“Starting from scratch”
The South Australian Medicines Evaluation Panel

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Disclosure

Nadine Hillock:
- I have no financial or non-financial conflicts of interest to disclose in relation to this presentation.

Catherine Hill:
- I have no financial or non-financial conflicts of interest to disclose in relation to this presentation.
Overview

‣ Background & establishment of a statewide high cost medicines evaluation panel in Australia

‣ SAMEP process of review includes:
  ‣ Audit of current or prior usage in SA
  ‣ Consideration of decisions from other jurisdictions
  ‣ Cost-effectiveness in the SA context

‣ Challenges:
  ‣ Evidence base
  ‣ Resources & governance for outcome collection
  ‣ Maintaining clinician engagement

‣ Benefits of incorporating local data in decision-making process
South Australia

SA is similar size in land area to Ontario but population size is 8 time smaller

<table>
<thead>
<tr>
<th></th>
<th>Ontario</th>
<th>South Australia</th>
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<tbody>
<tr>
<td>Land area</td>
<td>1,076,000 km²</td>
<td>984,377 km²</td>
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<tr>
<td>Population</td>
<td>12,852,000</td>
<td>1,597,000</td>
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<td>(2011 census)</td>
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South Australia - Demographics

- 7% of total Australian population
- Of the 1,600,000 living in SA, ~77% live in Adelaide:
  - Adelaide  1,225,000
  - Mount Gambier  25,000
- Adelaide has 5 tertiary referral hospitals
- Interesting facts:
  - SA is the driest state on the driest continent!
  - SA produces over half of all Australian wine
### Funding of medicines in Australia

<table>
<thead>
<tr>
<th>Federal funding</th>
<th>State/Territory funding</th>
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<td>Prescription medicines for patients in the community - via the Pharmaceutical Benefits Scheme (PBS)</td>
<td>Prescription medicines for all public hospital inpatients; and Out-patient medicines that are not funded on the PBS</td>
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**Evaluation for funding by Pharmaceutical Benefits Advisory Committee**

**Hospital (or Local Health Network) Drug & Therapeutics Committees or Statewide evaluation / formulary management**
Reasons why medicines may not be on the PBS

- It doesn’t work!
- Not cost-effective (rejected by PBAC)
- New therapies – not yet registered with the TGA
- ‘Off label’ indication
- Used to treat rare conditions
  - low numbers, unable to adequately power clinical trials
- Insufficient evidence of efficacy or safety
- Evidence that efficacy or safety are inferior to current available options
Background – before SAMEP

- Localised (hospital-level) decisions on funding of individual requests for high cost medicines
- Decision-making pressure on members of hospital drug committees
- Lack of equity between hospitals within the state
- No routine method of sharing decisions between hospitals

"That’s unanimous then - we don’t know what to do."
Establishment of SAMEP

- Established in 2011 under state policy
- Centralised (statewide) method of evaluation
- Statewide formulary for high cost medicines

What is a high cost medicine?
- ≥$10,000 per patient per treatment course or per year; or
- ≥$100,000 for an individual hospital per year; or
- ≥$300,000 within the SA public health system per year.

(Exemptions: clinical trials, compassionate use, PBS-funded medicines, low cost/high volume drugs)

References
Purpose of SAMEP

- To promote equity of access to high cost medicines for patients in South Australian public hospitals by evaluating them for efficacy, safety and cost-effectiveness and making statewide recommendations for use
- To increase the efficiency of funding of high cost medicines
- To reduce decision-making pressure on individual drug committees
Who are SAMEP?

- First statewide high cost medicine panel in Australia established under State government policy
  - Decisions once endorsed by SA Health are mandatory

- Membership
  - Chair
  - Executive officer
  - 8 senior clinicians with an interest in medicine use (including clinical pharmacology, oncology, haematology, paediatrics, rheumatology)
  - 3 clinical pharmacists
  - 2 health economists
  - 2 consumer representatives
  - 1 medical ethicist
Scope of SAMEP

Medicines within scope for SAMEP review:
- High cost
- Not funded on the PBS

Typically:
- New & emerging drugs, often off-label
- Small patient populations (e.g. refractory disease)
- Often limited or weak evidence base
- Treated in the tertiary setting
Process of high cost medicine review

- Can be initiated by SAMEP but usually review is in response to a formulary application from a clinician
- Review application, literature review, evaluations by other jurisdictions (e.g. PBAC, CADTH, NICE, SMC)
- Review local outcome data (if available)
- Meet with applicant(s), seek opinion from clinical networks/senior clinicians
- Consult interstate
- Review of application at SAMEP meeting
- Recommendation to the South Australian Medical Advisory Committee (SAMAC)
SAMEP is an advisory panel → formulary recommendations to South Australian Medicines Advisory Committee (SAMAC) and then to Portfolio Executive (senior executives) for funding approval.
Process of review - using outcome data to assist decision-making

- Outcome data particularly useful when:
  - Limited evidence base
  - Refractory disease – no alternative options
  - Off-label / unregistered indication

- Audit of prior local usage can assist formulary decision making:
  - Clinical outcomes
  - Direct costs
  - Indirect costs
  - Outcomes for patients treated with comparator/no treatment

"Take them until further testing shows they really aren't effective."
Using outcome data to assist decision making: Plerixafor example

- Formulary application received in May 2012
- Used to mobilise haemopoietic stems cells to peripheral blood – for collection and subsequent autologous transplantation
- High Cost: AUS$6,991 per vial ($20,973 for 3 vials)
- Previously rejected by the PBAC for funding on the PBS for lymphoma & multiple myeloma patients
- September 2012 → CADTH recommended not listing plerixafor due to uncertainty regarding the most appropriate patient population
Using outcome data to assist decision making: Plerixafor example cont.

