

# *Kainamu Whakamomori: Attempted Suicide in Aotearoa*



**Dr Nicole M. Coupe** *KĀI TAHU, TE ATIWA*

**Post Doctoral Fellow**

*Nga Pae o te Maramatanga*

***[n.m.coupe@massey.ac.nz](mailto:n.m.coupe@massey.ac.nz)***

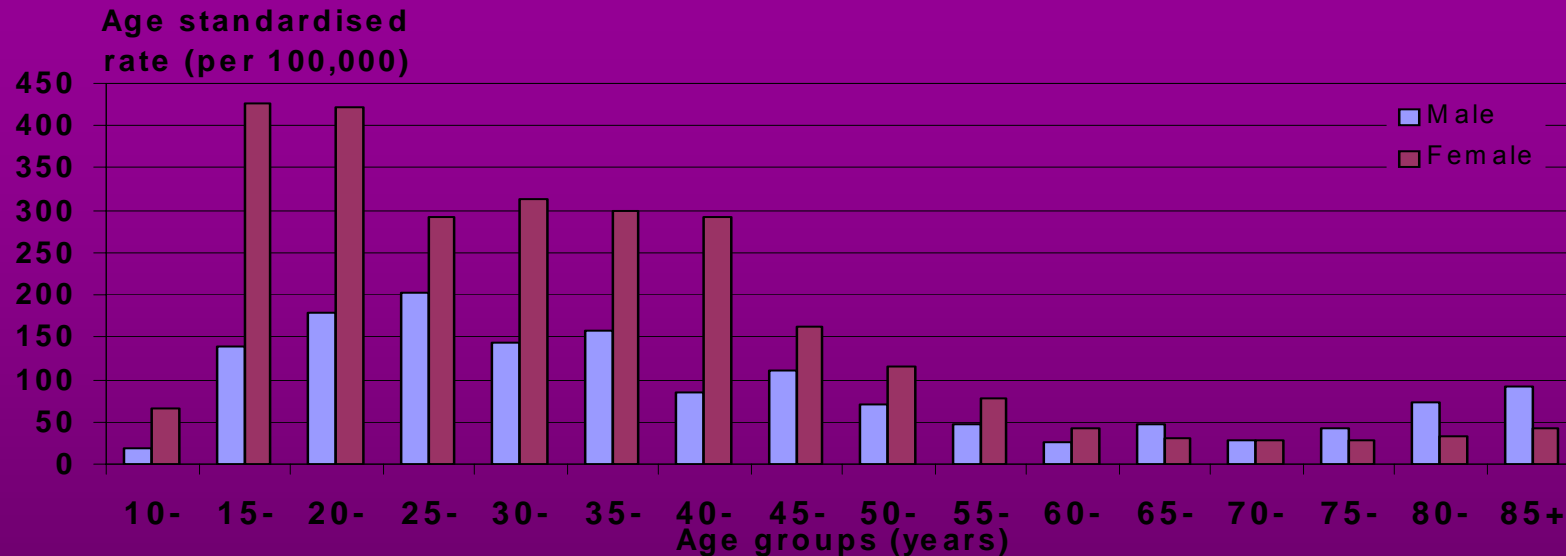
- ◆ Aotearoa contemporary context
- ◆ Maori attempted suicide medical record review
- ◆ Maori attempted suicide case control study
- ◆ Translating research into suicide prevention

- ◆ Changes in coding
- ◆ Differences in DHB reporting and patient management
- ◆ Hospitalisations are numbers of episodes rather than individual people
  - Readmissions same condition counted as additional discharges
  - People transferred between hospitals are counted each time

