

Māori Injury Outcomes: A case study of researching with, and for, Māori

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Overview of Today's Talk

- Context of health research in relation to Māori, including key documents.
- A case study:
 - Collaborative research project using the Treaty as a framework for development.
 - Examples of specific actions when working with Māori.
 - Key findings relating to injured Māori.

Research Team

- Research team:
 - Sarah Derrett, John Langley, Gabrielle Davie, Shanthi Ameratunga, Brendan Hokowhitu, Paul Hansen, Rebbecca Lilley, Ari Samaranayaka, Helen Harcombe, Sue Wilson, Michelle Lambert, Maia Tapsell, Matire Harwood and others.
- Advisory Group:
 - Deborah Anselm, Peter Ellison, Barbara Metzger, Tracey Wright-Tawha.

Māori Society – Historical Context

- Māori are tangata whenua.
- Ancestors arrived from Pacific islands prior to 1300AD.
- Entire country explored by end of 14th Century.
- Largely coastal settlements.
- Sustained European contact and settlement from ~late 1700s/early 1800s.



Treaty of Waitangi

- Signed in 1840, first on 6 February.
- Māori and British Crown representatives.
- English and te reo Māori versions.
- 500+ signatories.
- 38 locations throughout the country.

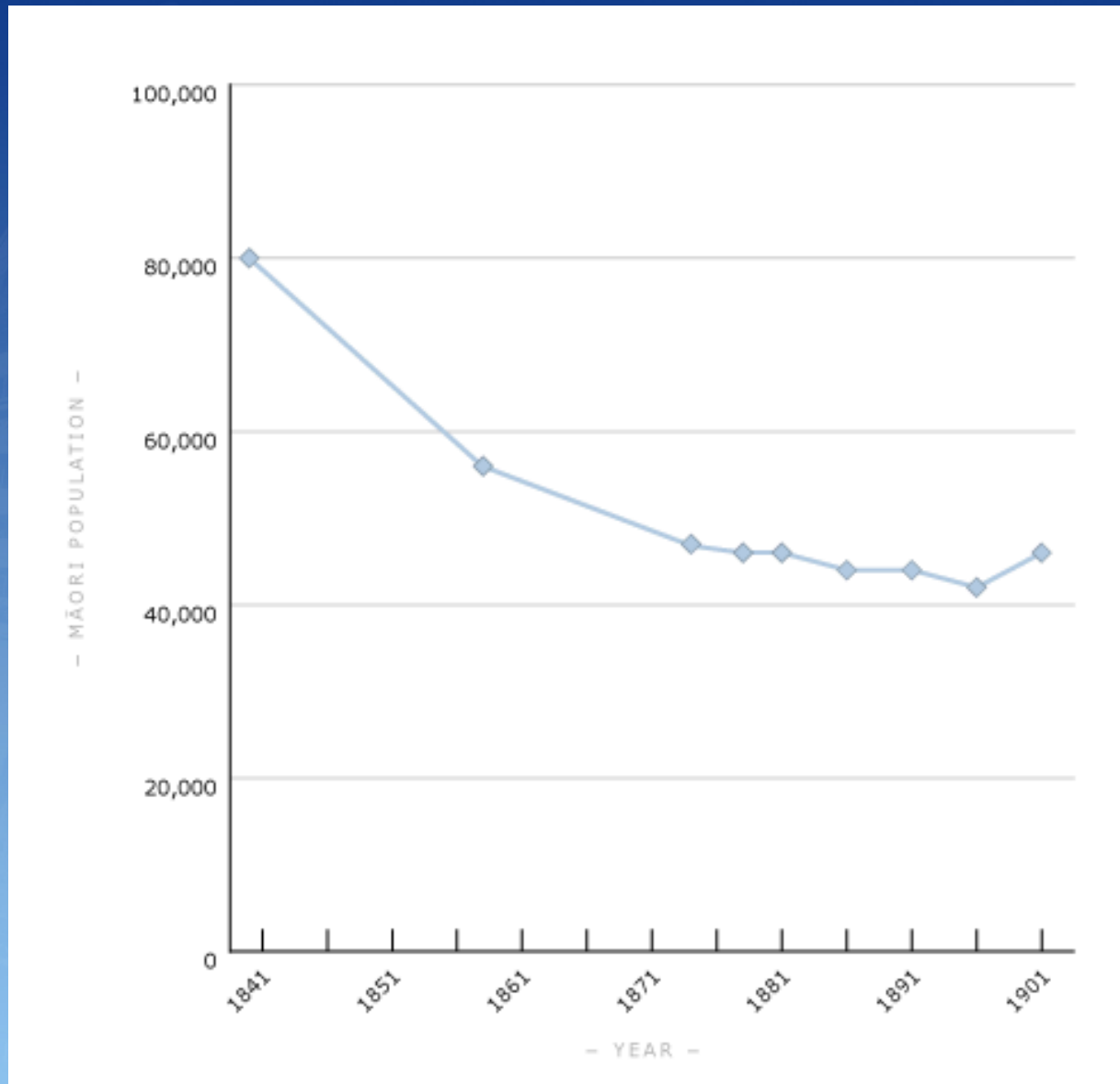


Treaty of Waitangi

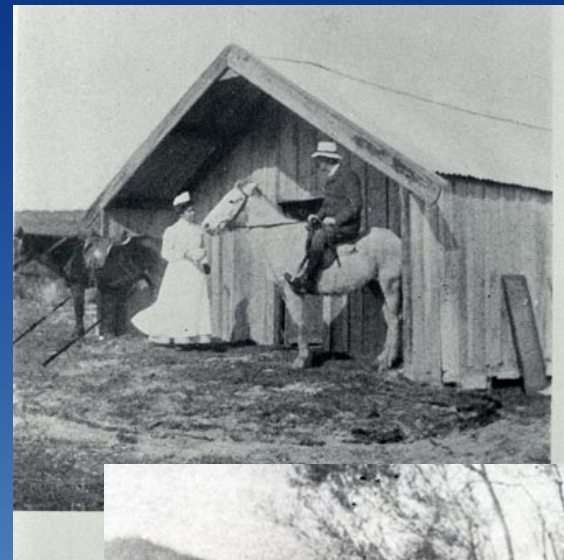
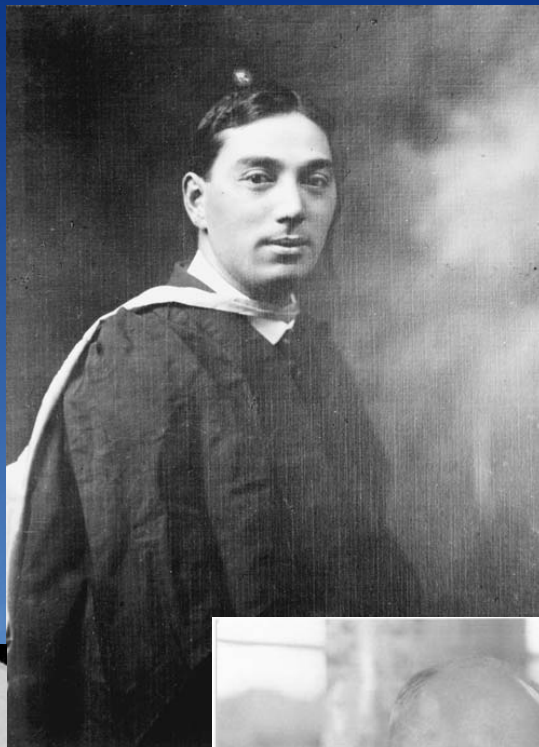
- Three articles:
 - I: Māori cede sovereignty of New Zealand to the British Crown.
 - II: Māori guaranteed full exclusive rights of ownership and use of their lands, forests, fisheries and other possessions, but if they wish to sell any of these, it must be to the Crown.
 - III: Māori enjoy the same rights and privileges as British citizens.