- Locally in SA, 23 patients had received plerixafor.
- Expert opinion → some patients would not have mobilised sufficient cells without plerixafor, **BUT**
  - Which patients obtained most benefit?
  - **In which patients would it be cost-effective?**
- Review of local data → 3 groups
  - Patients who would likely mobilise cells without plerixafor.
  - Patients who mobilised some cells but not quite enough on first large volume apheresis collection prior to plerixafor.
  - Patients who failed to mobilise enough cells despite receiving plerixafor.
Using outcome data to assist decision making: Plerixafor example

- Local data assisted in identifying patient group where benefit could be maximised.
- Led to development of a revised clinical pathway
  - Listed on formulary for a narrower population group (based on peripheral blood CD34+ cell count), maximum of 2 vials / patient
- Post-hoc analysis of pre-marketing trial data was subsequently published
- Positive recommendation for funding on the PBS after resubmission to PBAC in Nov 2013
Benefits of collecting statewide utilisation data for high cost medicines

- Ability to identify inequity issues early
- Sharing information: Hospital drug committees know what decisions have been made at other hospitals
- Able to identify when an emerging therapy is becoming ‘routine’ clinical use
- Monitor ‘off-label’ usage
- Assisted in a prospective data collection study of off-label usage of rituximab in Australia
  - Of-label usage data supplied voluntarily from clinicians
  - SA was used as the baseline to estimate the proportion of voluntary data capture

Infliximab to treat steroid-refractory ipilimumab-induced colitis

- Ipilimumab - to treat malignant melanoma
  - Funded on the PBS in Australia from August 2013
  - Immune-related colitis known potential adverse effect from clinical trials
  - No evidence-based guidelines to treat steroid refractory colitis due to ipilimumab

- After PBS-listing of ipilimumab, increased requests to DTCs for infliximab to treat steroid-refractory cases of ipilimumab-induced colitis – very weak evidence
Infliximab to treat steroid-refractory ipilimumab-induced colitis

- SAMEP retrospectively reviewed clinical outcomes of patients who had been treated with infliximab for ipilimumab-induced colitis:
  - Largest case series (13 patients)
  - Variable outcomes, possibly due to timing of administration from onset of colitis

- SAMEP review:
  - Highlighted need for early gastro consult
  - Better collaboration between oncology & gastro specialties
  - Improved patient outcomes
  - Marked reduction in steroid-refractory cases
Challenges of setting up a statewide High Cost Medicines formulary

- Pharmaceutical companies
  - Access programs, Cost-sharing schemes
- Clinicians
  - Engaging (time poor) clinicians to provide outcome data (currently no incentive, no governance)
  - Gaining consensus across the state
- Statewide perspective for cost-effectiveness analysis
  - Some high cost medicines not cost-effective from the perspective of the State government (funder of hospital services) but are potentially cost-effective from a societal perspective (Federal government), or vice versa.
Challenges: Defining eligibility criteria for rare diseases

- Example: Rituximab for ANCA-associated vasculitis
- Disease of heterogenous presentation – many different pathological presentations
- Formulary request was for rituximab in ‘severe, refractory’ cases → difficult to define (both for eligibility & to measure clinically important outcomes)
- SAMEP worked with clinicians to define “severe disease”
Rituximab for ANCA-associated vasculitis

- Formulary listed:
  - Eligibility checklist developed
  - Clinicians have to specify definition of severe disease:

  - Generalised or severe disease, defined as including a minimum of one of the following: (please tick as applicable)
    - Acute severe glomerulonephritis with progressive renal failure
    - Risk to sight including scleritis/episcleritis, sudden visual loss, uveitis, retinal changes (vasculitis/thrombosis/exudates/haemorrhage)
    - Bronchial/subglottic obstruction
    - Pulmonary haemorrhage
    - Parenchymal lung disease
    - Sensorineural hearing loss
    - Recurrent sinonasal disease requiring recurrent surgical interventions
    - Meningitis, organic confusion, seizures, stroke, cord lesion, cranial nerve palsy, sensory peripheral neuropathy, motor mononeuritis multiplex

- PBS listed on 1st January 2016 (two years after listed on SA formulary)
  - PBS listing utilised the SAMEP definitions for ‘severe disease’
Increasing equity across the state

Example

- Botulinum toxin type A (Botox) - reviewed early 2012 for focal spasticity
- Marked inequity of access across the state noted before SAMEP review
- Little change in overall expenditure, but equity across the state appears to have improved:

![Annual Botulinum toxin type A dispensings for non-PBS funded public hospital rehabilitation services](chart.png)
Where to now?

"A journey of a thousand miles begins with a single step." - Confucius
Opportunities

- Statewide evaluation process for high cost medicines now established in SA
- Western Australia – adopting similar process to SA
- Opportunity to share resources: Share evaluations / formulary decisions with other states, & vice versa

- Opportunity exists for more detailed review of clinical outcomes:
  - Providing feedback to clinicians assists in maintaining engagement with the process
  - Validate decision making
  - Assist national evaluation processes
Conclusions

- There are both opportunities and challenges with state-based evaluation as opposed to decision-making by individual hospitals
- Main benefits for the South Australian population:
  - Increased equity of access to high cost medicines
  - Earlier access to some high cost medicines
  - Reduced decision-making pressure at hospital level
- Local outcome data useful to assist decision making at a state level, & also to inform federal decisions
- Limited resources for collecting outcomes. Utilisation of hospital pharmacists has been invaluable
- Maintaining communication, ensuring transparency of decision making & engaging clinicians in the process has helped ensure acceptance of formulary decisions
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For further information: