Patient Costing & Clinical Engagement

*It Starts With Coding*

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Topics to be covered

- Health Spending Overview
- Patient Costing Process
- Clinical Coding
- Patient Costing Study
- Q&A
DTF 2010 Intergenerational Report

- 2009/10 Health Expenditure $121.4b, of which Public Hospitals account for $36b
  Australian Institute of Health & Welfare: Health Expenditure Australia 2009/10

- Health absorbing a higher proportion of Government and personal budgets

- GDP Consumption
  8.2% in 2007/08 vs 3.8% in 1960/61

- Government real spending increased from 1.9% to 6%, more than tripled in 37 years
Historical Health Spending

Per cent of GDP

- Australian government
- State and Territory governments
- Non-government

Historical data from 1960-61 to 2005-06.
Projected Health Spending

- Commonwealth health spending (GDP) projected to increase from 4% in 2009/10 to 7.1% in 2049/50

- Private health insurance rebate is the fastest growing component, projected to increase by 50% in the next decade

- Would explain why Labor Government are changing the eligibility rules!
Projected Health Spending

Projected health spending as a percentage of GDP from 2009-10 to 2049-50. The graph shows a steady increase over time, with different categories of spending, such as Total health, Hospitals, MBS, PBS, PHI, and Other, contributing to the overall trend.
Reasons for Projected Increase

- Australians are living longer
- Higher proportion of older age people, who are more regular health service users
- IGR projects real spend for age >65 years, will increase seven-fold by 2049/50
- Expectation of increasing service quality
- Funding of new expensive technologies.
Implications of Projected Increase

- Rapidly **increasing demand** for quality health services
- **Limited funding** available / pressure on Government and personal budgets
- Challenge for health providers to provide **more cost efficient** services, ie to get more value for health $ spent.
Patient Costing

- Key accountability tool to monitor and manage health service costs
- Activity is classified into groups with similar levels of resource utilisation (costs) and similar clinical features
- Casemix Classification systems have been developed for the following types of patient care, ie DRGs for Acute Inpatients, URGs for Emergency Services, etc
Patient Costing Process

Patient Costing distributes general ledger costs back to patient encounters

3 main stages to Costing Process:

1. Data Load
2. General Ledger Setup – Reorganisation
3. Costing Dataset – Allocation of GL costs to patient encounters
Patient Costing (PPM2)

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Patient Costing & Clinical Engagement — It Starts With Coding
To complete patient costing, data is required from numerous health unit source systems.

Includes coding data (DRG, Procedure & Diagnosis codes) for each patient encounter, which are a standard classification for both costing & reporting.
Data Load

Source Systems

- PMI
- Inpatients
- Outpatients
- ICU
- Imaging
- Pathology
- Finance

Load

PPM Database
Costing Dataset

The Costing Dataset stage may utilise coding data for 2 of the processes:

- **Building Service Codes** to attach services to patient encounters, using procedure codes
- **Allocating costs**, using DRG service (cost) weights
Costing Dataset Process

1. Build Service Codes
   - Activity Database
   - Costing Dataset
   - Built Service Codes
     - AAU-T1
     - Allied-9555000-4451
     - OBD-IVF-00111-9440
     - DRUGS-S334
     - PreAdmission
     - Recovery
     - OTS-44821-4449DS

2. Map Service Codes to Areas
   - Patient Care Area Services
     - Acute Assessment Unit
     - Allied Health
     - Day Patient Ward
     - Operating Theatre
     - Recovery/Anaesthesia
     - Critical Care Unit
     - Pharmacy Contract

3. Allocate Costs
   - Patient Care Area Services
   + Patient Care Area $
Procedure codes are typically used to build services to enable costs to be allocated for areas such as Allied Health & Prosthesis.
Each DRG code can have a service weight for each DRG cost bucket, indicating the relative rate of its resource consumption. For example, the Latest Round 14 National Hospital Cost Data Collection is available at the following URL:


<table>
<thead>
<tr>
<th>DRG Version</th>
<th>DRG Code</th>
<th>Operating Th...</th>
<th>Recovery/Ane...</th>
<th>Angio...</th>
<th>Pharm...</th>
<th>Endoscopy...</th>
<th>Nursing cost...</th>
<th>Allied health...</th>
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Cost Allocation

- Relative Value Units (RVU) are used to allocate costs, where the RVU = volume x weight

- **For example**
  Allied Health (AH) costs allocated to those encounters identified with an AH procedure code & applying AH DRG service weight