## *Intentional self harm rates*

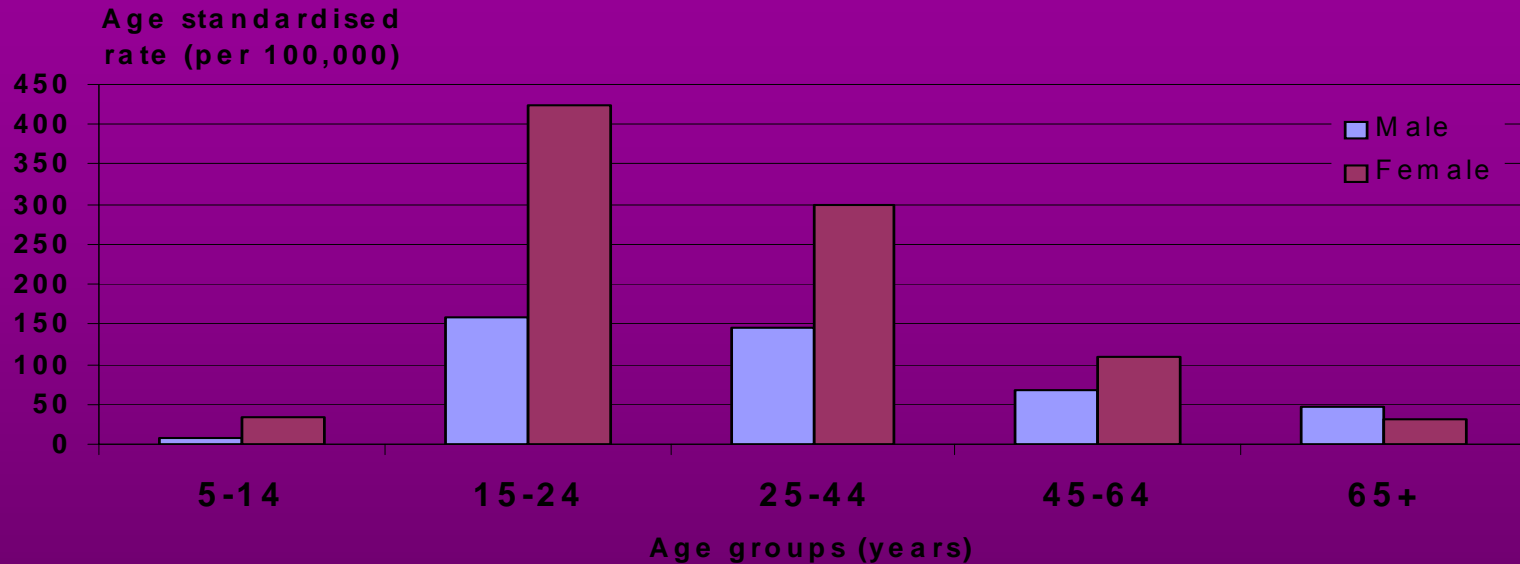
	<b>Aotearoa</b>		<b>Non-Mäori</b>		<b>Mäori</b>	
	<b>100,000</b>	<b>No.</b>	<b>100,000</b>	<b>No.</b>	<b>100,000</b>	<b>No.</b>
<b>Total</b>	131.5	5292	134.1	4573	115.1	719
<b>Female</b>	178.6	3610	185.0	3143	143.9	467
<b>Male</b>	84.2	1682	83.3	1430	85.0	252

