approach recommended by Ratima (2007) was demonstrated by Counties Manukau District Health Board in their Maaori Case Management Clinic Project back in 2003 (Maniapoto and Gribben 2003). A common theme in this body of research is the community focus and the need to invest in community capacity building when implementing intervention programmes, adopting a long-term view on any return on investment and one that includes community development measures. In addition, mainstream rehabilitation measures of independence and functionality may not be appropriate for many Maaori as

mainstream measures do necessarily reflect Maaori views of health – a point made back in 2013 by researchers in the Otago University POIS study (Wilson et al. 2013).

Working with Maaori businesses

167. Similar themes to those articulated above have been put forward by the Equal Employment Opportunities Trust in their advice on working with Maaori business and encouraging Maaori staff within organisations (EEO Trust 2010).[19] The Trust suggests that in order to work successfully with Maaori businesses it is important to understand the ethos driving many of the organisations, which can be described in terms of the 'Four Ps':

    a. Purpose

    b. Principles

    c. Practices

    d. Performance measurement.

Recent meta-analysis Maaori consumer experiences of health systems reinforces the accumulated knowledge

168. Recently, Palmer et al (2019) in their comprehensive review of range of studies on Maaori consumer experiences of health and programmes concluded that Maaori experiences are important informants of variables that impact upon health equity. In additions strategies can be drawn from the experiences to inform action including 'structural polices to address health inequities' that can be mapped to and accepted international conceptual framework for tackling the inequities, which are illustrated in the following diagram (Palmer et al. 2019).

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[19] See Pages 18 and 19 of the EEO Trust report for advice on working with Maaori businesses.

Figure 11: Figure 3 from Palmer et al (2019) - Researcher recommended actions to improve Maaori experiences of health services and programmes mapped to the Commission for Social Determinants of Health conceptual framework for tackling health inequities

