Universal Pharmacare

THE NEW ZEALAND EXPERIENCE
Road map

- Pharmacare in NZ
- What is PHARMAC and how does it operate?
- Some of the consequences
- Possible lessons
Key Features of drug access in NZ

One plan – universal coverage
- Covers all residents, no deductible, low to no co-payments, c. 2,000 community drugs covered

Funded from general tax through a fixed budget
- Minister of Health sets budget (part of Vote: Health), three year envelope

Listing decisions managed by a Crown entity
- Minister appoints Board, Board makes all listing decisions, Minister can direct

High performing management culture
- Budget is binding, opportunity costs matter, analysis counts, processes and communication vital
Affordable

Impact of pharmac on combined pharmaceutical budget expenditure over time (actual 2004 to 2015)

Net drug cost ($ millions): $536, $596, $634, $720, $806, $860, $1,015, $1,127, $1,464, $1,670, $1,847, $1,994

Estimated expenditure at 2004 subsidies
Actual expenditure
Dynamic
Accessible

Co-payment

Threshold

NZ Aus

NZ Aus
Key moments in NZ’s Pharmaceutical Benefits history.

- **Old Age Pensions Act 1898**
  Small pension, heavily means tested, financed from general taxation

- **Social Security Act 1938**
  Three main objectives: to substitute for the existing system of non-contributory pensions a system of monetary benefits to which citizens would contribute according to their means and from which they could draw according to their need; to provide a universal superannuation; and to inaugurate a universal system of medical care benefits
  Act provided for five health benefits:
  - medical
  - pharmaceutical
  - Hospital
  - Maternity
  - Supplementary

- **Drug Tariff administered by Department of Health established in 1959**
  - sets out products covered and reimbursement rules

- **PHARMAC established in 1993 at arms length from Government (Crown Entity)**
PHARMAC’s role and functions

“To secure for eligible people in need of pharmaceuticals the best health outcomes that are reasonably achievable from pharmaceutical treatment and from within the amount of funding provided”

NZ Public Health & Disability Act 2000

- Manage the Community Pharmaceutical Schedule
- Manage the Hospital Formulary
- Help Hospitals manage their spending on devices
- Promote the responsible use of medicines and devices (optimal use)
- Manage access under exceptional circumstances
How?

The approach

- Start with current Schedule of drugs
- Track and forecast expenditure to know “head room” (or, if none, savings needed to remain within budget)
- “Remove” low value for money items (mainly through price)
- Add high value for money items (investment analysis required)

Act like anyone managing a household budget

High clinical involvement throughout the process
How?   Put another way

Know thy substitutability
- Encourage price competition between suppliers of substitutes (to create/expand “head room”)

Know thy “head room”
- Encourage price competition for slice of the head room

Know thy opportunity cost
- Fund those proposals that minimise opportunity cost (within the available “head room”)

Manage exceptions
- Create processes that can meet exceptions and/or recognise patients have names
Injecting price competition

Budget is treated as binding (in law and culturally)
“No” means “no”! (political interference minimised structurally)

- Tendering
- Requests for Proposals
- Reference pricing
- Managed entry
- Negotiation
## Impact of tendering – 2007 cf pre tender

<table>
<thead>
<tr>
<th>Product</th>
<th>Use/disease treated</th>
<th>Price reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baclofen</td>
<td>Muscle relaxant</td>
<td>93.6%</td>
</tr>
<tr>
<td>Fluconazole (200mg)</td>
<td>Fungal infections</td>
<td>93.4%</td>
</tr>
<tr>
<td>Buspirone (10mg)</td>
<td>Anti-anxiety</td>
<td>90.8%</td>
</tr>
<tr>
<td>Fluconazole (50mg)</td>
<td>Fungal infections</td>
<td>90.8%</td>
</tr>
<tr>
<td>Propranolol</td>
<td>Heart disease</td>
<td>88.2%</td>
</tr>
<tr>
<td>Buspirone (5mg)</td>
<td>Anti-anxiety</td>
<td>83.4%</td>
</tr>
<tr>
<td>Selegiline</td>
<td>Parkinsons disease</td>
<td>82.2%</td>
</tr>
<tr>
<td>Doxycycline</td>
<td>Antibiotic</td>
<td>82.0%</td>
</tr>
<tr>
<td>Pindolol</td>
<td>Heart disease</td>
<td>80.9%</td>
</tr>
<tr>
<td>Cetirizine</td>
<td>Allergies</td>
<td>80.8%</td>
</tr>
</tbody>
</table>
Minimising opportunity cost of new investments

What “value” do you want the most of? Quality Adjusted Life Years - QALYs

Evaluate how much extra of this value each drug option provides for each extra unit of resource it uses

\[ ICUR = \frac{\text{Costs(Drug)} - \text{Costs(Comparator)}}{\text{Benefits(Drug)} - \text{Benefits(Comparator)}} \]

Determine the total resources likely to be used if proposal chosen

Rank each proposal from that which provides the most value per unit of resource to that which provides the least

Fund from the top of that list down until your spare resource capacity is exhausted
Minimising opportunity cost – aka operationalising constrained optimisation

<table>
<thead>
<tr>
<th>Drug</th>
<th>Cost/QALY</th>
<th>5 Year Cost</th>
<th>Total QALYs</th>
<th>Lives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$5,000</td>
<td>$20M</td>
<td>4,000</td>
<td>160</td>
</tr>
<tr>
<td>B</td>
<td>$10,000</td>
<td>$50M</td>
<td>5,000</td>
<td>200</td>
</tr>
<tr>
<td>C</td>
<td>$25,000</td>
<td>$30M</td>
<td>1,200</td>
<td>48</td>
</tr>
<tr>
<td>D</td>
<td>$40,000</td>
<td>$50M</td>
<td>1,250</td>
<td>50</td>
</tr>
<tr>
<td>E</td>
<td>$100,000</td>
<td>$30M</td>
<td>300</td>
<td>12</td>
</tr>
<tr>
<td>F</td>
<td>$500,000</td>
<td>$20M</td>
<td>40</td>
<td>1.6</td>
</tr>
</tbody>
</table>