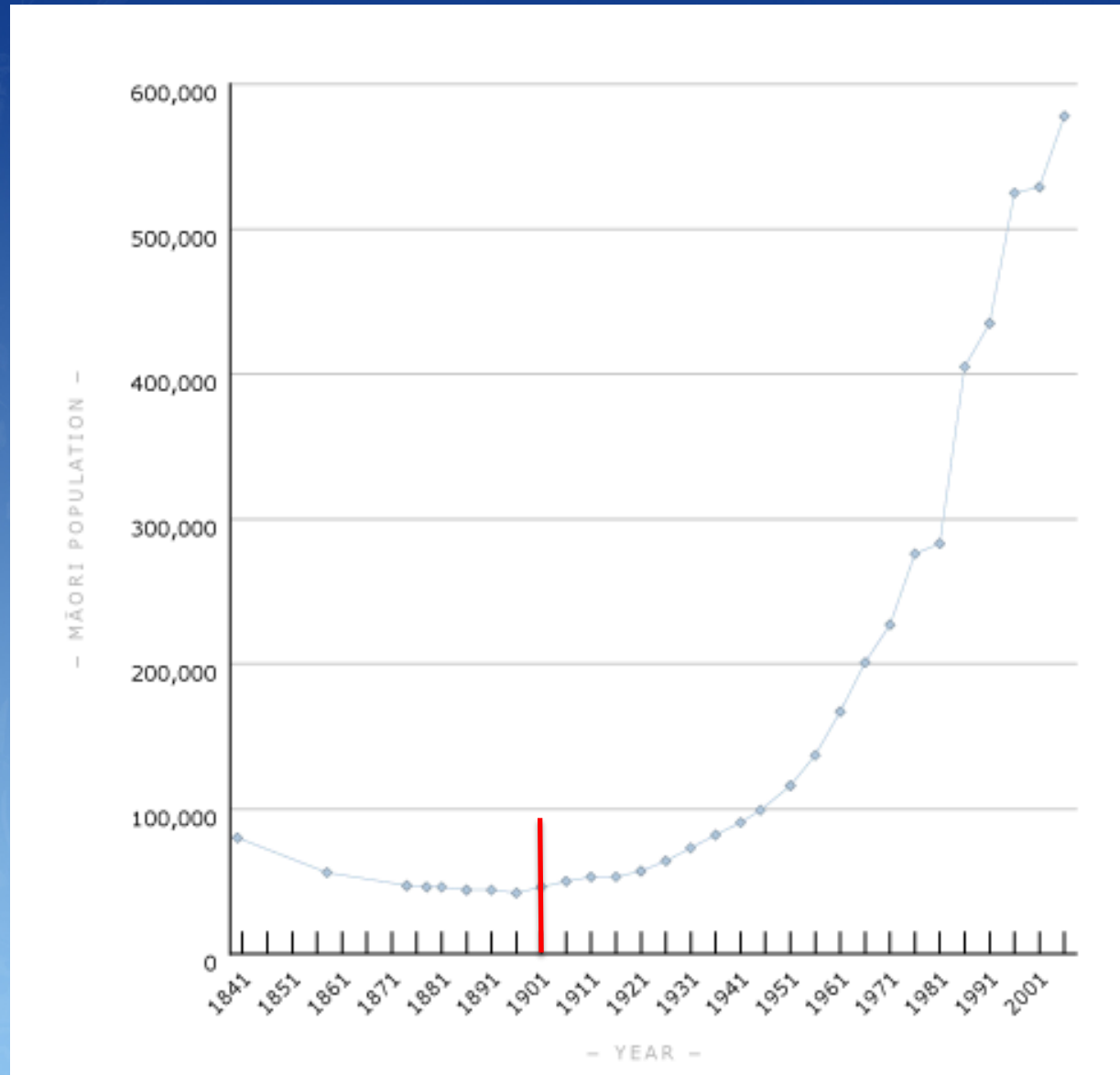
Māori Population 1841-1901



Māori in the Health Sector



Māori Population 1841-2001



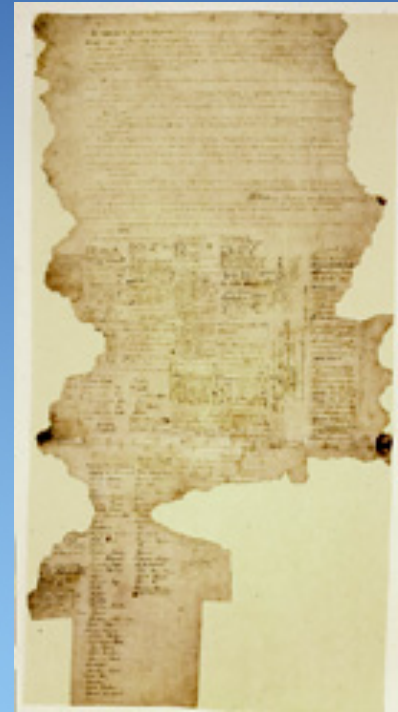
Māori Population (2013 Census)

