"It’s time to remember NOCC is also about casemix: Australian casemix development in mental health"

Philip Burgess, Analysis & Reporting

AMHOC: 19 November 2010
A definition of casemix

A summary way of describing the mix of cases

The classification of patient episodes based on those patient attributes that best explain the cost of care
## Casemix Myths -1

<table>
<thead>
<tr>
<th><strong>Assertion</strong></th>
<th><strong>The facts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>casemix = DRGs</td>
<td>there are over 100 casemix classifications</td>
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<tr>
<td>casemix is a payment system</td>
<td>casemix is a tool that can be used for payment</td>
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<td>casemix is a method of cutting costs</td>
<td>governments and managers don’t need information in order to cut costs - but they do need information to cut costs in sensible ways</td>
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Mental Health Outcomes in Australia: The future of information development in practice
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<td>casemix is a method of reducing quality</td>
<td>casemix is neutral, but can help in measuring quality &amp; looking at the relationship between quality &amp; cost</td>
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On understanding variation

Variation is a fact of life in the health system

We need measurement tools which help us to understand this variation
Types of variation

Variation due to differences in the ways that health services treat patients

Variation due to differences in the kinds of patients treated
Casemix and Variation

- We need to control for one type of variation in order to understand the other.
- Casemix classifications help to control for variations between patients.
- By controlling for variations between patients, we produce information which helps us to understand the differences between providers.
Casemix Classification Criteria

1. iso-resource - patients in the same class ‘cost’ about the same amount to treat;

2. clinically sensible;

3. the right number of classes
MH-CASC findings

- There is an underlying episode classification, not just in inpatient care but also community;
- Modest but acceptable levels of variation explained;
- The costs being driven by ‘casemix’ are often confounded by the costs driven by provider variations.
MH-CASC findings

- The variables driving costs in inpatient settings are also driving costs in the community but:
  - the patterns of care are different …. so …. 
  - the importance of the variables differs across the two settings (e.g., focus of care)
MH-CASC based on:

DIAGNOSIS

SEVERITY, using the HoNOS scales as the main measure

LEVEL OF FUNCTIONING, measured through an amended Life Skills Profile (adults) or child/adolescent specific measures; and

Other CLINICAL AND SOCIO-DEMOGRAPHIC characteristics e.g., age
Summary view of MH-CASC

All cases 42 classes

Inpatient episodes 23 classes

Completed episodes

Ongoing episodes

Children & Adolescents

Children & Adolescents

Adults

Community episodes 19 classes

Adult

12 classes split on Age, Legal Status, Diagnosis and HoNOS item (Aggression/Disruptive behaviour), RUG-ADL

3 classes split on Diagnosis and HoNOSCA item (Disruptive/Aggressive Behaviour)

8 classes split on Age, Diagnosis, Legal Status, HoNOS Total and RUG-ADL

9 classes split on Age, HoNOSCA Total, HoNOS item (School Problems), CGAS, and Psychosocial factors

10 classes split on Focus of Care, Legal Status, HoNOS Total and LSP total
Adult acute inpatient episodes

All cases

- Age < 65 yrs
  - Other Diagnoses
  - Diagnosis = Schizophrenia, Mood or Eating Disorders
    - Voluntary
      - 2 classes split on severity HoNOS
    - Involuntary
      - 2 classes split on severity HoNOS

- Age 65-85 yrs
  - 2 classes split on Dependency RUG-ADL

- Age > 85 yrs
The Vision

- The routine use of outcome measures (consumer and clinician rated) where such measures contribute both to improved practice and service management.

- An informed mental health sector in which benchmarking is the norm, to be used in a quality improvement cycle.
The Vision

- The informed use of casemix to understand the variation in costs and outcomes.

- A health services research culture that contributes knowledge and evidence to inform best clinical practice.
Mental Health
Information Development

National Outcomes and Casemix Collection

Technical specification of State and Territory reporting requirements for the outcomes and casemix components of ‘Agreed Data’ under National Mental Health Information Development Funding Agreements

Version 1.0
Final pre-publication version

Prepared by Technical Drafting Group
National Mental Health Information Strategy Committee,
AHMAC Mental Health Working Group,
June 2002

Mental Health Outcomes in Australia: The future of information development in practice
NATIONAL HEALTH AND HOSPITALS NETWORK AGREEMENT

An agreement between

- the Commonwealth of Australia and
- the States and Territories, being:
  - the State of New South Wales;
  - the State of Victoria;
  - the State of Queensland;
  - the State of South Australia;
  - the State of Tasmania;
  - the Australian Capital Territory; and
  - the Northern Territory of Australia.
Activity Based Funding!