- $100M buys a maximum of 10,200 QALYs or 408 lives saved
- Swapping C with E has opportunity cost of 900 QALYs or 36 lives
Intended consequences

Good or Bad?
IMC 2016 OECD access comparisons

% New Products

% Launched of approved drugs
% Reimbursed of approved drugs
Average % reimbursed of approved drugs

% Launched of approved drugs in Canada
% Reimbursed of approved drugs in Canada

1. Listed in one province/Medicare plan;
2. Covered for 50% of the eligible public drug plan population;
3. Covered for 80% of the eligible public drug plan population.
Prescrire assessment of “break throughs”

<table>
<thead>
<tr>
<th>Year</th>
<th>Prescrire</th>
<th>Pilule d’Or/Golden Pill Award</th>
<th>Honours List</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>(n=364)</td>
<td>(not awarded)</td>
<td>No awards for any new products or new indications</td>
</tr>
<tr>
<td>2012</td>
<td>(n=352)</td>
<td>(not awarded)</td>
<td>No awards for any new products or new indications</td>
</tr>
<tr>
<td>2011</td>
<td>(n=340)</td>
<td>(not awarded)</td>
<td>No awards for any new products or new indications</td>
</tr>
<tr>
<td>2010</td>
<td>(n=328)</td>
<td>(not awarded)</td>
<td>• Gilvec® (imatinib) (inoperable and metastatic gastrointestinal stromal tumours, with more follow-up)</td>
</tr>
<tr>
<td>2009</td>
<td>(n=316)</td>
<td>(not awarded)</td>
<td>No awards for any new products or new indications</td>
</tr>
<tr>
<td>2008</td>
<td>(n=304)</td>
<td>(not awarded)</td>
<td>No awards for any new products or new indications</td>
</tr>
<tr>
<td>2007</td>
<td>(n=292)</td>
<td>CARBAGLU® (carbamidic acid)</td>
<td>• Gilvec® (imatinib) (chronic myeloid leukaemia, a second look)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(a second look)</td>
<td>• Herceptin®(N) (trastuzumab)</td>
</tr>
<tr>
<td>2006</td>
<td>(n=280)</td>
<td>ORFADIN® (nilotinide)</td>
<td>• Egaten® (nicotinolactone)</td>
</tr>
<tr>
<td>2005</td>
<td>(n=269)</td>
<td>(not awarded)</td>
<td>• Varivax® (chickenpox vaccine)</td>
</tr>
<tr>
<td>2004</td>
<td>(n=258)</td>
<td>(not awarded)</td>
<td>• Diacomit® (stripes) • Fuzen® (estudiante) • Morphine Agustant® syrup (oral morphine) (1)</td>
</tr>
<tr>
<td>2003</td>
<td>(n=247)</td>
<td>(not awarded)</td>
<td>• Carbaglu® (carbamidic acid) • IheBex® (hepatitis B immunoglobulin) • MeningFit® (conjugated meningococcal C vaccine)</td>
</tr>
<tr>
<td>2002</td>
<td>(n=236)</td>
<td>(not awarded)</td>
<td>• Replagal® (agalsidase alpha) (2) • Ceprotin® (human protein C) • Stromectol® (NI) (ivermectin)</td>
</tr>
<tr>
<td>2001</td>
<td>(n=225)</td>
<td>(not awarded)</td>
<td>• Esterasim® (CI esterase inhibitor) (1) • Trolovit® (NI) (penicillamine)</td>
</tr>
<tr>
<td>2000</td>
<td>(n=214)</td>
<td>(not awarded)</td>
<td>• Remicade® (influnamid)</td>
</tr>
<tr>
<td>1999</td>
<td>(n=203)</td>
<td>(not awarded)</td>
<td>• Sustiva® (efavirenz) • NonLevo® (levonorgestrel)</td>
</tr>
<tr>
<td>1998</td>
<td>(n=192)</td>
<td>CRIXIVAN® (indinavir)</td>
<td>• Cystagon® (mercaptoamine) • Viagra® (sildenafl)</td>
</tr>
</tbody>
</table>
SES mortality gradients among diabetics in Ontario

Booth, Bishara, Lipscombe, Shah, Feig, Bhattacharyya, Bierman, Diabetes Care August 2012
Lessons learned and applicable (?)

Universality is feasible (and not just for a “core” formulary)

Managing to a fixed budget has advantages compared with managing to a fixed threshold
  ◦ Budget reduces downside fiscal risk to funder, creates competitive tension in the market, heightens need to know opportunity cost, facilitates identification of price at which seller’s are willing to sell

Depoliticising reimbursement decisions is key to affordable universal coverage
  ◦ Can’t manage to budget or create the conditions for effective price competition without it

Single purchaser necessary to encourage effective price competition (within a jurisdiction)
  ◦ Not possible if there is whipsawing, or significant “leakage”

Identifying substitutes and buying the least expensive is where the real money is
  ◦ Bulk purchasing delivers relatively modest savings
Some background reading

http://www.pharmac.health.nz/tools-resources/research/medical-journal-articles/

- Metcalfe, S, et al. (2007) PHARMAC funding of 9-week concurrent trastuzumab (Herceptin) for HER-2 positive early breast cancer. NZMJ.
Matthew Brougham

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