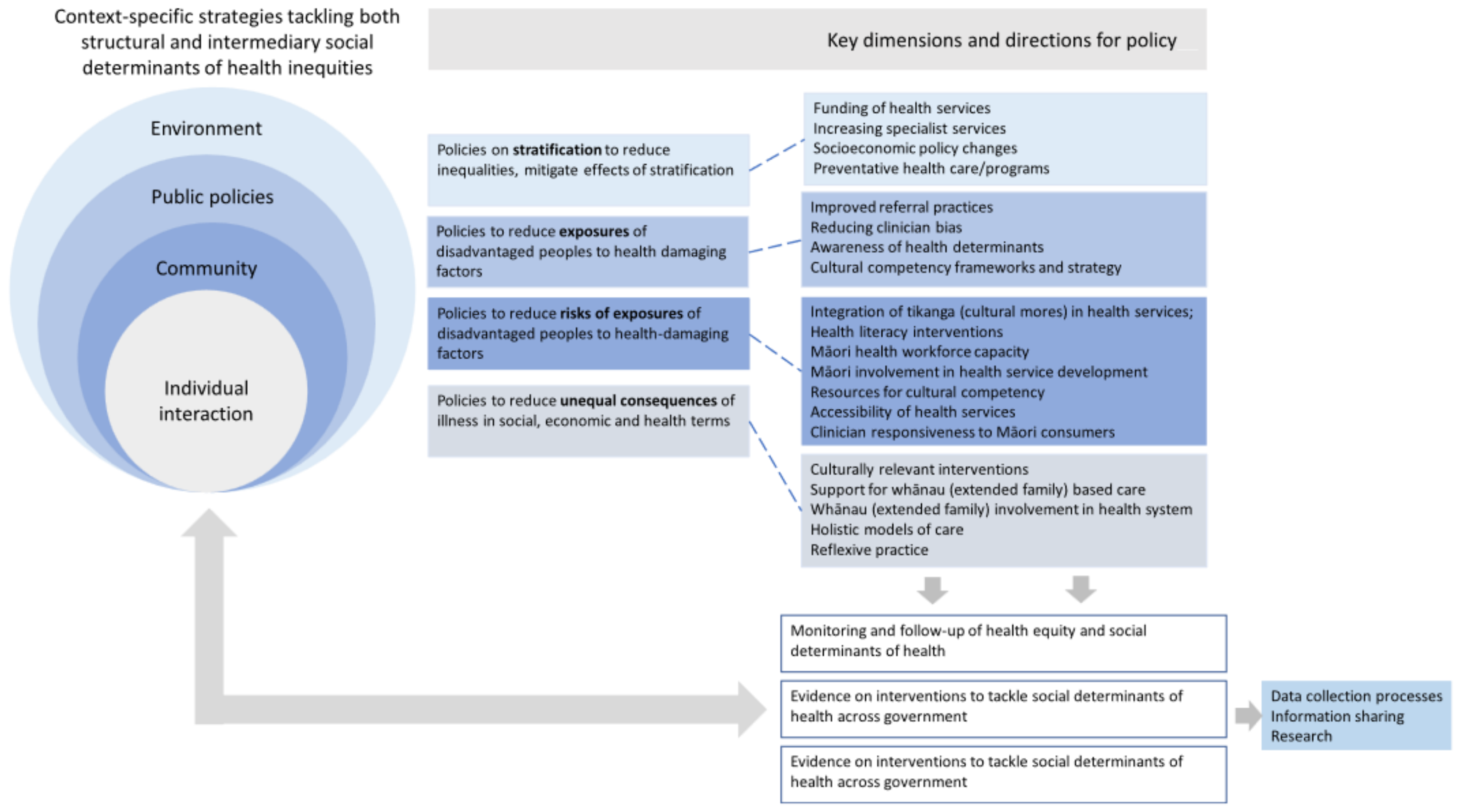

Fig. 3 Researcher recommended actions to improve Māori experiences of Aotearoa/New Zealand health services and programs mapped to the Commission for Social Determinants of Health (CSDH) conceptual framework for tackling social determinants of health inequities [16]

Implications for the Crown in relation to ACC

169. On the brief summary of evidence presented, it is clear there are long-established and well-founded public policy and health fairness, equity, and effectiveness arguments and a research base to justify and inform the development and implementation of polices and services to close the gap in Maaori utilisation of ACC funded services. However, ACCs responsiveness has been inconsistent at best.

170. Implications for the Crown include recognizing that:

    a. currently, there is no specific statutory or crown monitoring requirements for ACC to comply with and routinely report on its Te Tiriti obligations. Including ACC with Schedule 2 of the Public Service Act could remedy this.

    b. there are well established Maaori health frameworks for government agencies to work within, and evidence for effective programmes addressing Maaori health inequalities – including the suite of pilot studies undertaken by ACC in 2005/06. There is a substantive body of evidence for effective Maaori specific health promotion programmes in areas such as alcohol, smoking, violence, and Maaori women's health services, which can be used to inform thinking about other health service delivery design (and which is outside the scope of this evidence brief). All the evidence clearly shows that effective programmes interweave current scientific knowledge and best-practice about health promotion and agency service delivery with:

        i. a Maaori world view of health

        ii. a meaningful partnership approach where the needs of both parties are met

        iii. the aspirations of Maaori for self-determination and development are recognised including an uplift in the employment of Maaori within ACC at all levels including to the Board of governance

        iv. success is measured not only in terms of health outcome and the short-term (less than three years), but rather in terms of participation, engagement and wider aspirations for social, cultural and economic development and the long-term

v. resourcing (financial and people) appropriate for the task is required. This is likely to mean funding has to be at levels higher than mainstream programmes given that many of the issues being addressed are long standing and interventions are starting from a position of significant gaps in community and workforce resiliency, capability and resourcing

vi. the recent work by Palmer et al (2019) has mapped what can be done to address the health inequities described.

171. There is good evidence that an effective organisational response will require clear senior leadership, including adequate representation on the Board, and sustained commitment across the whole organisation about the need for Maaori specific response, and the value it can bring to the organisation (in terms of both enhanced trust and confidence and service delivery).

172. There will be need for substantive professional development for all staff about the issues and ways of responding appropriately to cultural differences, and a willingness to meaningfully communicate and engage in partnership with Maaori over the development of Maaori responsive injury treatment and claims management services (including implementation of injury prevention programmes).

173. Development of trusting relationships is important, and the traditional ACC approach of a top-down and short-term focus will significantly undermine any Maaori specific programmes that may be developed if traditional organisational management practices continue.

174. The new ACC Whaia te Tika initiatives are welcomed and implements much of the research evidence about what works. However long-term organizational commitment is required. The history of ACCs commitment has been shown to be patchy. This points to the need for systemic change that includes legislative mandates and crown monitoring reporting requirements setting out ACCs obligations under Te Tiriti to ensure the Whaia te Tika type initiatives are sustained over the long-term. This should include the mandatory adoption by ACC of a definition of equity that has an unambiguous health equity lens when

considering its responsiveness to Maaori. This is required to counter the default actuarial insurance definition that is dominant in ACC.

Part 5: Summary, conclusions and recommendations

175. Using a critical literature research method and informed by a social epidemiology perspective this evidence brief has presented a historical overview of the published and unpublished research on the topic of Maaori utilisation of ACC funded injury treatment and rehabilitation services (including disability), injury related health outcomes including disability, barriers to ACC service utilisation, evidence for effective interventions, and the inconsistency in ACCs responsiveness over time in spite of the evidence available to the organisation.

