Disinvestment in Australia
OSTEBA 25 years with Euroscan
Bilbao October 2017
Prof Brendon Kearney
Disinvestment

Disinvestment relates to the process of withdrawing health resources, either partially or completely, from existing healthcare practices (including procedures, devices, diagnostics, programmes and pharmaceuticals) that are deemed to deliver no or low health gain for their cost, and are thus not efficient health care resource allocations. Released resources can then be reinvested in clinical practices and technologies that deliver safe and effective healthcare for all patients, therefore representing efficient health resource allocation.
The HTA sequence

Basic biomedical research
Translational research
Safety and efficacy
Effectiveness and cost-effectiveness
General clinical use

Primary data collection
Horizon-scanning & early awareness
Reviews
Pragmatic trials
Cochrane reviews

EuroScan International Network
Adoption and diffusion

Technology → Adoption → Technology use → Diffusion → Impact

Diffusion %

0 100

EuroScan International Network
Life cycle of technology

- Future technology – technology not yet developed
- Emerging technology – technology prior to adoption
- New technology – technology in the phase of adoption
- Accepted technology – technology in general use
- Obsolete technology – technology that should be taken out of use
Passive Disinvestment and natural attrition

Many interventions become outmoded

e.g. Diagnostic ERCP
     Epoetin β
     Pegfilgastrin
     Tonsillectomy
     Appendicectomy
Active Disinvestment

Active strategies used in a more directive approach to reduce the practice of unnecessary, ineffective, inefficient or harmful interventions
Review of Medicare Benefits Schedule

More than 5000 items
  – often no descriptors
  – mostly no HTA

Remove obsolete items

Review high cost/volume items
  e.g. Colonoscopy
  Coronary artery stenting

Comprehensive and ongoing
Choosing Wisely Australia

5 years
30 organisations
  – Medical colleges
  – Societies  – Medical
  – Nursing
  – Pharmacy
Choosing Wisely Australia

More than 300 recommendations
Information for Clinicians and Patients
Established 5 years
Operated by NPS medicine wise
Funded by Australian Government
First annual meeting 2017
Evaluation planned
Hospital involvement
Health PACT

Technology Briefs designed to change practice
Tavi
Renal nerve denervation
IVC filters
IV canulae in antibiotic use
Mitraclip
Bioresorbable stents
Gynaecological mesh
Pulmonary stents
State Health Department
And based HTA committees

All states and New Zealand have
Active programmes

e.g. Auckland hospital
  - Catheter ablation for AF
  - Grommots
Pharmaceutical Benefits Scheme

Use of biosimilars generics

Limited expenditure growth to 1%

Hepatitis C – Public health QALY of $14,000
PBS Costs

↑ by 13% from 1994 to 2005

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2.7%</td>
</tr>
<tr>
<td>2006</td>
<td>4.3%</td>
</tr>
<tr>
<td>2007</td>
<td>9.4%</td>
</tr>
<tr>
<td>2008</td>
<td>9.2%</td>
</tr>
<tr>
<td>2009</td>
<td>9.3%</td>
</tr>
<tr>
<td>2010</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

Reduced since then by use of:
- generics
- biosimilars
- but funding new high cost drugs
QALY

Used in PBAC assessments

No set amount

Can vary widely
PBAC

HPV Vaccine

High Qualy

Population Health approach
  - reduction in cervical cancer and precursor lesions
  - changes to cervical cancer screening programme
PBAC