- 14.9% of NZ resident population.
- Median age=23.9 years (NZ European=41.0 years).
 - Females: 25.4 years
 - Males: 22.2 years
- 51.8% female, 48.2% male.
- 34% <15 years.
- 5.4% ≥65 years.



Treaty Principles

- Principles only legally defined as recently as *Lands Case* 1987.
- Partnership, participation and protection (“3 Ps”) or,
- Good governance, self-determination and equity.



Treaty Principles

- Rangatiratanga:
 - Article 2.
 - Chieftainship.
 - “Māori...groups have the right to own and manage collective assets...”
- Ōritetanga:
 - Article 3.
 - Equality/equity.
 - “Māori individuals have the same rights and responsibilities as non-Māori New Zealanders.”

Guidelines for Researchers on Health Research Involving Māori

- Originally released in 1998 by the HRC.
- “To assist researchers who intend undertaking biomedical, public health or clinical research involving Māori participants or research on issues relevant to Māori health”.
- All health research conducted in NZ is of relevance to Māori.



Guidelines for Researchers on Health Research Involving Māori

- Purpose, to help develop:
 - Research partnerships between health researchers and Māori communities or groups on issues important to Māori health.
 - Research practices which ensure that biomedical, clinical and public health research effectively contributes to Māori health development wherever possible.



Guidelines for Researchers on Health Research Involving Māori

- Guidance regarding consultation with Māori.
- To ensure that research contributes to Māori health development whenever possible.
- Foundation for co-operative and collaborative working relationships between researchers and Māori organisations and groups.





UoO Research Consultation with Māori

- Memorandum of Understanding (MoU) with Ngāi Tahu (via TRoNT).
- UoO committed to partnership with Māori (consistent with ToW and UoO objectives).
- Facilitate co-operative and collaborative working relationships between researchers and Māori groups and organisations.

UoO Research Consultation with Māori

- “Consultation does not mean negotiation or agreement. It means: setting out a proposal not fully decided upon; adequately informing a party about relevant information upon which the proposal is based; listening to what the others have to say with an open mind (in that there is room to be persuaded against the proposal); undertaking that task in a genuine and not cosmetic manner. Reaching a decision that may or may not alter the original proposal.” – Justice McGechan.

UoO Research Consultation with Māori

- Research Consultation with Māori Policy (2003).
 - Provides researchers and academic staff with a framework for a mandated consultation process.
 - And, acknowledges the needs and aspirations of Ngāi Tahu.
- Ngāi Tahu Research Consultation Committee (NTRCC).

A Collaborative Case Study

- Collaborative research and meaningful outcomes for Māori in a national population-based study.
- Applying the principles of the Treaty of Waitangi in hauora Māori research.
- Prospective Outcomes of Injury Study (POIS).
 - Wyeth *et al.* (2010) Rangatiratanga and Ōritetanga: Responses to the Treaty of Waitangi in a New Zealand Study, *Ethnicity and Health*, 15(3), 303-316.

Development of POIS

- Many people injured in New Zealand.
 - Many are disabled as a result of injury.
 - ACC costs.
 - What makes a difference to outcome?
 - Drivers of outcomes identified elsewhere.
 - New Zealand is unique – ACC.
 - Little known about outcomes experienced by injured people (all injuries), including for Māori.
- Development of the Prospective Outcomes of Injury Study (POIS).

Development of POIS – Timeline

- 2003:
 - Conceived idea of study of people’s outcomes after injury, over time.
 - Developmental study to “undertake developmental work with a view to preparing a project grant application to undertake research aimed at determining the personal, social, injury and rehabilitation determinants of disability and cost following injury” (JL).
 - BH (Māori researcher) brought onboard.
- 2004:
 - Consultation.

Development of POIS – Timeline

- 2005:
 - SD appointed to co-ordinate developmental work and prepare funding applications for the large injury outcomes study.
- 2006:
 - EW brought onboard.
 - Consultation.
 - NTRCC.
 - Advisors in study regions.
 - Pilot.
- 2006/07:
 - Further consultation.
 - Funding applications submitted.

Development of POIS – Advice Received

- Encourage Māori participation.
- Results be available to Māori health providers and sports' bodies.
- Ensure collection of ethnicity data based on NZ Census question.
- Focus on issues for Māori accessing ACC and healthcare services?
- Support for quantitative component.
- Inclusion of a qualitative component.
- Include whānau perspectives?
- Face to face interviews.
- Translation of questionnaires.

POIS



- 2007-2010:
 - Funded by HRC and ACC.
- 2010-2013:
 - Funded by HRC.
 - (Subsequent projects funded by HRC).
- To quantitatively identify predictors of disability following injury.
- To qualitatively explore the lived experiences and perceptions of injury outcomes for Māori and non-Māori.



POIS – Recruitment

- 2856 ACC entitlement claimants, including 566 Māori.
- 18-64 years inclusive.
- ACC e-data + NMDS + 4 interviews (3, 5, 12 & 24 months).
- Qualitative interviews (Māori & non-Māori) at 6 and 12 months.

Auckland City
Manukau City



Gisborne

Otago
Southland

Derrett, S., Langley, J., Hokowhitu, B., Ameratunga, S., Hansen, P., Davie, G., Wyeth, E. and Lilley, R. (2009) Prospective Outcomes of Injury Study. *Injury Prevention*;15 (e3)

Wyeth, E., Derrett, S., Hokowhitu, B., Hall, C. and Langley, J. (2010) Rangatiratanga and Ōritetanga: Responses to the Treaty of Waitangi in a New Zealand Study. *Ethnicity & Health*;15(3):303-316.

POIS & Treaty Principles

- Rangatiratanga:
 - Article 2.
 - Chieftainship.
 - “Māori...groups have the right to own and manage collective assets...”
- Ōritetanga:
 - Article 3.
 - Equality/equity.
 - “Māori individuals have the same rights and responsibilities as non-Māori New Zealanders.”

The Treaty of Waitangi	Health and disability legislation	Health and disability research requirements	Our responses within the Prospective Outcomes of Injury Study
<p>Article I Māori cede sovereignty to the British Crown. <i>Kāwanatanga</i> (Governorship)</p>	<p>Māori and other New Zealanders are covered by the New Zealand Public Health and Disability Act 2000.</p>		
<p>Article II In return Māori are guaranteed full exclusive rights of ownership and use of lands, forests, fisheries and other possessions. <i>Rangatiratanga</i> (Chieftainship)</p>	<p>Act requires mechanisms for Māori involvement in decision-making and delivery of health services.</p>	<p>MoRST, which manages research (via the HRC & other purchasers), states that research in relation to Māori development is a partnership between Māori and the Crown. Researchers to consult with Māori.</p>	<ul style="list-style-type: none"> • Māori researchers asked to identify a researcher interested in helping develop the study. • Māori researcher involved in the preparation of developmental grant application (funded 2004). • Discussions and applications to the NTRCC in 2004 and 2006. • Consulted with various stakeholders, including <i>pakeke</i>, in study regions to learn about issues of importance and design. • Translated questionnaire and Study Information Sheet into <i>te reo</i> Māori.
<p>Article III Māori enjoy the same rights and privileges as British citizens. <i>Ōritetanga</i> (Equality)</p>		<p>MoRST calls for a focus on '... achieving equity & reducing disparities for Māori'. HRC requires researchers to demonstrate how their research is of relevance to Māori health outcomes.</p>	<ul style="list-style-type: none"> • Pilot study including Māori. • Advised to include regions with a high proportion of Māori. • Inclusion and emphasis on qualitative component for Māori and their <i>whānau</i>. • Required sufficient numbers of Māori for quantitative results to be benefit to Māori. • To meet regularly with interviewers and where possible appoint Māori interviewers via Māori organisations for local support.

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Conclusions

- Consultation had a direct and substantial influence on the design and implementation phases of POIS.
- These things take time!
- Māori-led data analysis.
- Approach may not seem problematic or unique but to many (especially outside NZ) is sometimes incomprehensible.
- Not a perfect example! But, adds to the limited literature about practical responses to the Treaty.

Conclusions

- Multiple approaches to achieve beneficial outcomes for Māori, this is one example.
- Start conversations early.
- Seek advice if unsure.
- Meaningful engagement is imperative.



Discussion & Questions?



Māori Injury Outcomes Key Findings

Māori POIS Cohort

- Majority living in Auckland or Manukau City.
- 66% male.
- 38.8 years (mean age).
- 92% reported good-excellent overall health.
- 48% reported post-secondary school qualification.
- 50% reported ≥ 1 chronic condition.
- 92% in full or part-time employment.
- 25% hospitalised for injury.
- 43% 'minor', 39% 'moderate', 15% 'severe'.



Māori POIS Cohort

Variables	n ¹	% of cohort ²
Injury region and nature		
Head and/or neck		
Intracranial	17	3.0
Superficial	18	3.2
Spine		
Sprain or dislocation	95	16.8
Upper extremity		
Fracture	81	14.3
Open wound	36	6.4
Sprain or dislocation	78	13.8
Superficial	36	6.4
Lower extremity		
Fracture	89	15.7
Open wound	33	5.8
Sprain or dislocation	146	25.8
Superficial	34	6.0
Other		
e.g. burn, crush injury	102	18.0

¹ Total exceeds 566 as some participants had multiple injury types

POIS – Māori

- Māori specific papers/analyses.
 - Development of POIS in relation to the Treaty of Waitangi.
 - Life satisfaction 3 months after injury.
 - Injury severity & 3 month outcomes.
 - Outcomes 12 months post-injury.
 - Work participation 3 months after injury.
 - Disability 24 months post-injury.
 - Disability 24 months post-injury – hospitalised Māori and non-Māori.
- Findings relevant for Māori from other papers as well.

POIS – Māori

Wyeth et al. (2013) Indigenous injury outcomes: life satisfaction among injured Māori in New Zealand three months after injury

- Used Te Whare Tapa Whā to inform and interpret analyses.
- 71% satisfied with life 3 months post-injury (compared to 93% pre-injury).
- More severe injuries, not satisfied with pre-injury social relationships or poor self-efficacy pre-injury then less likely to be satisfied with life at 3 months.

POIS – Māori

Maclennan et al. (2013) Injury severity and 3-month outcomes among Māori: results from a New Zealand prospective cohort study

- Prevalence of disability was 49% (compared to 8% pre-injury).
- ~50% experiencing difficulties walking 3 months post-injury.
- >66% reported pain or discomfort 3 months post-injury.
- >50% experiencing a level of psychological distress.
- Adverse outcomes increased with ↑severity but a high level of problems for those classified as ‘minor’ injury.
- Majority satisfied with life and considered themselves to have good to excellent overall health.

POIS – Māori

MacLennan et al. (2014) Twelve-month post-injury outcomes for Māori and non-Māori: findings from a New Zealand cohort study

- High levels of adverse outcomes in both groups.
- More Māori experiencing disability, problems with mobility and psychological distress than non-Māori.
- Controlling for pre-injury and injury-related characteristics, Māori had greater:
 - risk of disability
 - problems with mobility
 - trouble performing usual activities
 - psychological distress
 - ‘barely/not enough’ household income, compared to non-Māori.

POIS – Māori

Wyeth et al. (2017) Predictors of Work Participation for Māori Three Months After Injury

- n=521 (working for pay prior to injury).
- At 3 months, 64% working (92% pre-injury).
- A reasonable proportion not working.
- Characteristics in 4 out of 5 dimensions predictors of working post-injury for Māori.
- No evidence to suggest association with working post-injury for Māori for many factors investigated.

Māori Working Soon After Injury

Pre-injury sociodemographic

Age, sex, occupation type, financial security, adequacy of household income, living arrangements, satisfaction with social relationships.