# *Suicide & Intentional Self Harm Rates*



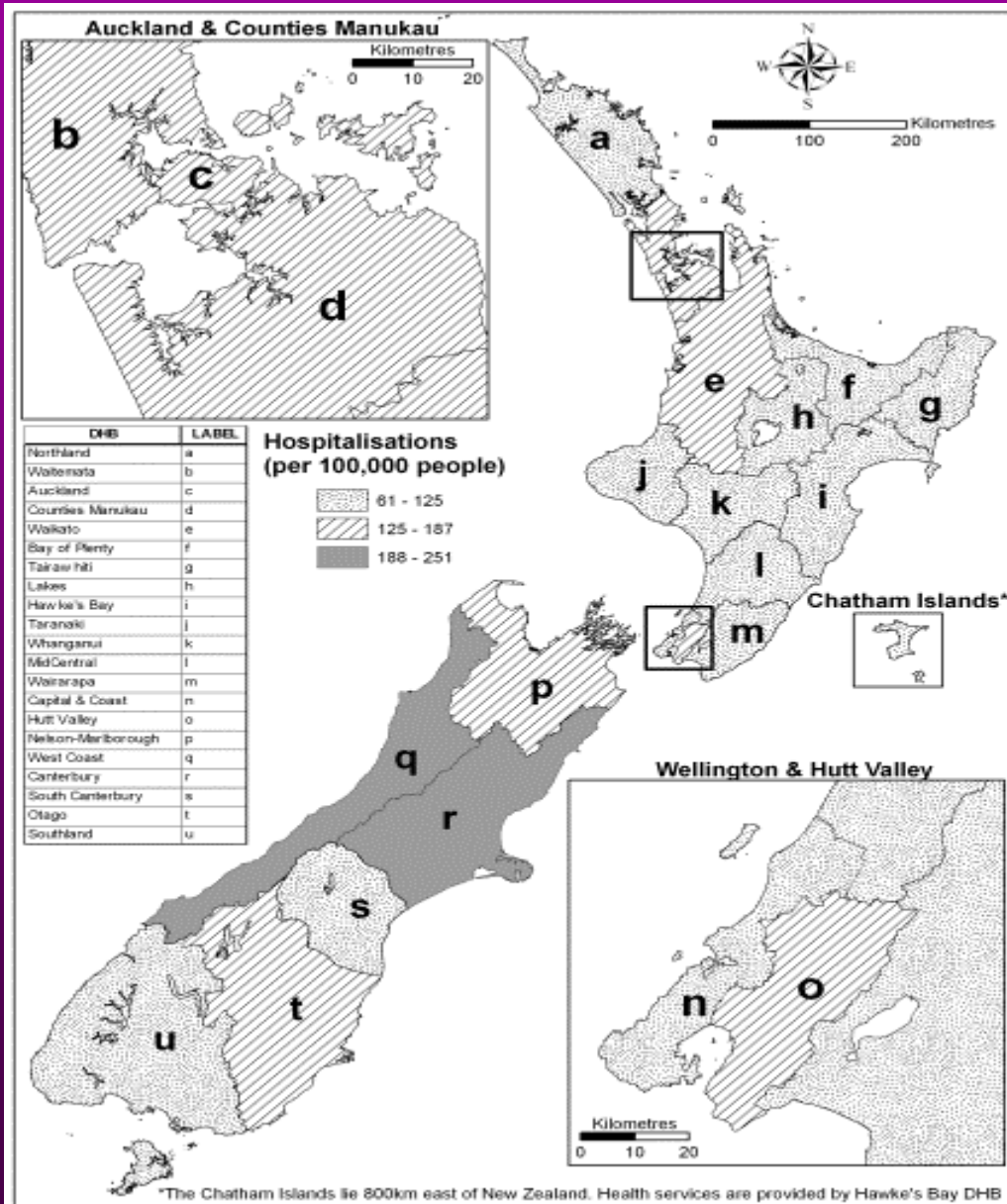
- ◆ Total 20-24 years (300.0/100,000)
- ◆ Males 25-29 years (201.6/100,000)
- ◆ Females 15-19 years (425.4/100,000)
- ◆ Māori 20-24 years (277.5/100,000)
  - Males 20-25 years (210.0/100,000)
  - Females 20-24 years (343.4/100,000)

# *Suicide & Intentional Self Harm Rates*



- ◆ 15-24 years both males and females
- ◆ Rates decrease with life style age group