Hepatitis C

- Industry submitted to PBAC for listing
- Request for approx $3 billion dollars
- PBAC looks at Population Health approach to eliminate Hepatitis C from Australia
- Currently 230,000 patients
- PBAC Qualy assessed at $15000
- PBAC/Health negotiates with industry to fund all drugs and genotypes
- 10 year agreement for approx. $1 billion
  - Volume vs. price
  - risk for Government and Industry
- 30,000 treated in first six months
- Generic scheme ceased
- Associated public health programme
<table>
<thead>
<tr>
<th>Genotype</th>
<th>No Previous Treatment (naïve)</th>
<th>Previously Received Treatment (experienced)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No cirrhosis</td>
<td>With cirrhosis</td>
</tr>
<tr>
<td>1 a/b</td>
<td><strong>Ledipasvir/sofosbuvir</strong> (8 or 12 Weeks)</td>
<td><strong>Ledipasvir/sofosbuvir</strong> (12 Weeks) or <strong>Sofosbuvir and Peg-Interferon alfa-2a/ribavirin</strong> (12 weeks)</td>
</tr>
<tr>
<td>1 a/b</td>
<td><strong>Daclatasvir and sofosbuvir</strong> (12 weeks)</td>
<td><strong>Daclatasvir and sofosbuvir and ribavirin</strong> (12 weeks) or <strong>Daclatasvir and sofosbuvir</strong> (24 weeks)</td>
</tr>
<tr>
<td>1a</td>
<td><strong>Paritaprevir-ritonavir,</strong> <strong>ombitasvir,</strong> <strong>dasabuvir</strong> and <strong>ribavirin</strong> (12 weeks)</td>
<td><strong>Paritaprevir-ritonavir,</strong> <strong>ombitasvir,</strong> <strong>dasabuvir</strong> and <strong>ribavirin</strong> (12 weeks)</td>
</tr>
<tr>
<td>1b*</td>
<td><strong>Paritaprevir-ritonavir,</strong> <strong>ombitasvir</strong> and <strong>dasabuvir</strong> (12 weeks)</td>
<td><strong>Paritaprevir-ritonavir,</strong> <strong>ombitasvir</strong> and <strong>dasabuvir</strong> (12 weeks)</td>
</tr>
<tr>
<td>2</td>
<td><strong>Sofosbuvir and ribavirin</strong> (12 weeks)</td>
<td><strong>Sofosbuvir and ribavirin</strong> (12 weeks)</td>
</tr>
<tr>
<td>3</td>
<td><strong>Daclatasvir and sofosbuvir</strong> (12 weeks) or <strong>Sofosbuvir and ribavirin</strong> (24 weeks)</td>
<td><strong>Daclatasvir and sofosbuvir</strong> (24 weeks) or <strong>Sofosbuvir and ribavirin</strong> (24 weeks)</td>
</tr>
</tbody>
</table>
Australian Safety and Quality Commission

2nd Atlas of variation in Healthcare 2017

Developed Chronic disease management programs
COPD
Heart Failure
Diabetes
<table>
<thead>
<tr>
<th>Data item</th>
<th>Range across local areas' per 100,000</th>
<th>Times difference</th>
<th>Times difference excluding top and bottom 10%</th>
<th>Number over one year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Chronic obstructive pulmonary disease</td>
<td>63 to 990</td>
<td>15.7</td>
<td>3.3</td>
<td>66,250</td>
</tr>
<tr>
<td>Hospitalisations, all ages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 Heart failure</td>
<td>90 to 632</td>
<td>7.0</td>
<td>2.1</td>
<td>55,511</td>
</tr>
<tr>
<td>Hospitalisations, all ages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3 Cellulitis</td>
<td>102 to 1,262</td>
<td>12.4</td>
<td>2.9</td>
<td>59,466</td>
</tr>
<tr>
<td>Hospitalisations, all ages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4 Kidney and urinary tract infections</td>
<td>140 to 899</td>
<td>6.4</td>
<td>2.2</td>
<td>73,277</td>
</tr>
<tr>
<td>Hospitalisations, all ages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5 Diabetes complications</td>
<td>52 to 601</td>
<td>11.6</td>
<td>2.8</td>
<td>43,737</td>
</tr>
<tr>
<td>Hospitalisations, all ages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>^ Statistical Area 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Second Australian Atlas of Healthcare Variation
<table>
<thead>
<tr>
<th>Data item</th>
<th>Range across local areas* per 100,000</th>
<th>Times difference</th>
<th>Times difference excluding top and bottom 10%</th>
<th>Number over one year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Acute myocardial infarction</td>
<td>105 to 905</td>
<td>8.6</td>
<td>2.6</td>
<td>32,388</td>
</tr>
<tr>
<td>Hospitalisations, people aged 35–84 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2 Atrial fibrillation</td>
<td>192 to 740</td>
<td>3.9</td>
<td>1.7</td>
<td>58,608</td>
</tr>
<tr>
<td>Hospitalisations, people aged 35 years and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\* Statistical Area 3

**Recommendations**

2a. State and territory health departments to examine variation in the timeliness and access of patients to appropriate investigations and interventions for suspected acute myocardial infarction.

2b. The Commission to develop a clinical care standard on the management of atrial fibrillation.
## 4. Surgical interventions