Pre-injury health and psychosocial

General health, depressive-type episodes, pain or discomfort, prior injury, chronic conditions, self-efficacy.

Injury-related

Injury severity (NISS), hospitalisation, perceived threat to life, perceived threat of long-term disability, work-related injury, assault.

Pre-injury work-related – organisational & psychosocial

Employment contract, job security, job satisfaction, job support, job strain, hours worked per week, days worked per week, multiple jobs.

Pre-injury work-related – physical

Repetitive hand movements, heavy lifting, painful/tiring body positions, standing/walking, physical exertion.

Wyeth, E.H., Maclennan, B., Lambert, M., Davie, G., Lilley, R. and Derrett, S. (2017) Predictors of Work Participation for Māori Three Months After Injury, *Archives of Environmental and Occupational Health*, 73(2), 79-89.

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POIS – Māori

Derrett et al. (2013) Prevalence and Predictors of Disability 24-Months after Injury for Hospitalised and Non-Hospitalised Participants: Results from a Longitudinal Cohort Study in New Zealand

- n=2184.
- 25% were hospitalised.
- In both hospitalised and non-hospitalised groups, 13% experience disability 24 months after injury; higher than pre-injury (5%).
- Some evidence to suggest that among the hospitalised group, Māori have 70% higher risk of disability compared to non-Māori.

POIS – Māori

Wyeth et al. (2017) Prevalence and Predictors of Disability For Māori 24 Months After Injury

- n=374
- 19% experiencing disability 24 months post-injury (compared to 9% pre-injury).
- Factors associated with increased risk of long-term disability:
 - ≥ 2 chronic conditions.
 - Trouble accessing healthcare services at time of injury.
 - Hospitalised for injury.
 - Pre-injury inadequacy of household income.

Prevalence & predictors of disability for Māori 24 months after injury

Pre-injury sociodemographic

Age, sex, education, living arrangements, **adequacy of household income.**

Pre-injury health and psychosocial

Chronic conditions, depressive-type episodes, self-efficacy, satisfaction with social relationships, BMI, smoking, WHODAS.

Injury-related

Hospitalisation, perceived threat of long-term disability, injury severity (NISS), **access to healthcare services.**

Māori Disability Outcomes: Pathways and Experiences After Injury

- Emerging Researcher First Grant – HRC.
- To understand pathways and experiences for Māori hospitalised after injury and the factors contributing to disability outcomes, in collaboration with key organisations.

Māori Disability Outcomes: Pathways and Experiences After Injury

- 1) To describe disability outcomes to 24 months for Māori who were hospitalised after injury.
- 2) To identify factors contributing to disability outcomes for injured Māori who have been hospitalised compared to non-Māori.
- 3) To explore the experiences of health and rehabilitation services (and barriers to achieving improved disability outcomes) for a group of Māori who were hospitalised after injury and experiencing profound disability 24 months after injury.
- 4) To work with key advisors and organisations to meaningfully interpret and identify appropriate opportunities for future interventions to improve Māori disability outcomes after injury.

Disability After Hospitalisation for Injury (Provisional Findings)

Wyeth et al. (under review) Understanding Longer-term Disability Outcomes for Māori and Non-Māori After Hospitalisation for Injury: Results from a Longitudinal Cohort Study

Wyeth, E.H., Lambert, M., Tapsell, M., Samaranayaka, A., Anselm, D., Ellison, P., Harwood, M., Metzger, B., Wright-Tawha, T. and Derrett, S. (Under review, revisions submitted) Understanding longer-term disability outcomes for Māori and non-Māori after hospitalisation for injury. NOTE: Not for wider circulation.

Conclusions

- Findings provide key points of focus in complex pathway for future attention and interventions.
- Different factors predict disability (or other outcomes) at 24 months post-injury for Māori and non-Māori.
- Trouble accessing healthcare predictive of poor Māori outcomes, despite accessing ACC and hospital. More insight needed.
- Areas identified where increased focus required to improve post-injury outcomes for those who hospitalised for injury, and those not.
- Qualitative analyses for additional insight about Māori experiences with ACC and health services for injury (currently in progress).