176. It is concluded that there is substantial cumulative evidence over 20 years of inequitable Maaori utilisation of ACC injury treatment and rehabilitation services and consequential injury (including disability) related health outcomes from a health equity lens perspective. In addition, there is a substantial body of evidence from the early 2000s onwards about the barriers to the utilisation of ACC services and what works. Furthermore, there are no ACC specific legislated Crown obligations on ACC to respond to Maaori, nor Crown Agent Monitoring activity on the issue.[20] ACC is a monopolistic provider and users have only two choices to use or not use the services on offer. Not too surprisingly given all these factors, ACCs Maaori responsiveness has been inconsistent and the dominant actuarial perspective in ACC on what ‘equity’ means mitigates against a health lens response. While the current Whaaia te Tika strategy is welcomed, a far stronger Crown response is required, including legislative change to ensure the necessary focus, long-term commitment and monitoring activity is in place to effect real change over time.

177. The evidence presented in this brief suggests that inverse health care law (Hart 1971) applies also to ACC related injury treatment and rehabilitation services. The application of the law to ACC services is represented in the following Figure 12. The figure illustrates the application of the law to ACC injury treatment and rehabilitation services for Maaori in the context of their injury related health need, service utilisation and injury related health outcomes. The vertical axis on the left indicates the relative burden of injury and health loss,

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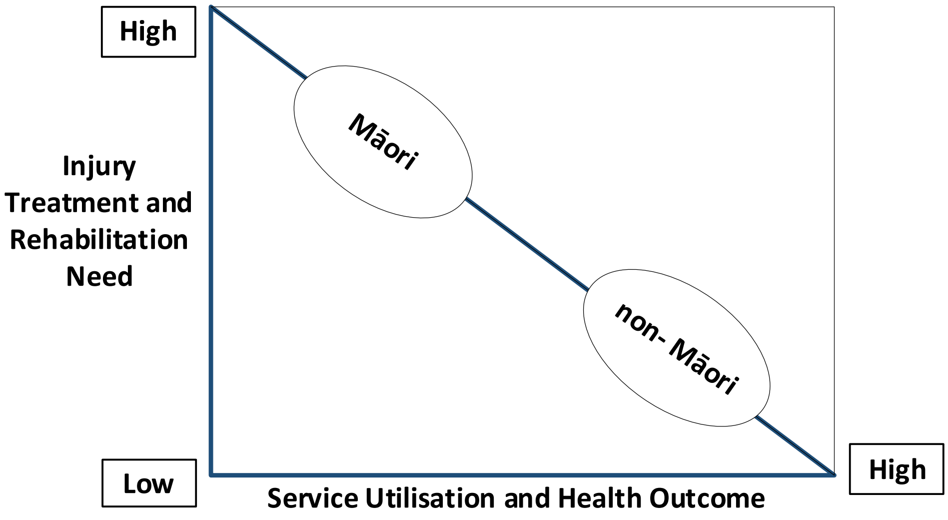
[20] We have noted that ACC is not included within Schedule 2 of the Public Service Act.

and the horizontal axis indicates the relative utilisation of injury treatment and rehabilitation services of the two population groups of interest – Maaori and non-Maaori. The position of the bubbles indicates the operation of the inverse care law at two levels. The higher position of the Maaori bubble on the left side reflects the significantly higher burden of injury borne by Maaori and thus injury treatment and rehabilitation need. However, the evidence presented shows that Maaori use less services and have worse injury related health (including disability) outcomes. This is also illustrated by the relative position of the bubble at the low end of service utilisation and health outcomes axis.

Figure 12: Illustration of application of Inverse Care Law to ACC injury treatment and rehabilitation by Maaori and non-Maaori populations



178. The argument for substantive and inequitable utilisation of ACC funded injury treatment and rehabilitation services hinges on:

a. understanding the Maaori burden of injury related health loss compared to non-Maaori

b. analysis of ACC administrative claims and health data respectively about the utilisation of ACC funded health treatment and rehabilitation services by the population, including the health outcomes achieved through receipt of the services

c. the choice of whether to adopt a 'health equity' lens, or a 'actuarial' insurance/banking lens to interpret and understand the observed differences in Maaori compared to non-Maaori ACC service utilisation.

179. The cumulative result of the above is that:

a. Maaori are injured more frequently, however

b. This is not reflected in ACC data on access to and underutilisation by Maaori – Maaori are less likely to claim for cover from injury and less likely claim for entitlements once injured

c. Maaori are less likely to receive referrals, treatment, income supplements, paid in home support etc – once a claim is accepted Maaori continue have inequitable levels of support

d. Currently injury requires the individual to actively access care, not receive ACC as a right. This is the actuarial approach versus a health right and health equity approach.

e. There is a lack of choice, ACC is monopoly / monopsony

f. ACC policy settings and choices are not accounting for Maaori preferences and currently privileges Pakeha Western preferences

g. Systemic racism is imbedded in ACC approaches that fail to account for these factors.

h. There are multiple sites for system review, i.e. work sites, primary healthcare (GPs), ACC staff, which have not delivered to date equity in utilisation of ACC services and injury related health outcomes.