<table>
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<tr>
<th>Roleup</th>
<th>Direct/Indirect</th>
<th>Fixed/Variable</th>
<th>Cost Output</th>
<th>Volume</th>
<th>Weight</th>
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<tr>
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<td>Quantity</td>
<td>DRG: Allied health per day</td>
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<td>Quantity</td>
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<tr>
<td>Salaries &amp; Wages</td>
<td>I</td>
<td>V</td>
<td>Medical SW</td>
<td>Quantity</td>
<td>DRG: Critical care per day</td>
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<td>Salaries &amp; Wages</td>
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<td>V</td>
<td>Medical SW</td>
<td>Quantity</td>
<td>DRG: Critical care per sep</td>
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Costing Results

Once costs are allocated, can report for both internal health unit & external users (State & Commonwealth Health Depts)

<table>
<thead>
<tr>
<th>Hospital &gt; Encounter Type &gt; DRG</th>
<th>Cases</th>
<th>Total Days</th>
<th>ALOS</th>
<th>Average Direct Cost</th>
<th>Average Indirect Cost</th>
<th>Average Cost</th>
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</table>
Not only does Clinical Coding play a role in determining cost weights, they are usually used to distribute funding on an activity basis.

ABF reforms will put more emphasis on patient costing as basis for future funding.

- **Medical Record Documentation**: Clinicians document diagnoses and procedures in the medical record.
- **ICD**: Documentation translated into alphanumeric ICD-10-AM codes.
- **Clinical Coding**: Codes/Age/Discharge status used to assign AR-DRGs. Computer software used (Encoder).
- **DRG Assignment**: Assigned to each AR-DRG. Average value of treating a patient.
- **Cost Weights**: Cost weights used in NSW ABF Model to distribute funds to each LHD.
- **Funding**:
Importance of Clinical Coding

- Given the role of clinical coding to the costing & funding process of health units, quality coding is crucial.
- Clinical coding staff should be educated so that they are aware of the importance of their role.
- It follows that good clinical documentation and a working relationship with clinicians is important.
Case Study  South Australian Teaching Hospital

- Quantified operating deficit, comparing patient costing to Casemix funding
- Benchmarked hospital cost structures
- Identified strategies to increase efficiency & financial sustainability
- Target audience was hospital executive, clinical directors and SA Health.
Educating & Engaging Clinicians

- Critical to educate senior clinicians on basics of patient costing process & to be available when further clarification required

- How patient costing contributes to determining cost weights, which are used for future funding

- Incentive to get right & to understand service delivery costs vs funding

- Praise good performance, as well as outlining areas for improvement when presenting results.
Benchmarked hospital inpatient activity using state and national costing studies

Compared LOS, Casemix revenue, all cost buckets and reimbursement rates

Analysed at DRG level to ensure comparability, given different hospital patient profiles.
Funding to cost reimbursement rate lower than both state and national average >> higher cost structures

My previous hospital, for which I was SFO had the best state reimbursement rate – so clinical engagement can work!

ALOS higher >> identified top-30 DRG’s & associated specialties equating to an extra ward

ICU funding to cost reimbursement rate lower than state average >> economies of scale issue with decreasing demand/change of activity profile.
Expensive Cost Buckets

Identified DRGs & associated clinics with higher than average cost structures, which is where further efforts need to be concentrated, eg

- **Medical S&W** – review patient fractions, payroll data (particularly overtime/penalties) & rosters
- **Nursing S&W** – distinguish between LOS (practice) issue and cost/day (review NHPPD, skill mix, agency use)
- **Pathology & Imaging** – senior clinicians develop test protocols for common procedures/diagnoses for trainees.
Further Cost Analysis

- **Prosthesis** – further benchmarked at a procedure level against sites which record actual use at a patient level

- **Medical/Surgical Supplies** – utilise supply item price & quantity data

- **Theatre** – further benchmarked at procedure level & theatre lists/times

- **Hotel** – further breakdown to cleaning, orderlies, food, security, etc (national standards would assist benchmarking).
Low Average Weight

- **Lowest average weight** (equisep per separation) of SA teaching hospitals

- **Benchmarked at DRG group level** (without CCs/age splits) to check for clinical coding issues

- Concluded due to patient profile not inadequate coding

- However, identified **top 20 DRGs & clinics**, with higher ALOS and lower casemix revenue >> coding or clinical practice issues.
For patient costing to be useful & comparable across Australia under an ABF framework, it is crucial that health units have quality coding information ... so it starts with coding
Q&A

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