Other Work in Progress

- Coping and support for Māori after injury (qualitative).
- Long-term impacts of injury for Māori hospitalised and experiencing disability 24 months post-injury (qualitative).
- Health services and ACC experiences for Māori hospitalised and experiencing disability 24 months post-injury (qualitative).
- Subsequent injuries for Māori (quantitative)
 - Describing proportions and frequencies of ACC SI for Māori 24 months post-injury.
 - Access to, and receipt of, ACC services for SI for Māori and non-Māori.
 - Participation in paid and unpaid work after injury and SI factors.

POIS Publications – Māori

- Harcombe, H., Davie, G., **Wyeth, E.H.**, Samaranyaka, A. and Derrett, S. (2017) Injury upon injury: A prospective cohort study examining subsequent injury claims in the twenty-four months following a substantial injury, *Inj Prev*, epub ahead of print.
- **Wyeth, E.H.**, Maclennan, B, Lambert, M., Davie, G., Lilley, R. and Derrett, S. (2017) Predictors of Work Participation for Māori Three Months After Injury, *Archives of Environmental and Occupational Health*, **73**(2), 79-89.
- **Wyeth, E.H.**, Samaranyaka, A., Davie, G. and Derrett, S. (2017) Prevalence and Predictors of Disability For Māori 24 Months After Injury, *Aust NZ J Public Health*, **41**(3), 262-268.
- Derrett, S., Harcombe, H., **Wyeth, E.**, Davie, G., Samaranyaka, A., Hansen, P., Hall, G., Cameron, I.D., Gabbe, B., Powell, D., Sullivan, T., Wilson, S. and Barson, D. (2016) Subsequent Injury Study (SInS): Improving outcomes for injured New Zealanders, *Inj Prev*, **23**(6), 429-434.
- Maclennan, B., **Wyeth, E.**, Davie, G., Wilson, S., & Derrett, S. (2014) Twelve-month post-injury outcomes for Māori and non-Māori: Findings from a New Zealand Cohort Study. *Aust NZ J Public Health*, **38**(3) , 227-33.
- Harcombe, H., Derrett, S., Samaranyaka, A., Davie, G., **Wyeth, E.**, & Wilson, S. (2014). Factors predictive of subsequent injury in a longitudinal cohort study. *Inj Prev*. Advance online publication.
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- Derrett, S., Wilson, S., Samaranyaka, A., Langley, J., **Wyeth, E.**, Ameratunga, S., Lilley, R., Davie, G., Mauiliu, M. (2013). Prevalence and predictors of disability 24-months after injury for hospitalised and non-hospitalised participants: Results from a longitudinal cohort study in New Zealand. *PLoS ONE*, **8**(11), e80194.
- Langley, J., Davie, G., Wilson, S., Lilley, R., Ameratunga, S., **Wyeth, E.**, & Derrett, S. (2013). Difficulties in functioning one year after injury: The role of preinjury sociodemographic and health characteristics, health care and injury-related factors. *Arch Phys Med Rehabil*, **94**(7), 1277-1286.
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- Wyeth, E.H., Derrett, S., Hokowhitu, B., & Samaranyaka, A. (2013). Indigenous injury outcomes: Life satisfaction among injured Māori in New Zealand three months after injury. *Health Qual Life Outcomes*, **11**, 120.
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- Langley, J., Derrett, S., Davie, G., Ameratunga, S., & **Wyeth, E.** (2011). A cohort study of short-term functional outcomes following injury: the role of pre-injury socio-demographic and health characteristics, injury and injury-related healthcare. *Health Qual Life Outcomes*, **9**, 68.
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- **Wyeth, E.H.**, Derrett, S., Hokowhitu, B., Hall, C., & Langley, J. (2010). Rangatiratanga and Ōritetanga: Responses to the Treaty of Waitangi in a New Zealand study. *Ethnicity & Health*, **15**(3), 303-316.
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- Contact: emma.wyeth@otago.ac.nz

<https://www.otago.ac.nz/dsm-psm/research/maori-health.html>

<https://blogs.otago.ac.nz/ipru/research/pois>





Discussion & Questions?