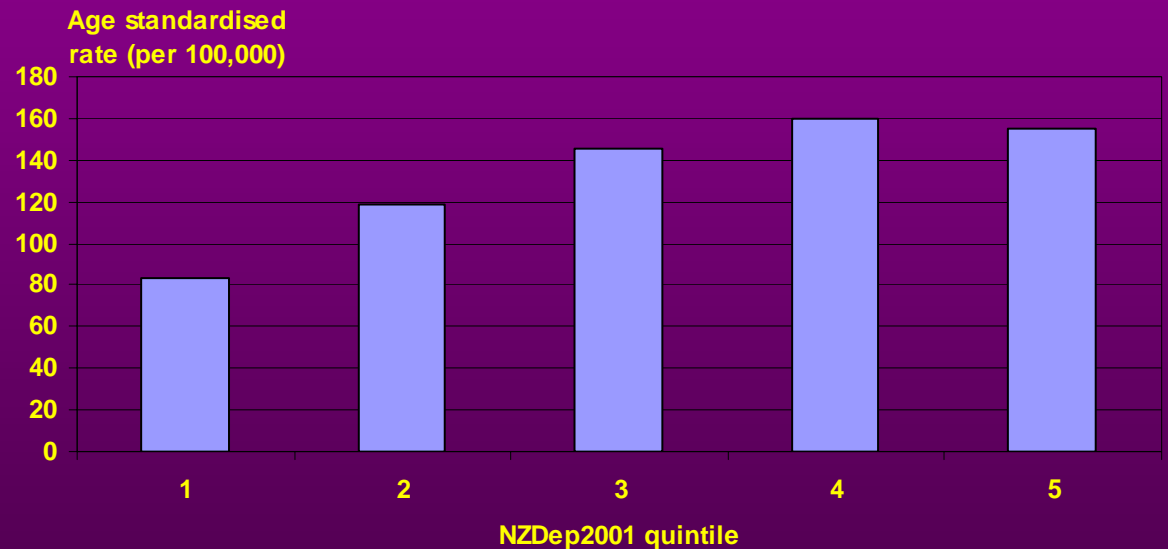
# *DHB intentional self harm*



- ◆ West Coast (250.3) & Canterbury (218.7)
- ◆ Waitemata, Auckland, Counties, Waikato, Hutt Valley, Nelson Marlborough, Otago
  - 125-187/100,000
- ◆ Capital & Coast (61.9) & Southland (63.1)

# *Hospitalisation & Deprivation*

- ◆ Increase hospitalisations with increased deprivations
- ◆ Least deprived areas 83/100,000
- ◆ Most deprived areas 154.7/100,000



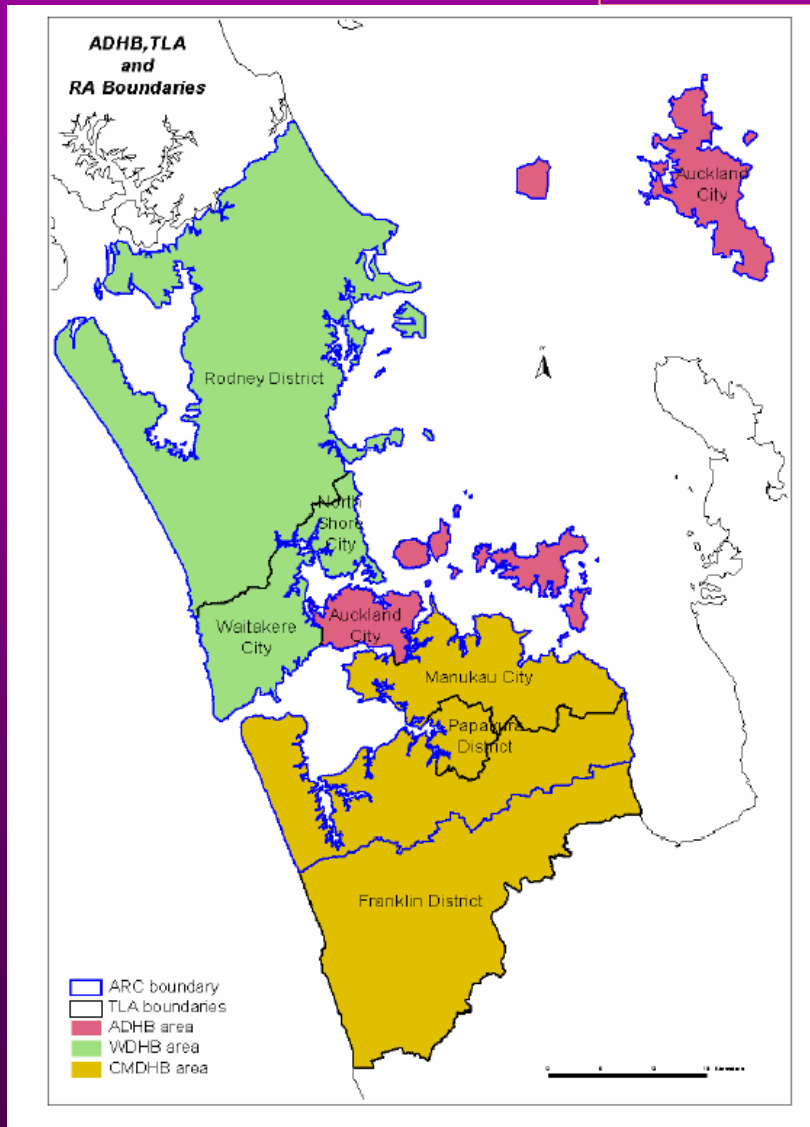
## *Other researchers of suicide attempts*