<table>
<thead>
<tr>
<th>Data item</th>
<th>Range across local areas per 100,000</th>
<th>Times difference</th>
<th>Times difference excluding top and bottom 10%</th>
<th>Number over one year</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Knee replacement</td>
<td>128 to 507</td>
<td>4.0</td>
<td>1.9</td>
<td>52,039</td>
</tr>
<tr>
<td>Hospitalisations, people aged 18 years and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(See table below for 4.2 and 4.3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.4 Laparoscopic cholecystectomy</td>
<td>89 to 392</td>
<td>4.4</td>
<td>2.0</td>
<td>49,874</td>
</tr>
<tr>
<td>Hospitalisations, all ages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.5 Appendicectomy</td>
<td>103 to 360</td>
<td>3.5</td>
<td>1.7</td>
<td>40,752</td>
</tr>
<tr>
<td>Hospitalisations, all ages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.6 Cataract surgery</td>
<td>835 to 3,279</td>
<td>3.9</td>
<td>1.6</td>
<td>245,797</td>
</tr>
<tr>
<td>Hospitalisations, people aged 40 years and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data item</th>
<th>Range across local areas per 100,000</th>
<th>Times difference</th>
<th>Times difference excluding top and bottom 10%</th>
<th>Number over three years</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2 Lumbar spinal decompression</td>
<td>30 to 156</td>
<td>5.2</td>
<td>2.0</td>
<td>44,169</td>
</tr>
<tr>
<td>Hospitalisations, people aged 18 years and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3 Lumbar spinal fusion</td>
<td>10 to 69</td>
<td>6.9</td>
<td>2.5</td>
<td>14,746</td>
</tr>
<tr>
<td>Hospitalisations, people aged 18 years and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

^ Statistical Area 3
<table>
<thead>
<tr>
<th>Data item</th>
<th>Range across local areas^ per 100,000</th>
<th>Times difference</th>
<th>Times difference excluding top and bottom 10%</th>
<th>Number over one year</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Hysterectomy</td>
<td>115 to 763</td>
<td>6.6</td>
<td>2.1</td>
<td>27,586</td>
</tr>
<tr>
<td>Hospitalisations, women aged 15 years and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2 Endometrial ablation</td>
<td>19 to 390</td>
<td>20.5</td>
<td>4.2</td>
<td>28,606</td>
</tr>
<tr>
<td>Hospitalisations, women aged 15 years and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3 Cervical loop excision cervical laser ablation</td>
<td>23 to 408</td>
<td>17.7</td>
<td>2.1</td>
<td>43,920</td>
</tr>
<tr>
<td>Hospitalisations, women aged 15 years and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4 Caesarean section, selected women aged 20–34 years</td>
<td>147 to 438</td>
<td>3.0</td>
<td>1.5</td>
<td>75,018</td>
</tr>
<tr>
<td>3.5 Third- and fourth-degree perineal tears, all vaginal births</td>
<td>6 to 71</td>
<td>11.8</td>
<td>2.9</td>
<td>18,463</td>
</tr>
</tbody>
</table>

^ Statistical Area 3
Hysterectomy hospitalisations 15 years and over

Figure 3.4: Number of hospitalisations for hysterectomy per 100,000 women aged 15 years and over, age standardised, by Statistical Area Level 3 (SA3), 2014–15: Australia map

6.6x as high in the highest rate area compared to the lowest rate area.

Number per 100,000 women

- 407 – 793
- 277 – 406
- 244 – 276
- 238 – 248
- 207 – 237
- 191 – 206
- 256 – 260
- 224 – 226
- 189 – 223
- 155 – 186
- not published

Notes:
Rates are age standardised to the Australian female population in 2001.
Rates are based on the number of hospitalisations in public and private hospitals (numerator) and women in the geographic area (denominator).
Analysis is based on the patient's area of usual residence, not the place of hospitalisation.
For further detail about the methods used, please refer to the Technical Supplement.

Figure 3.5: Number of hospitalisations for hysterectomy per 100,000 women aged 15 years and over, age standardised, by Statistical Area Level 3 (SA3), 2014–15: capital city area maps

Notes:
Rates are age standardised to the Australian female population in 2001.
Rates are based on the number of hospitalisations in public and private hospitals (numerator) and women in the geographic area (denominator).
Analysis is based on the patient's area of usual residence, not the place of hospitalisation.
For further detail about the methods used, please refer to the Technical Supplement.
Hysterectomy hospitalisations 15 years and over

Figure 3.6: Number of hospitalisations for hysterectomy per 100,000 women aged 15 years and over, age standardised, by Statistical Area Level 3 (SA3), state and territory, 2014–15

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>NSW</th>
<th>Vic</th>
<th>Qld</th>
<th>WA</th>
<th>SA</th>
<th>Tas</th>
<th>ACT</th>
<th>NT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest rate</td>
<td>522</td>
<td>763</td>
<td>447</td>
<td>614</td>
<td>451</td>
<td>428</td>
<td>314</td>
<td>427</td>
</tr>
<tr>
<td>Lowest rate</td>
<td>134</td>
<td>119</td>
<td>190</td>
<td>182</td>
<td>203</td>
<td>241</td>
<td>115</td>
<td>209</td>
</tr>
<tr>
<td>No. hospitalisations</td>
<td>8,058</td>
<td>6,750</td>
<td>6,123</td>
<td>3,113</td>
<td>2,228</td>
<td>874</td>
<td>337</td>
<td>211</td>
</tr>
</tbody>
</table>

Notes:
Rates are age-standardised to the Australian female population in 2001.
Rates are based on the number of hospitalisations in public and private hospitals (numerator) and women in the geographic area (denominator).
Analysis is based on the patient's area of usual residence, not the place of hospitalisation.
For further details about the methods used, please refer to the Technical Supplement.