Conclusions and recommendations

180. Research has over many years has shown that Maaori report very consistent experiences over time with utilisation of a wide range of health and government agency (including ACC) services respectively (Palmer et al. 2019; Russell, Smiler, and Stace 2013; Williams and Cram 2012a). A long colonial history that perpetuates health inequity and treated Maaori poorly has been demonstrated many times.

181. The experiences of Maoari have been described in terms of difficult to access, unresponsive and alien to the lived experience and value systems of those who do not share the dominant 'mainstream' world view represented in many government services (Lindsay Latimer et al. 2022; Palmer et al. 2019; Williams and Cram 2012b). In the health context, the barriers have been broadly grouped as being social, cultural, economic and geographical (Russell et al. 2013), and in terms of service interactions (Palmer et al. 2019)..

182. The New Zealand academic literature is substantive, clear and consistent about the existence of significant differences in Maaori health outcomes and inequities in access to health services compared to non-Maaori. The public health literature, particularly since the late 1990s, has consistently shown that:

    a. Maaori bear a significantly higher burden of health and injury related loss respectively compared to non-Maaori (Ministry of Health 2001c, 2006; Ministry of Health and Accident Compensation Corporation. 2013; Reid 2000; Robson and Harris 2007)

    b. there has historically been significant under-utilisation by Maaori of publicly funded health services in a range of health areas compared to their health need, and while progress has been made there is much more to be achieved (Barker-Collo and Feigin 2009; Blakely 2011; Blakely, Simmers, and Sharpe 2011; Brabyn and Barnett 2004; Bryant and Campbell 1996; Carr 2013b; Chong and Dai 2013; Cormack et al. 2005; Crengle 2000; Curtis 2013; Dixon et al. 1993; Lindsay, G; Jackson, G; Robinson 2007; Maclennan et al. 2013; Malcolm 2002; Maniapoto and Gribben 2003; Mauri Ora Associates. 2009; Ministry of Health 2001a; Ratima et al. 1993; Reid 2000; Robson and Harris 2007; Juliet M L Rumball-Smith 2009; Russell et al. 2013; Sharpe 2011; Singleton et al. 2013; Tobias and Yeh 2007; Wang et al. 2013)

    c. there is considerable research based evidence about the barriers for Maaori in the uptake of health services (including ACC specific information, which is outlined in the next Part), and what can be done about it (Barwick 2000; Baxter 2002; Brabyn and Barnett 2004; Carr 2013b; Cherrington and Masters 2005; Crengle 2000; Health Promotion Forum. 2010; Health Waikato 2001; Human Rights Commission. 2012; Jansen and Smith 2006; Maniapoto and Gribben 2003; Masters and Cherrington 2005; Mauri Ora Associates. 2009, 2010; McLeod et al. 2004; Ministry of Health 2002c, 2002a, 2004; New Zealand Medical Association. 2011; Parks and Kreuter 2010; Ratima et al. 1993; Reid 2000; Juliet M L Rumball-Smith 2009; Russell et al. 2013)

d. there is a substantive rationale for a specific Maaori focused response to Maaori to address the under-utilisation of health / injury treatment services, particularly for Crown agencies (Kingi 2007; Ministry of Health 2002c, 2002a; Public Health Association 2002; Russell et al. 2013; A Woodward and Kawachi 2000)

e. improving equity of service use in health terms starts with recognising that equity does not mean the equal or the same use of services across all population groups, or that a mainstream is always appropriate for Maaori and other population groups with diverse backgrounds, health needs and injury experiences (EEO Trust 2010; Health Promotion Forum. 2010; Human Rights Commission. 2012; Mauri Ora Associates. 2009; Ministry of Health 2002; Parks and Kreuter 2010; Public Health Association 2002; Reid 2000; The Royal New Zealand College of General Practitioners. 2015; A Woodward and Kawachi 2000)

f. there is evidence that while small improvements have been made in Maaori access to health services in the health sector, much more remains to be done to promote equality in use of health services and in health outcomes (Blakely et al. 2011; Carr 2013b)

g. the presence of health comorbidities at the time of injury considerably complicates the injury treatment and rehabilitation process, and costs to ACC (CBG Health Research Ltd & ACC Research. 2012)

h. Otago University researchers have shown that significant numbers of Maaori have measurably poor health outcomes three months post injury on a wide range of measures. They argue their evidence suggests that more effort needs to be put into 'improved strategies…for appropriate rehabilitation for injured Maaori, irrespective of injury severity' (Maclennan et al. 2013).

i. in addition, the New Zealand the Royal New Zealand College of GPs has acknowledged in their position statement on achieving health equity that in "New Zealand, ethnic inequalities between Maaori and non-Maaori are the most consistent and compelling inequities in health" (The Royal New Zealand College of General Practitioners. 2015). Similar statements have been published by the New Zealand Medical Association, Health Promotion Forum, and the New Zealand Public Health Association and others (Blakely 2011; Health Promotion Forum. 2010; New Zealand Medical Association. 2011; Public Health Association 2002).

