Socio-Economic Differences in Health in Maori

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Background

• Persistent health inequalities between Maori and non-Maori highlighted by recent “Progress Towards Closing the Social And Economic Gaps” and “Social Inequalities in Health” publications

• Claim that inequalities reflect socio-economic inequality and that this is decreasing (Chapple; Prebble et al …)

• Similar health status reported for Maori and European children from elite backgrounds (Dell and Elliot 1975)

• Previous studies of male Social Class Mortality Patterns for the periods 1975-77 and 1985-87 (Pearce et al) required updating
## Definitions: chronology

<table>
<thead>
<tr>
<th>Census data</th>
<th>Mortality data</th>
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<tbody>
<tr>
<td>1981: ‘biological’, multiple groups allowed</td>
<td>Prior to September 1995:</td>
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<tr>
<td></td>
<td>• biological race</td>
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<td></td>
<td>• only 3 categories: Maori, Pacific, Other</td>
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<td>1986: self-identified ethnic origin</td>
<td>• sole categories only permitted</td>
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<td>1991: self-identified ethnicity</td>
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<tr>
<td>1996: self-identified ethnicity, more encouragement of multiple self-identity</td>
<td>After September 1995, identical questions to 1996 census (± implementation)</td>
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<td>2001: revert back to 1991 question</td>
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‘Social Class’ Definitions

• Elley-Irving (1970s)
  – 6 groupings of occupations
  – based upon education and income

• NZSEI (1990s)
  – linear scale of ranked occupation
  – based upon algorithm involving age, income and education
  – aggregated to 6 discreet groupings to enable comparison with E-I

• NZDep (1990s)
  – index of geographic deprivation
  – based upon 9 variables (telephone, benefit, unemployment, household income, car access, single parent family, no qualifications, home ownership, overcrowding.)
Deprivation and Health Differences

- Socio-economic status is unequally distributed by ethnicity
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Non-Maori non-Pacific

Maori
Deprivation and Health Differences

- Socio-economic status is unequally distributed by ethnicity
- Maori life expectancy is lower than that of non-Maori for all deprivation scores
Overlap of ethnic and socio-economic inequalities: Life expectancy by NZDep96 by ethnic group

Deprivation and Health Differences

- Socio-economic status is unequally distributed by ethnicity
- Maori life expectancy is lower than that of non-Maori for all deprivation scores
- Maori mortality rates are higher than non-Maori even when controlled for social class
  - The gap increases as the level of deprivation increases
- Maori hospitalisation rates lower for under 25 years and for men over 65 years
- Maori smoking rates are higher than non-Maori for each age group.
  For women this gap increase with deprivation
Elley-Irving SES and Male Mortality 75-77 and 85-87

Examined

- All cause mortality
- Amenable mortality (as per previous definition)
- Non-amenable mortality

- Decreasing mortality for both Maori and non-Maori
- Maori mortality higher but decreasing faster than non-Maori
- Strong social class mortality gradients in each group
- Maori had particularly high mortality from causes amenable to intervention
NZSEI and Male Mortality 95-96

• So what’s changed since 1987?
  – Macro-economic reform, health sector restructuring, Maori service development and mainstream focus on Maori responsiveness
  – Changes in ethnicity, occupation and social class definitions since 1987
NZSEI and Total Male Mortality 95-96
NZSEI and Total Male Mortality

Risk Ratios by SES

- NZSEI and Total Male Mortality
- Risk Ratios by SES
- Graph showing risk ratios based on SES.
NZSEI and Male Amenable Mortality

Amenable Mortality

Mortality rate (per 100,000) vs. NZSEI Occ. Class

Non-Maori
Maori
Socio-economic status: pathway variable (not confounder) that explains ethnic inequalities
What proportion of Maori:non-Maori differences in mortality are attributable to SES?

- About 20% (1974-78) to a third (1985-87) among 15-64 year old males attributable to occupational class
  (Pearce et al, 1993, NZCMJ)
- About a third (1991-94) among both males and females aged 0-74 years attributable to small area deprivation
  (Blakely et al, 2001, submitted)
Male Mortality Study: Implications

- the poor state of Maori health cannot be explained solely by relative socioeconomic disadvantage.
- the health sector is still not meeting the serious health needs of many Maori.
- the need to address persistent disparities within Maori.
- improved occupational and ethnicity data required for future monitoring/research
- the need to broaden our indicators of well-being used in such studies
- The urgent need for intervention /programmes studies at the individual and environmental level