- ◆ Bennett – Pākehā youth suicide
- ◆ Tiatia – Pacific youth suicide
- ◆ Beautrais – Serious suicide attempts
- ◆ Hatcher – Problem solving therapy after suicide attempt
- ◆ Nada-Raja, Collings, Coggan

## *Māori attempted suicide*

- ◆ Māori Medical Record Review
- ◆ Māori Attempted Suicide Case Control

# Study zone



# *Māori Medical Record Review*

- ◆ Records from Emergency Departments between July 1<sup>st</sup> 1999 – December 31<sup>st</sup> 2000
- ◆ N=252 individuals/310 presentations - 18mths
  - 61% female; 85% sole Māori, 43% Counties Manukau, 25% employed, 21% unemployed, 17% beneficiaries, 56% living with whānau
  - 70% Poisoning (53% prescription medications, 20% analgesics), 15% cutting or piercing
- ◆ Home, 1800-2400 hours , 37% presentations alcohol (females younger), 15% Marijuana
- ◆ 71% first timers – repeat presentations (74% 2x, 17% 3x, 9% 5x)
- ◆ ED service 53 % medications, 88% psychiatric, 16% cultural informed, 13% absconded or refused services
- ◆ 87% with post discharge plans, 67% home, 18% psychiatric care,
- ◆ Follow up CMHS, Hospital psych services GP, Cultural Services 4%

- ◆ 1 Māori every 2 days presents to Auckland ED for DSH
- ◆ 20% presented following OD analgesics
- ◆ 50% previously been to ED and 33% more than twice
- ◆ Overnight admissions allow culturally appropriate assessment and follow up

# *Kaupapa Māori Methodology*

- ◆ Community driven research
- ◆ Māori principal investigator
- ◆ Māori research team
- ◆ Māori decision making
- ◆ Partnerships with non-Māori
- ◆ Self identification
- ◆ Participant controlled interview
  - Time
  - Place
  - Koha
- ◆ Dissemination

## *Māori case control study*

### ◆ CASES:

- n=250
- Māori (self Identification)
- 16 – 50 years
- Attempted suicide (diagnosed)
- Auckland region
- 3 hospitals (Auckland, Middlemore, North Shore)

### ◆ CONTROLS:

- n= 250
- Māori (self identification)
- 16 – 50 years
- Population based
- Auckland Region
- 227 sites; 3045 households

## *Method Māori case control study*

- ◆ Questionnaire (>400 questions)
  - Cultural Indicators
  - Demographic & socio-economic factors
  - General Health Questionnaire (GHQ–28)
  - Hospital Anxiety & Depression Scale (HADS) & Mental Health Factors
  - Substance Use (CAGE)
  - Health service accessibility
  - Social supports
  - Environmental factors
  - Suicidality (CIDI)
  - Beck's Scale of Suicide Intent (SIS–14)

- ◆ Case selection
  - 1<sup>st</sup> August 2000 to 13<sup>th</sup> January 2002 (15mths)
- ◆ Interviews complete Nov 2002 (27mths)
- ◆ 214 (85.5%) cases & 203 (81.2%) controls