j. ACC in its 2021 briefing to the Minister on delivery to Maaori, highlighted the role General Practitioners (GPs) as the primary gate way (but not sole gateway) to ACC (Accident Compensation Corporation 2021b) in order to provide a medically informed assessment of injury, its cause, and course of treatment.[21] However, the importance of this role has been known for approximately 20 years. For example, McLeod et al (2004) examined the influence of New Zealand clinicians in influencing access to elective surgery through the use of in-depth interviews and a review of the literature. They identified a range of factors including:

    i. health system factors such as the perceptions of clinicians of patients' ability to benefit

    ii. patients' ability to make informed decisions about surgery

    iii. patients' social and cultural perceptions of the health system

    iv. low socio-economic status of many patients in need which restricts their ability to utilise public services or private services (McLeod et al. 2004).

    v. it was also noted that GPs and Specialists identified a range of socio-economic factors that acted as barriers, and made patients more 'vulnerable' to systemic barriers' to utilisation of additional services. As a consequence, both 'GPs and secondary care clinicians described situations where they would personally advocate for individual patients to improve their access. Advocacy was related to clinicians' perceptions of the value that patients would receive from the surgery and patients' needs for

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[21] See paragraphs 18-20 of ACC briefing.

public sector funding' (McLeod et al. 2004). However, the authors also pointed out that 'when resources are constrained, subjective decision-making by clinicians has the potential to further advantage or disadvantage patients through the weighting surgeons implicitly place on socio-demographic factors when making rationing decisions' (McLeod et al. 2004).

183. In the mid-2000s internal ACC research briefings suggested that Maaori were over-represented in receipt of some services (Fawcett and Kake 2009a; Kake and Allen 2011a; Kake and Dougherty 2010a; T. Kake and Hayward 2011a; Kake and Small 2010a). These papers assumed Maaori had the same rate of injury and the same injury experience and associated service needs as non-Maaori.

184. However, the World Health Organization Global Burden of Health and Injury research in the early 2000s clearly proved that the Maaori experience of injury and associated burden of health loss was approximately 2.5 times higher compared to non-Maaori over the period from the 1990s into the 2000s (Health 2001, 2013a, 2013b). Recent research suggests this disparity remains, and Otago University longitudinal outcomes of injury research has highlighted the disproportionate longer-term disability outcomes for Maaori after hospitalisation for injury (Wyeth et al. 2017, 2019, 2021). In this context, one would expect that Maaori utilisation of ACC services should be significantly higher than non-Maaori – this is not the case.

185. The evidence for underutilisation is most notable in the referral and uptake of elective surgery services, home and community support services, and duration of weekly compensation claims. The differences in service utilisation between Maaori and non-Maaori vary between 5% and 50% depending upon the type of service, age group and gender (Wren 2015b).

186. As already noted, in terms of whether the underutilisation represents a substantive inequity and inequality in service use, there are two perspectives on

this. The first is a 'health lens' view[22], the other is the insurance and banking view on actuarial equity. From the 'health lens' view the available evidence is sufficient to indicate that there is significant inequality and inequity in Maaori use of ACC funded injury treatment and rehabilitation services. However, from the dominant actuarial insurance and banking management perspective in ACC there is no inequity and inequality as everybody has the same choice to the use the same service in the same way. This approach assumes that different population groups have the same injury experience, health service need, and ability to access services, and that the same services are appropriate for all. The evidence presented demonstrates the fallacy of these assumptions.

187. Research with Maaori consistently reported similar views expressed over time about Maaori experiences with utilisation of many government agency services (including ACC services) and the barriers faced when trying use mainstream services.

188. Research with Maaori in the early and mid-2000s has also shown there is strong support for the principles of the ACC Scheme; however there is a fair amount of discontent with the operation of ACC. Five key expectations that Maaori have of ACC are:

a. Fairness – the system must achieve fair outcomes for Maaori and all New Zealanders

b. Choice – all choices must be fair and open

c. Improvement of services - inequities must be addressed within both the larger healthcare system and ACC

d. Kaupapa Maaori – Maaori world views and values must be respected and integral to the design and delivery of ACC services for Maaori

e. Consultation and communication – in the absence of genuine interaction and co-development, no changes to ACC services will be successful in improving

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[22] http://www.health.govt.nz/publication/health-equity-assessment-tool-equity-lens-tackling-inequalities-health (Accessed: 25 March 2022)

Maaori trust and confidence in ACC as an organisation or the utilisation of ACC services.

189. There is a substantive body of evidence about what works for Maaori in a range of social and economic areas. Maaori service delivery, particularly health service delivery, emphasises the importance of having a holistic view of health incorporating spirituality and whaanau ties, a focus upon community and community taking ownership, provision of leadership that has integrity and an ability to build and/or utilise strong community networks.

190. Responding to Maaori starts with acknowledging that:

    a. Western and monopolistic practices by Crown agents such as ACC on their own are insufficient to address the disparities and inequities observed between Maaori and non-Maaori population groups

    b. there is a well-argued case for Maaori specific programmes on the basis of fairness and equity, and Treaty of Waitangi obligations for Crown agencies

    c. Maaori specific interventions are likely to need funding at higher levels than non-Maaori (i.e. mainstream) programmes given the significant community and workforce capacity gaps that need to be closed, and given the much lower community resource base that any programme will be working in

    d. programmes will need to be established on a medium to long-term basis – more than five years, and the success of the programmes measured not only in terms of importance to ACC, but crucially, in terms of community development measures important to Maaori

    e. there is good evidence that an effective organisational response will require clear senior leadership and sustained commitment across the whole organisation about the need for a Maaori specific response, and the value it can bring to the organisation (in terms of both trust and confidence and better service delivery such as integrated care services)

    f. on the evidence presented about the inconsistency in ACCs responsiveness to Maaori over at least 20 years, a stronger Crown response is required including new specific legislative mandates on ACC to respond to Maaori appropriately in terms of Ti Tiriti, and to explicitly adopt a 'health equity lens' as opposed to a actuarial equity lens

g. as a Crown entity, ACC has a responsibility to actively support Crown obligations under the Treaty of Waitangi, and to respond to Maaori. As such, Maaori responsiveness should not be seen as the sole responsibility of Maaori staff or a dedicated cultural unit. Rather, the organisation as a whole should respond, with specialist support in Maaori knowledge and community networks to assist with delivering a credible response to Maaori across the organisation

h. development of trusting relationships is important, and the traditional ACC approach of a top-down and short-term focus (less than three years) on return on levy investment, or change in programme priorities, will significantly undermine any Maaori specific programmes that may be developed; they require a longer time frame to deliver the outcomes desired. ACC suggests there are legislative barriers to these elements, in response the onus is on the Crown to amend the legislation to remove the barriers

i. a Maaori strengths based approach is preferable to a deficit model, because such an approach recognises the value, insights and capability that Maaori can bring to the design and delivery of health care service provision; this is likely to significantly improve engagement with Maaori authorities and representatives, and Maaori perceptions of the organisation.

j. the current ACC Whaaia te Tiki strategy has much to merit, however a stronger Crown response is required to remove the barriers identified, and to ensure a long-term sustained and active effort by ACC to address the long standing equities that have been identified in the accumulated research evidence presented.

KEY CONCLUSIONS AND RECOMMENDATIONS

191. There is a long colonial history that shows the perpetuation of health inequity and poor treatment of Maaori (Brown, Toki, and Clark 2021; Came 2014; Harris et al. 2006; Reid, Cormack, and Paine 2019; Talamaivao et al. 2020). The systemic design of ACC, highlighted in this evidence brief that emphasises the

actuarial approach to defining and thinking about equity and equality disproportionately impacts Maaori is the latest example.

192. We have presented evidence and argue that there is there is an accumulated body of evidence over 20 years that cannot be ignored any longer:

    a. significant inequitable underutilisation of ACC services by Maaori in the context of their injury related health need

    b. about what the barriers are to Maaori accessing ACC services are

    c. about what works for Maaori in agency service delivery and what they want

    d. ACC responsiveness over the years has been at best ad-hoc and inconsistent (noting specialist Maaori Teams have been established and disestablished at various times under changing ACC Board's and Snr Management)

    e. ACC is institutionally racist as currently legislatively designed, and functioning

        i. There are no Te Tiriti obligations (or reference to Ti Tiriti) in any of the ACC related legislation

        ii. The dominant Western actuarial / insurance and banking perspective about what 'equity' means is antithetical to a 'health equity' lens

        iii. from the dominant ACC perspective, no action is required as utilisation is matter of individual choice

        iv. <u>equity from this perspective also means 'same policy/service design'</u> irrespective of Te Tiriti requirements for protection, participation and partnership

        v. ACC is a monopsony provider set up by the Crown, there is no other choice for Maaori – but it is clearly not working for Maaori in context of their injury related need

        vi. Crown Monitoring agencies have been inconsistent in their reporting of the issues.

193. The Maaori experience of ACC services are described in terms of difficult to access, unresponsive and alien to the lived experience and value systems of

those who do not share the dominant 'mainstream' world view. These experiences are unfortunately not new, and are represented in many government services (Lindsay Latimer et al. 2022; Palmer et al. 2019; Williams and Cram 2012b). In the health context, barriers to service utilisation have been broadly grouped as being social, cultural, economic and geographical (Russell et al. 2013), and in terms of service interactions (Palmer et al. 2019). Why would Maaori engage with ACC?

194. Given the evidence, ssystemic change is required to address the institutional racism built into the design and operation of ACC.We recommend on the basis of Te Tiriti obligations and the evidence about what works for Maaori in health and a range of government services that:

   a. ACC legislation be amended to require ACC to comply with the principles of Te Tiriti, and fulfil established standards regarding protection, participation and partnership.

      i. This might be done by including ACC within Schedule 2 of the Public Service Act

   b. the legislation explicitly include a health equity lens that is given equal status to the dominant Western Actuarial / Insurance / Banking lens when it comes to service design and delivery

   c. Crown Monitoring agencies must publicly report on ACCs progress in reducing the health inequities observed

      i. this should include funding and public dissemination of the results from the Otago Uni/ Ngaai Tahu Maaori Health Research Positive Outcomes of Injury Study (with a focus on examining health inequities in service utilisation and treatment outcomes (including Disability) for the Maaori population with comparisons to Non- Maaori)

d. ACC decisions that affect Maaori be measured against outcomes set by Maaori organisations with representative mandates

e. ACC undergo significant systemic and cultural change, integrating Maaori decision-makers at all levels and funding training and development programs designed by Maaori for all staff

f. ACC be required to form active partnerships with Maaori primary healthcare providers and Iwi authorities

g. ACC pays for health provider service delivery based on client injury treatment and rehabilitation and cultural needs

    i. and a performance incentive for reductions in inequities in receipt of injury treatment entitlements and injury related health outcomes

h. ACC implement a focussed and serious commitment to Maaori injury prevention in partnership with Maaori and other government agencies given the Maaori experience of injury is double that of non-Maaori.

195. More specifically to address the Maaori injury prevention gap, it is recommended that:

a. ACC actively move to enabling Kaupapa Maaori injury prevention initiatives with Maaori Iwi authorities, Maaori Businesses and Maaori communities who have real interests in a range of injury prevention initiatives of importance to them – and accept that these may not always align with ACC injury prevention priorities.

b. ACC needs to accept that investment will have to sustained and require extra funding in order to build capability and capacity in those communities, Iwi, Businesses.

c. ACC refer to the following for guidance about how to approach working with Maaori include reflecting on:

    i. Ratima, M. (2007). "Maaori Experience of Disability and Disability Support Service." In H. R. Robson B (Ed.), *Hauora: Maori standards of Health IV. A study of the years 2000-2005.* Wellington, New Zealand: Victoria University, Te Roopuu Rangahau Hauora A Eru Poomare. (this focuses on health service design, however we think the principles equally apply to injury prevention)

    ii. Equal Employment Opportunities Trust (2010) (see pages 18 and 19) for advice on working with Maaori businesses and encouraging Maaori staff within organisations (EEO Trust, 2010). The Trust suggests that in order to work successfully with Maaori businesses it is important to understand the ethos driving many of the organisations, which can be described in terms of the 'Four Ps':

        a. Purpose
        b. Principles
        c. Practices
        d. Performance measurement

d. Recognise there is a substantive body of evidence for effective Maaori specific health promotion programmes in areas such as alcohol, smoking, violence, drug harm reduction, and Maaori women's health services, which, in our view can be used to inform thinking about injury harm reduction.

e. All the evidence clearly shows that effective programmes interweave current scientific knowledge and best-practice about health promotion (injury prevention) and agency service delivery with:
    i. a Maaori world view of health
    ii. a meaningful partnership approach where the needs of both parties are met
    iii. the aspirations of Maaori for self-determination and development are recognised
    iv. success is measured not only in terms of health (injury health) outcome and the short-term (less than three years), but rather in terms of participation, engagement and wider aspirations for social, cultural and economic development and the long-term
    v. resourcing (financial and people) is appropriate for the task. This is likely to mean funding has to be at levels higher than mainstream programmes given that many of the issues being addressed are long standing and interventions are starting from a position of significant gaps in community and workforce resiliency, capability and resourcing.

Signed:

John Wren

Dr John Wren
Expert witness for the New Zealand Maaori Council

Dated at Wellington New Zealand this 26 January 2023

Brief of Expert Evidence: History of Maaori underutilisaton ACC injury treatment and rehabilitation support services, the barriers to their utilisation, and what works to improve service delivery to Maaori

Dr Peter Jansen

Expert witness for the New Zealand Maaori Council

Dated at Wellington, New Zealand , this 26 January 2023

Brief of Expert Evidence: History of Maaori underutilisaton ACC injury treatment and rehabilitation support services, the barriers to their utilisation, and what works to improve service delivery to Maaori

APPENDIX 1 – TIMELINE ON EVIDENCE FOR INEQUITY

This table shows the emergence of research evidence for inequity in use of ACC and inequity in health outcomes for Maaori compared with Europeans alongside changes to the political context including the legislation governing ACC over the past 25 years.

Parliament	**Year**	**Summary of evidence**	**Reference**
National coalition until 1996			
1999 Labour / Alliance coalition Support from Greens 66 of 120 seats	1999	**Reports on persistent inequalities** Persistent higher morbidity and mortality for Maaori compared to European/Other. Injury death rates 70% higher for Maaori males and females than for European/Other.	Our health, our future. Hauora pakari, Koiora roa: the health of New Zealanders. Ministry of Health, 1999
	December 2000	**NZ Health Strategy** aims to reduce inequalities • foster Maaori development in health • improve Maaori/Crown relationships • injury prevention on roads, workplaces, and non-work injuries for Maaori	The New Zealand Health Strategy. Ministry of Health, December 2000
20022002 Labour / Progressive coalition Support from United Future & Greens 69 of 120 seats	2002	**Maaori Health Strategy** • increase Maaori participation • improve mainstream effectiveness • improve information on Maaori health	He Korowai Oranga: Maaori Health Strategy. Ministry of Health, 2002
	2003	Health Practitioners Competence Assurance Act **cultural competence of health professionals** required alongside clinical competence and ethical behaviour.	HPCA Act, section 118
	2003 to 2007	Health practitioner associations and **health professional regulatory authorities develop guidance on cultural competence**, supported by training resources.	See Medical Council Nursing Council, dental Council, Physiotherapy Board, Dieticians, etc DHBs, MoH etc
	January 2004	Orewa Rotary Club Speech • Focus on 'one rule for all' received by many as a call to end special programs for Maaori, including Maaori electorates and iwi representation on statutory boards. • led to an **audit of government programs** to determine if programs with an ethnicity focus should be altered to a need-based approach.	Cumming, Geoff (4 February 2004). Non-Maori say they've had enough - NZ Herald

		Preceded by Maori Land Court and Cort of Appeal decisions related to title of foreshore and seabed, then Waitangi Tribunal report into Government plan to legislate to vest ownership in the Crown.	
	2004	Te Roopu Manawa Mai (advisory committee to ACC CE and GM Maaori Development and Customer Access) Members – C Mantell, W McLean, C Crofts, L Thompson, P Jansen, L Wall, K Puketapu Advice on Maaori Access Strategy and funding of primary care services	Minutes
	2004	ACC includes "Hauora Competencies" in contracts.	ACC contracts
	2004	Maaori Party formed after Foreshore and Seabed Act Nov 2004	
Labour / Progressive coalition Support from United Future & NZ first	2005	ACC develops Guidelines on Cultural Competence for providers, and other resources including seminars and training DVDs	ACC1625
66 of 120 seats	2006	**Inequality not explained solely by economic status** • Socioeconomic gradients in health outcomes identified. • Differences between Maaori and European/Other in mortality and disability not accounted for by socioeconomic status.	Tatau Kahukura: Maaori Health Chart Book, Public Health Intelligence Monitoring Report 5. Ministry of Health, 2006
	2005	**Change from medical misadventure to treatment injury**	
	2006 Using data from 1998	**Maaori less likely to claim for medical misadventure** after admission to a public hospital Matched data from NZ Healthcare Quality Study to ACC claims data Older age, lower socio-economic status and Maaori ethnicity all result in lower likelihood of a claim	Claiming behaviour in a no-fault system of medical injury: a descriptive analysis of claimants and non-claimants Bismark, et al. MJA 2006; 185: 203–207
	2006	Te Roopu Manawa Mai proposes that it provides advice to ACC Board with a direct governance relationship	DRAFT Terms of Reference May 2006
	2006	He ritenga whakaaro: Maaori experiences of health and disability and ACC services. Qualitative and quantitative components completed and findings presented to ACC and MoH. Data from ACC on on Maori access and outcomes included.	Final published 2008 by Mauri Ora Assciates. ISBN 978-0-473-14643-6
2008 National	2010	Whaanau Ora established	

58 of 122 Support from ACT, Maaori Party & United Future			
2011 National 59 of 121 Support from ACT, Maaori Party & United Future			
2014 National 60 of 121 Support from ACT, Maaori Party & United Future	2016	**Maaori receive less** access to ACC – claims, ACC-funded services, referrals to surgery Aim to adhere to Treaty of Waitangi, greater engagement with Maaori and monitoring of results	Whaia te Tika – ACC Maaori Strategy 2016
2017 Labour / NZ First coalition 63 of 120 Support from Green	2020	**Access to ACC after injury from treatment** Ethnicity included in public report on treatment injury claims for the first time. Compared accepted claim rates for treatment injury with public hospital attendances for Maaori, Asian, Pacific and European/ other ethnic groups. Maaori continue to have less access to ACC support after injury from medical treatment	Supporting treatment safety report 3, page 40 [supporting-treatment-safety-report-2020.pdf (acc.co.nz)]
2020 Labour Majority 64 of 120 Support from Green			
	2021	Maaori continue to have less access to ACC despite higher rates of serious injury	Aide memoire to Hon Carmel Sepuloni, Minister for ACC Gov-010263 May 2021
	2022	Update of Guidelines on Cultural Competence for providers	

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