Figure 1: Cost per National Weighted Activity Unit (NWAU) for acute admitted patients, major metropolitan public hospitals, 2011–12 to 2013–14

<table>
<thead>
<tr>
<th>Year</th>
<th>Per average expenditure per hospital (AUD)</th>
<th>Per average NWAU per hospital</th>
<th>Per average Cost per NWAU</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011–12</td>
<td>$214,775,000</td>
<td>48,682</td>
<td>$4,380</td>
</tr>
<tr>
<td>2012–13</td>
<td>$222,325,000</td>
<td>50,917</td>
<td>$4,320</td>
</tr>
<tr>
<td>2013–14</td>
<td>$228,444,000</td>
<td>51,636</td>
<td>$4,410</td>
</tr>
</tbody>
</table>

Each dot represents a hospital and the size represents the units of activity for each hospital.
Why address Clinical Variation?

Presentation to ACI Stroke Forum – 28 April 2016

Professor Brian McCaughan | Board Chair, Agency for Clinical Innovation and Co-Chair, ACI Reducing Unwarranted Clinical Variation Taskforce
Variation

- is everywhere

- occurs across all disciplines/practices

- is multi-dimensional and elements (for example clinical practice, cost, LoS) are often inter-related.

- arises for a range of valid reasons including complexity of a patient’s illness and burden of illness in different populations (e.g. rural, Indigenous, older populations)

- the presence of variation does NOT mean that the variation is Unwarranted
Unwarranted Clinical Variation (UCV)

“variation that cannot be explained by the condition or the preference of the patient; it is variation that can only be explained by differences in health system performance (ACSQSH)”

- can reduce safety, quality, performance effectiveness and efficiency outcomes
- Busy space…with multiple players…
Challenges

- “The challenge is identifying which variation is unwarranted. In some instances, regardless of variation, overall rates of use may be a concern.” (Atlas)

- Multiple sources identify variation, few determine whether the variation is unwarranted, even fewer have successful strategies to address.

- Lack of linked MBS, PBS and primary care data.

- Health system is complex – no one size fits all approach to determining nature of variation.
ACI Reducing UCV Taskforce

- Formal Terms of Reference
- Co-Chaired by Professors Brian McCaughan and Jacque Close
- Senior clinicians from a number of disciplines (Orthopaedics, Respiratory, General Medicine, Rheumatology, Colorectal, Ophthalmology, Anaesthetics, Geriatrics etc)
- Surgical Services Taskforce representative
- Nursing & Allied Health
- 2 LHD Chief Executives
- Consumer Representative (Peak Body)
- Deputy Secretaries
- Analysts & ABF Taskforce
- Pillars (CEC, BHI and former Kids and Families)
ACI Reducing UCV Taskforce - Projects

Around 15 active current and past projects being overseen by the RUCV Taskforce:

- **Mortality**: Stroke, Hip Fracture, Low volume cancer surgeries (oesphagectomies and pancreatectomies)
- **LOS & Cost**: Prostate surgery, Childbirth, Selected surgical groups areas (Lap Chole, Appendicetomy, Hysterectomy)
- **Scoping & commencing work**: “Appropriateness”, “Low value care”, Clinician identified areas (eg Colorectal Surgery, Opioid Use, Antimicrobial dispensing, Knee arthroscopy)
- **Interventions for chronic/disease**: (COPD, Heart Failure, Diabetic Foot, Stroke, Pneumonia)
Example - Hysterectomy

Chart 11-6
Hysterectomy rates for women aged 35 to 69 years
Hysterectomy rate per 100,000 women aged 35-69 years by local health district of usual residence, 2005-2009

Source: NSW Admitted Patient Data Collection and ABS population estimates (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Notes: Rates were standardised by using Australian Population as 30 June 2001
**Example - Hysterectomy**

**Range of Sources:** NHPA, Atlas, Grattan, CEC, AMB Portal

**Range of Variables:** Rate of intervention, type of intervention, Los, Cost

**NB:** ACI working with clinicians presenting consolidated analysis of variation to May Taskforce Meeting
Example: Hip Fracture

Variation in ALOS, Cost & Mortality for hip replacement – 3 different sources – NHPA & Grattan Institute and BHI
Example: Hip Fracture Response

Early (Formative) Evaluation of Implementation in 6 sites (3 early and 3 late adopters of the standards) found:

- 18.6% reduction in risk of death if surgery is in 48 hours of admission
- Mean LOS for the main episode for the episode during which surgery was undertaken:
  - NSW: 11.6 days
  - Study hospitals: 10.9 days ranging between 8.1 and 13.4 days
- Strong clinical support
- Positive staff experience
- Increase in the numbers of patients receiving surgery in 48 hours
- Showed need to do further work around nutrition and pain management

Comprehensive (Summative) Evaluation Planned once most of 37 sites implemented
After the ACI pilot audits the BHI analysis was modified to measure outcomes by hospital of first presentation for this hospital identified analysis. Variation is measured against an arithmetic mean. Smaller hospitals were excluded due to small numbers and wide confidence limits.

The identified BHI 30 day mortality data on 5 conditions was released 6-8 months earlier than expected and before planned meetings with hospital managers and clinicians.
Stroke – Time to Act (RUCV Taskforce)

- Evidence is strong & no more audits needed

- Time to act – response is clear:
  - Adherence with bed-side processes known to improve patient outcomes and experience
  - Assessment of swallowing
  - Access to desired investigations
  - Use of a stroke clinical pathway
  - Access to stroke unit beds
  - Access to a multidisciplinary team
  - Evidence-based prescribing
  - Prevention and timely treatment of stroke complications

- Comprehensive evaluation planned by ACI – not just mortality but include patient/carer and staff experience, cost and impact on utilisation
Why does variation exist?

- Unwarranted Variation is NOT OK….
  - Conspiracy theory
  - Random theory
  - Sickest theory
  - Money theory
  - Better theory
Why address UCV

- Positive outcomes can be achieved if clinicians “own” the data and drive changes
- Data also need to be understood by the broader system including LHD managers
- Important to examine what is working well – not all variation is unwarranted
- Committed to improving patient experience, improving health and ensuring services are delivered in an efficient and effective way
- Understand that populations are variable and cultural and geographical specific issues need to be taken into account
Approaches and Lessons

- Engage early with clinicians about methodology, keep clinicians involved
- Encourage analyses by different “groups” and at different levels (eg system, clinical group, LHD, hospital)
- Provide “non-judgemental” data to sites/clinicians for validation and comment as early as possible
- Use Analytics but recognise limitations of administrative datasets
- Ongoing system reporting and benchmarking & provide sites with data, a way to monitor & tools
- Model of care/Standards – systems wide eg Hip/Stroke
- For big projects undertake a formative evaluation so that changes to approach can be made from early “lessons”
- Evaluate and measure outcomes…….