## *Culture & Māori attempted suicide*

Culture	All ages		16-24	
	OR	CI	OR	CI
Identity & whakapapa (family tree)				
Sole Māori identity	<b>2.4</b>	1.59, 3.63	<b>2.6</b>	1.23, 5.68
Knowledge 4+ generations	<b>0.25</b>	0.14, 0.44	<b>0.4</b>	0.11, 1.08
Name Iwi (tribe)	<b>0.35</b>	0.18, 0.67	<b>0.3</b>	0.11, 0.94
Marae (village common)	<b>0.09</b>	0.04, 0.21	<b>0.1</b>	0.01, 0.27
Tikanga (Māori protocols)	<b>1.8</b>	1.18, 2.75	<b>1.3</b>	0.6, 2.8
Whānau (family) links	<b>0.16</b>	0.09, 0.29	<b>0.3</b>	0.09, 0.72
Whenua (Māori land)	<b>0.22</b>	0.13, 0.36	<b>0.3</b>	0.12, 0.66
Kai (Māori food)	<b>0.26</b>	0.17, 0.40	<b>0.2</b>	0.08, 0.43
Te Reo Māori (Māori language)	<b>0.19</b>	0.10, 0.35	<b>1.9</b>	0.74, 5.03



# Measuring culture

Cultural indicators	Identity Profiles			
	Secure	Positive	Notional	Compromised
2: Identify as Māori	Yes	Yes	Yes	No
4: No. of Māori generations	3+	2	1	Any response
8.1: Times to own marae	5+	2-4	0-1	Any response
9.4: Role whānau plays in life	> large	Small	<small	Any response
10: Interest Māori land	Yes	Yes/dk	No	Any response
15: Te reo Māori ability	adv - native	basic - learner	No ability	Any response
Minimum criteria	Q.2 = yes + 3 other positive responses	Q.2 = yes + 2 other positive responses	Q.2 = yes + 3 other negative responses	Q.2 = no + any other response

# *Te Ao Māori Model*

<b>Cultural Indicators</b>	<b>A+G</b>	<b>A+G + SES</b>	<b>A+G + GHQ</b>	<b>A+G + HADS</b>	<b>A+G + Drugs</b>	<b>A+G + Abuse</b>
<b>Cultural identity profile</b>	$\chi^2_3=33.62$	$\chi^2_3=19.09$	$\chi^2_3=3.06$	$\chi^2_3=2.76$	$\chi^2_3=24.15$	$\chi^2_3=18.79$
<b>Secure</b>	0.28 (0.1, 0.7)	0.4 (0.1, 1.1)	1.1 (0.2, 6.7)	0.5 (0.2, 0.3)	0.2 (0.1, 0.7)	0.2 (0.1, 0.8)
<b>Positive</b>	1.0 (0.5, 2.4)	1.2 (0.4, 3.2)	3.1 (0.7, 14.4)	1.1 (0.3, 3.7)	1.0 (0.4, 2.6)	0.9 (0.2, 3.6)
<b>Notional</b>	4.4 (1.5, 13.3)	3.7 (1.04, 13.)	1.8 (0.2, 15.3)	1.2 (0.3, 6.1)	2.9 (0.8, 10.2)	3.3 (0.6, 18.0)
<b>Compromised</b>	1	1	1	1	1	1

# *Whakamomori: Māori suicide prevention model*

<b>Variable</b>		<b>OR</b>	<b>Confidence</b>	<b>P value</b>
Demographics	Age	0.99	0.95-1.04	0.8
Gender	Female	0.75	0.31-1.80	0.5
	Male	1		
Cultural Identity	Secure	1		0.2
	Positive	3.31	1.10-9.95	
	Notional	1.56	0.19-19.95	
	Compromised	1.7	0.23-12.38	
<b>Health Status</b>	<b>GHQ-28</b>	<b>1.28</b>	<b>1.20-1.35</b>	<b>&lt;0.0001</b>
Interpersonal Abuse	At least once	2.04	0.69-5.88	0.2
	No	1		
Alcohol (CAGE)	Two items	1.51	0.61-1.64	0.4
	Less than 2	1		
Marijuana	Use	1.55	0.68-3.85	0.3
	Don't use	1		
Education	School leaver ≤	1.84	0.75-4.51	0.2
	School leaver >	1		
Employment	Yes	1.03	0.36-2.93	0.96
	No	1		
Income	Under\$20,000	0.84	0.31-2.28	0.7
	At least \$20,000	1		