States responsible for system-wide public hospital service planning and policy and capital works

Based on this planning, States enter into a Local Hospital Network (LHNs) Service Agreement with each LCN that specifies services to be provided

LHN reports to State (and through to C'wealth) on activity and performance

State and Commonwealth transfer funding for these services to the National Health and Hospital Network Funding Authority in each State

LHN receives C'wealth and State funds from National Health and Hospital Network Funding Authority

Quarterly financial adjustments for variations in volumes as per Service Agreement

Commonwealth contribution based on 'efficient price' as determined by Independent Hospital Pricing Authority

State contribution determined by each State

Mental Health Outcomes in Australia: The future of information development in practice
Progress to date ....

- Volume
- Compliance
- Completion
AUS: Figure 2.3.1.C: Adults - Ambulatory - Admission

HoNOS, AUS

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<thead>
<tr>
<th>Year</th>
<th>Percentage Completed</th>
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<tr>
<td>0506</td>
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<td>91</td>
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<td>0708</td>
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CSR, AUS

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Graphs by NOCC Clinical Measure and Jurisdiction - Data Extract - 4 March 2010
Figure 2.3.1.1.C: Adults - Ambulatory - Admission - HoNOS

Graphs by Jurisdiction - Data Extract - 12 April 2010
AUS: Figure 2.3.3.C: Adults - Ambulatory - Discharge

Graphs by NOCC Clinical Measure and Jurisdiction - Data Extract - 4 March 2010
Figure 2.3.3.1.C: Adults - Ambulatory - Discharge - HoNOS

Graphs by Jurisdiction - Data Extract - 12 April 2010
Figure 2.3.3.2.C: Adults - Ambulatory - Discharge - LSP-16

Percentage Completed

Graphs by Jurisdiction - Data Extract - 12 April 2010
Figure 2.3.3.4.C: Adults - Ambulatory - Discharge - Diagnosis

Graphs by Jurisdiction - Data Extract - 12 April 2010
Progress to date …

- Most of our efforts have been about bedding down routine outcome measurement, workforce training & information infrastructure;
- Major obstacle has been linking the NOCC (who gets) with the NMDS for Admitted Patient and Community Mental Health Care;
  - Some progress with NOCC 1.6 aligning the patient identifiers but:
    - 90% of cases in NOCC account for 67% of CMHC data
Matching of 2008-2009 CMHC & NOCC

CMHC: 65.2%
Matched: 30.8%
NOCC: 4.0%
John Venn, MA FRS

Fellow and Lecturer in Moral Science, Cambridge
Critical appraisal & peer review

- “No one, not even John Venn's best friend would argue that his underlying idea is very deep”.
- “Venn's innovation, however, took immeasurably less brainpower than, for instance, Archimedes' determination of spherical surface”.
- “The latter required extraordinary insight”.
- “The former might just as well have been discovered by a child with a crayon”.

Professor William Dunham (1999), *The Mathematical Universe*
Challenges Ahead

- Does one size fits all? Some argue strongly that AR-DRGs the way to go;

- AR-DRGs simple to administer; specialist classifications like MH-CASC more complicated
Some indicative comparisons:
% RIV Completed Inpatient Episodes

- 1997 – AR-DRGs (V3) – costs 11.3% (8 classes);
- 1997 – MH-CASC – costs 17.3% (9 classes);
- 2009 – AR-DRGs (V6) – LOS 15.1% (9 classes);
- 2009 – MH-CASC – LOS 22.7%
But, for example …

- There is a single DRG for Childhood Disorders – age is not relevant – and other DRG classes are ‘available’ (so 9 classes);
- MH-CASC has 3 classes for Child & Adolescents, and includes age, diagnosis and the single HoNOSCA scale, Aggressive Disruptive Behaviours;
- AR-DRG for Kids – 8.7% (LOS)
- MH-CASC - 3.2%
  - Potentially artefact of more DRG classes
Challenges Ahead

- AR-DRGs are designed for acute inpatient care – much of the work in mental health occurs in ambulatory settings;
- Key issues:
  - How to deal with ‘missing’ data: no diagnosis, no classification (and worse – no payment!);
    - About 15% of completed inpatient episodes have no principal diagnosis
  - Classification development work very expensive and time consuming – years rather than months
Challenges ahead

- Making sure we define to ‘product’ of mental health care right:
  - Person or Period of Care or Episode of Care?

- Have we got our measures right – NOCC is based on work done 15 years ago?
  - But new measures will cost!

- May be too ambitious?
Challenges ahead

- How do we make sure the classification work proceeds balancing time constraints, funding imperatives while not compromising the goal of understanding variation?

- Perverse incentives – gaming etc – more likely to yield ‘phoney’ classifications
Challenges ahead

- Mental health will need to demonstrate that alternative, mental health specific casemix tools justify the additional costs of collection:
  - Quality improvement;
  - Benchmarking; and
  - Demonstrating better outcomes through using these tools
Cut down in his prime, aged 88 years ....

Sigh – you really would have hoped for more ...
But fondly remembered by his students & colleagues

The stained glass in Caius Hall at Cambridge University commemorating the life, the passion & the vision of John Venn