You can keep some of the people happy all of the time….

KPIs

Stephen McDonald
• In 2009 the DNT committee a group (led by Kym Bannister) to develop key performance indicators in dialysis
  – Bannister, Hawley, Ferrari, McDonald, Chadban, Polkinghorne, Walker, Torpey
  – Initial meeting 11/11/09
• Outcome was the expansion of the “real-time” system of ANZDATA to report on 2 specific KPIs in the first instance
  – From 1/2011
  – Reported at 2013 DNT
Proportion of new HD patients by centre, from completed 2013 survey data
How to measure quality in practice?

No single answer
Probes in the pudding

- Safety systems
- Patient satisfaction
- Registry performance
- KPI program
Dialysis KPI reports

- Now produced since 1/2011
- Produced on a quarterly basis
  - Based on real-time data
  - AVF / AVG / CVC rates for new HD patients
  - Peritonitis rates for prevalent PD patients
Circulation

- Reports produced as pdf files
- Circulated to heads of units
  - Initially via email
    - Now at https://secure.anzdata.org.au
  - Not publicly available currently
    - Although (hopefully) freely available within units
<table>
<thead>
<tr>
<th>Centre</th>
<th>New III Pts</th>
<th>AVF or AVG</th>
<th>AVF or AVG Excluding Early Reference</th>
<th>Early Reference</th>
<th>Rate (95% CI)</th>
<th>PM per Episode (95% CI)</th>
<th>2013 Total Episodes</th>
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<tbody>
<tr>
<td>Alfred Hospital</td>
<td>100</td>
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</table>

This table presents the number of patients beginning haemodialysis and the percentage starting with an AVF or AVG during the observation window by Centre. The total of Early Reference patients more than 3 months before first treatment and the percentage of Early Reference patients with AVF or AVG are also presented.
What has been the effect?

Access at first Rx

Peritonitis

Number of Episodes per Patient Year and Patient Months per Episode 2004 – 2013

- AVF
- AVG
- Tunnelled CVC
- Nontunnelled CVC
Realtime activity notification

Proportion of realtime events notified by end of following month

Proportion of realtime events notified by end of quarter

Proportion of realtime events notified by 31 Jan

Notification of key events in real time is improving, but still <100%
Problems – haemodialysis KPI

<table>
<thead>
<tr>
<th>Centre</th>
<th>New HD Patients</th>
<th>AVF or AVG</th>
<th>Vascular Catheter</th>
<th>Missing Access Data</th>
<th>Quarterly Average of New HD Pts 2013</th>
<th>AVF or AVG% (95 % CI)</th>
<th>Early Referrals</th>
<th>% of Early Referrals with AVF or AVG</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUS (All Centres)</td>
<td>322</td>
<td>148</td>
<td>161</td>
<td>13</td>
<td>442</td>
<td>48 (42-54)</td>
<td>240</td>
<td>57 (51-63)</td>
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</tbody>
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<th>% of Early Referrals with AVF or AVG</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUS (All Centres)</td>
<td>1552</td>
<td>624</td>
<td>843</td>
<td>85</td>
<td>1844</td>
<td>43 (40-45)</td>
<td>1114</td>
<td>52 (49-55)</td>
</tr>
</tbody>
</table>

- Proportion of new patients notified is high
  - Missing data proportion low
  - Likely unbiased estimate
Proportion of peritonitis episodes reported by the end of the quarter (compared with the final results from the end-year survey. Australia only.)
More problems with peritonitis

- Peritonitis rate calculations require a denominator
- But
  - Changes in treatment modality are also under-reported
- Net effect is likely biased estimates (from numerator and denominator)
  - Under-estimate by ?
  - Variable between hospitals
Issues

• Reporting reporting reporting
  – Impact of under-reporting differs by KPI
  – Where are the blocks
• Production and distribution of reports
• Review, discussion and interpretation of reports
  – Currently occurs at local level
  – Little / no national discussion of outcomes
The Questions

• How to we improve reporting?
• Do we need to revise the existing ANZDATA KPIs?
  – If so, who should do it?
• Should there be more KPIs now?
  – If so, who should design them?
  • Possibilities (depending on data reporting)
    – % of RRT starts on PD, preemptive tx
    – Access KPI calculated as \( \frac{(AVF+AVG+PD)}{All\ new\ dialysis} \)
    – Proportion of PD at 90 days that started with PD
• What about transplantation?
More questions

- What structures / framework are needed to provide ongoing input / leadership in the KPI area?
  - Carrots? Sticks?
- Current indicators cover important process measures
  - But many important determinants of outcomes are not covered
- What about transplantation?