Figure 3.7: Number of hospitalisations for hysterectomy per 100,000 women aged 15 years and over, age standardised, by Statistical Area Level 3 (SA3), remoteness and socioeconomic status, 2014–15

<table>
<thead>
<tr>
<th>Remoteness</th>
<th>Major cities</th>
<th>Inner regional</th>
<th>Outer regional</th>
<th>Remote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socioeconomic status (SES)</td>
<td>Low SES</td>
<td>Low SES</td>
<td>Higher SES</td>
<td>Low SES</td>
</tr>
<tr>
<td>Rate</td>
<td>275</td>
<td>540</td>
<td>574</td>
<td>399</td>
</tr>
</tbody>
</table>

Notes:
Rates are age-standardised to the Australian female population in 2001.
Rates are based on the number of hospitalisations in public and private hospitals (numerator) and women in the geographic area (denominator).
Analysis is based on the patient's area of usual residence, not the place of hospitalisation.
For further details about the methods used, please refer to the Technical Supplement.
Endometrial ablation hospitalisations 15 years and over

Figure 3.11: Number of hospitalisations for endometrial ablation per 100,000 women aged 15 years and over, age standardised, by Statistical Area Level 3 (SA3), 2012–13 to 2014–15: Australia map

20.5x AS HIGH in the highest rate area compared to the lowest rate area.

Number per 100,000 women

- 203 – 380
- 150 – 202
- 126 – 149
- 112 – 127
- 104 – 111
- 94 – 103
- 81 – 93
- 67 – 80
- 49 – 60
- 19 – 47
- not published

Notes:
Rates are age-standardised to the Australian female population in 2001.
Rates are based on the number of hospitalisations in public and private hospitals (numerator) and women in the geographic area (denominator).
Analysis is based on the patient's area of usual residence, not the place of hospitalisation.
For further detail about the methods used, please refer to the Technical Supplement.

Figure 3.12: Number of hospitalisations for endometrial ablation per 100,000 women aged 15 years and over, age standardised, by Statistical Area Level 3 (SA3), 2012–13 to 2014–15: capital city area maps

Notes:
Rates are age-standardised to the Australian female population in 2001.
Rates are based on the number of hospitalisations in public and private hospitals (numerator) and women in the geographic area (denominator).
Analysis is based on the patient's area of usual residence, not the place of hospitalisation.
For further detail about the methods used, please refer to the Technical Supplement.
Endometrial ablation hospitalisations 15 years and over

Figure 3.13: Number of hospitalisations for endometrial ablation per 100,000 women aged 15 years and over, age standardised, by Statistical Area Level 3 (SA3), state and territory, 2012–13 to 2014–15

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>NSW</th>
<th>Vic</th>
<th>Qld</th>
<th>WA</th>
<th>SA</th>
<th>Tas</th>
<th>ACT</th>
<th>NT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest rate</td>
<td>342</td>
<td>271</td>
<td>252</td>
<td>261</td>
<td>264</td>
<td>390</td>
<td>154</td>
<td>110</td>
</tr>
<tr>
<td>Lowest rate</td>
<td>19</td>
<td>22</td>
<td>45</td>
<td>61</td>
<td>51</td>
<td>63</td>
<td>70</td>
<td>47</td>
</tr>
<tr>
<td>No. hospitalisations</td>
<td>7,523</td>
<td>6,540</td>
<td>6,212</td>
<td>4,341</td>
<td>2,457</td>
<td>778</td>
<td>572</td>
<td>177</td>
</tr>
</tbody>
</table>

Notes:
Rates are age standardised to the Australian female population in 2001.
Rates are based on the number of hospitalisations in public and private hospitals (numerator) and women in the geographic area (denominator).
Analysis is based on the patient's area of usual residence, not the place of hospitalisation.
For further detail about the methods used, please refer to the Technical Supplement.

Figure 3.14: Number of hospitalisations for endometrial ablation per 100,000 women aged 15 years and over, age standardised, by Statistical Area Level 3 (SA3), remoteness and socioeconomic status, 2012–13 to 2014–15

Notes:
Rates are age standardised to the Australian female population in 2001.
Rates are based on the number of hospitalisations in public and private hospitals (numerator) and women in the geographic area (denominator).
Analysis is based on the patient’s area of usual residence, not the place of hospitalisation.
For further detail about the methods used, please refer to the Technical Supplement.

Each circle represents a single SA3. The size indicates the number of hospitalisations.