## *Whakamomori: Mäori suicide prevention model*

Variable		OR	Confidence	P value
Demographic	Age	0.99	(0.96-1.03)	0.8
Gender	Female	0.88	(0.43-1.81)	0.7
	Male	1		
Cultural Identity	<b>Secure</b>	<b>1</b>		<b>0.003</b>
	Positive	2.48	(1.21-5.08)	
	Notional	8.32	(2.51-27.61)	
	Compromised	4.3	(1.31-14.1)	
Interpersonal Abuse	<b>At least once</b>	<b>2.27</b>	<b>(1.15-4.35)</b>	<b>0.02</b>
	No	1		
<b>Substance Use</b>				
Alcohol (CAGE)	<b>Two items</b>	<b>1.85</b>	<b>(1.00-3.45)</b>	<b>0.05</b>
	More than two	1		
Marijuana	<b>Use</b>	<b>2.27</b>	<b>(1.24-4.16)</b>	<b>0.008</b>
	Don't use	1		
Education	School leaver ?	1.69	(0.77-3.71)	0.07
	School leaver >	1		
Employment	Yes	0.77	(0.37-1.60)	0.5
Income	Less than	1.73	(0.88-3.40)	0.1
	At least \$20,000	1		

## *Translation research - implementation*

- ◆ Whakawhanaungatanga – Self Harm & Suicide Prevention Collaborative
- ◆ Case Finding Assessment Tool – Early detection and management of people at risk of suicide in primary care setting

# Whakawhanaungatanga



- ◆ Implementation of guidelines into
  - Emergency Departments
  - Mental Health Services
  - Maori Health Services

◆ Tools

- National targets
- Mapping an individual clients pathway through secondary care
- Plan – Do – Study – Act Cycles

## *National Targets*

- ◆ 90% of people attending the ED identified with self-harm or suicidality are seen within 1 hour
- ◆ 100% of people presenting with self-harm or suicidality will have documented assessment.
- ◆ 100% of people presenting with self-harm or suicidality will be provided with a written copy of their care plan on discharge (also significant others/ whānau if appropriate)
- ◆ 100% of people presenting with self harm or suicidality will have a follow up appointment within 48-hours of discharge.
  - 90% of people who do not attend that appointment will be contacted within 48 hrs.

# *Client Pathway Map*



- ◆ What is a typical problem at each point of the process?
- ◆ Are there examples of best practice?
- ◆ Identify measures to monitor improved processes
- ◆ Test changes

# Plan – Do – Study – Act

- ◆ **What are we trying to accomplish?**
  - An *aim* with a clear outcome target is essential to assign resources & garner support
- ◆ **What changes can we make to result in improvement?**
  - The hypothesis generation step...where we test *ideas* before implementing changes
- ◆ **How will we know that a change is an improvement?**
  - *Measurement* to demonstrate improvement

## Act

Implement the changes that have been proven effective

## Study

Evaluate the impact of the trial  
Apply cultural audit



## Plan

Plan the change that is to be trialled  
Apply Tikanga process

## Do

Conduct a trial of the proposed change  
Assess cultural appropriateness

- ◆ Emergency departments, mental health & Maori health services in DHB's
  - Northland
  - Waitemata
  - Counties Manukau
  - Waikato
  - Lakes
  - Taranaki
  - Mid Central
  - Hutt Valley
  - West Coast
  - Southland

## *Primary Care tool development*

- ◆ Detection & Management of people at risk of suicide in the primary care setting
  - Depression
  - Anxiety
  - Interpersonal abuse
  - Substance use (alcohol & drugs)
  - Gambling
  - Smoking
  - Eating Disorder

## ◆ Kaupapa Epidemiology

### ➤ Randomised control trial

- Raukura Hauora o Tainui (PHO), West Auckland PHO, North Shore PHO and Tairawhiti PHO
- N=1000 face validity
- N=1200 content validity

### ➤ Kaupapa

- Maori co-leadership, data collection & analysis, participants