Survival Disparity Following AAA Repair Highlights Inequality in Socioeconomic Status

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I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Shareholder in a healthcare company
- Owner of a healthcare company
- Other(s)

I do not have any potential conflict of interest
Inequalities in health
  – Major public health concern
Worse outcomes in low SES & certain ethnic groups
USA- uninsured patients had worse outcomes
AAA tend to present acutely in lower SES

Rigberg et al. JVS 2005
Ultee et al. EJVES 2015
Aims:

To determine if social deprivation & certain ethnic groups were predictors of short & long term mortality in New Zealand.
• Population
  – All AAA repairs

• Period
  – July 2001 to Dec 2014

• Data
  – National & Clinical data sets

• Follow up
  – Minimum 1 year

• Ethnic groups
  – NZ European (70), Maori (15), Pacific (5) & Asian (10)
Deprivation
9 domains
1 (least deprived)
10 (most deprived)

Outcomes
30 day mortality
Long-term survival
Adjusted to comorbidities
• 5,824 patients
  80% elective, 70% open repair
• Ethnic groups
  – 6.6% Maori
  – 1.4% Pacific
  – 2.4% Asian
• Median Dep score 6 (IQR 4-8)
  – 51-70% were living in >7 areas
  – c.f. 46% NZ European
30-Day Mortality

Risk ratios:

• Asian
  1.54 (95%CI:1.1, 2.1) P=0.009

• Deprivation
  7-8  1.4 (95%CI:1.0, 1.8)
  9-10 1.4 (95%CI: 1.1, 1.9)

Adjusted to age, sex & comorbidities
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Maori HR = 1.4 (95% CI: 1.2, 1.8)

NZ European (reference)

Deprivation >7 HR 1.3 (95%CI: 1.1,1.4)

Deprivation 1-2 (reference)
• In NZ, health inequality exists
• Similar association seen with cardiac surgery\(^1\)

• Limitations
  – deprivation not linked to individuals but areas
  – Small numbers of other ethnic groups

Barnard et al. BMJ Open 2015
Following AAA repair:

- Higher deprivation was associated with worse short & long term mortality
- Asian people were associated with worse short term mortality
- Maori had a worse overall survival
- Knowledge might reduce disparity