Cancer Screening: Gaps, Challenges and Opportunities

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Background

• early detection is an important component of cancer control
• well-organised screening can reduce mortality and morbidity due to cancer
• screening is expensive: investments need to be balanced with other approaches to cancer control
Current screening programmes - challenges

- Cervical cancer screening programme (NCSP)
  - manage the introduction of new technologies eg Human Papilloma Virus (HPV) testing
  - re-examining screening intervals and the screening age range.
- Breast cancer screening programme (BSA)
  - implementation of age extension 45-69 years/workforce
  - managed introduction of new technologies, eg, digital mammography
  - improved treatments, eg taxanes, less invasive surgery.
The basis for choosing screening programmes

“All screening programmes do harm; some can do good as well”
Cancer of the prostate (ICD code 185)

Age-standardised rate

Year


Registrations

Deaths
Screening for Lung Cancer

• high risk group can be readily identified
• small tumours can be detected early
• four RCTs in the 1970s using X-rays failed to show reduced mortality
• trials of new imaging technology show improved sensitivity, but still no evidence of better survival
Colorectal cancer screening

- 1998 – NHC recommendation against population screening for CRC
- Evidence that screening can reduce mortality from CRC (pilots UK and Australia)
- NSU and NSAC to re-examine CRC screening in NZ
Prostate cancer screening

• **Challenges**
  - effectively conveying information about risks
  - assisting doctors and men to deal with the current uncertainty
  - responding to misconceptions about prostate cancer and screening

• **Opportunities**
  - results from RCTs now underway may provide greater certainty about benefits
  - the high profile of screening may hasten improvements in treatment and long term care
Skin cancer screening

- We lack evidence that screening for melanoma reduces mortality & need better information also on cost effectiveness, risks and limitations
- But it happens anyway
- Less screening, but better screening, might be cheaper
Quality and screening programmes

“Screening programmes shown to be efficacious in a research setting require an obsession with quality to be effective in a service setting”
Treatement of prostate cancer - side-effects

Surgery

• Impotence 30-70%
• Incontinence (any) 20-30%
• Mortality 1-2%

Radiotherapy

• Impotence 40-60%
• Incontinence 2-6%

JNCI 2000;92:1582
Screening and the Inverse Care Law

“Screening programmes are an excellent example of the inverse care law”
<table>
<thead>
<tr>
<th>Country</th>
<th>Incidence</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>96.7</td>
<td>24.5</td>
</tr>
<tr>
<td>New Zealand</td>
<td>97.8</td>
<td>31.4</td>
</tr>
<tr>
<td>- non-Maori</td>
<td>97.9</td>
<td>30.4</td>
</tr>
<tr>
<td>- Maori</td>
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<td>41.4</td>
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Reference: Skegg & McCredie NZMJ 2002;115:205
Cancer screening: the challenges

• Picking programmes that pay
• Sustaining quality
• Achieving equity