VicRehab: The Rehabilitation Funding System in Victoria

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July 2010
VicRehab (CRAFT)

- Designed to reflect industry best practice for rehabilitation services across Acute Health and Aged Care programs
- Recognises all forms of rehabilitation; short-term; long-term; high and low intensity of care
- System developed over a number of years with clinical input and statistical data from all agencies – shadowed 1999/2000 to 2000/01
- Casemix Rehabilitation Funding Tree (CRAFT) is the classification model that underpins VicRehab as a funding system
Victorian Inpatient Rehabilitation

- **Designated Rehabilitation Units**
  - Agencies are designated for Rehabilitation Units
  - 10 beds or more and must meet designation criteria
  - VicRehab agencies funded by a mix of episode (CRAFT) & per diem payments since 1999
  - Non VicRehab agencies continue to be funded by per diem grants

- **Non-Designated Rehabilitation**
  - Payment through Casemix Vic-DRGs and WIES

- **Ambulatory rehabilitation, such as Community Rehabilitation centres (CRCs)**
  - funded through Sub-acute Ambulatory Care Services (SACS)
Funding Status at CRAFT Development Stage

- Level 1 rehabilitation – higher per diem rate for amputee, spinal and major head trauma patients for the first post acute rehabilitation episode – same payment rate irrespective of patient type

- Level 2 rehabilitation – lower per diem rate for all other rehabilitation and second and subsequent episodes for Level 1 type patients – same payment rate irrespective of patient type

- Decision made to maintain status of per diem funding for Level 1 rehabilitation for time being, to minimise provider risk
Objective to develop a casemix classification system for Rehabilitation patients which could be effectively adopted as a casemix funding method

Important therefore that the model meet the following criteria:

- Clinical similarity
- Resource homogeneity
- Administrative ease
- Suitable for funding agencies
Functional Status Issues

- Functional status is not used in other DRGs, but functional status is basic to rehabilitation practice, assessment and theory – so important to consider in a classification

- Main issue with regard to functional status was choice of instrument:
  - Barthel – with a range of 1 to 100
  - Functional Independence Measure (FIM) - a range 1 to 120 or more
  - Other functional measures

- Barthel was chosen by Clinical Panel of advisers for collection in Victoria. Was used by over half of Victorian rehab agencies at the time. It can also be mapped to FIM scores – FIM would have incurred considerable cost in software licensing and education at the time to introduce statewide.

- FIM is now being collected for rehab and GEM – this will enable compliance with Commonwealth directions for a national classification for sub-acute, and the analysis and evaluation of substitution of FIM for Barthel in the CRAFT classification model for funding rehabilitation.
Issues With Data

• Adjustments to data included:
  – Same day episodes excluded-model looking at overnight or multi-day episodes only
  – Data trimmed to separate stays less than 4 days-not generally perceived as rehab
  – Data for one financial year; only episodes that started and concluded within that period included
  – Where cases had missing admission Barthel data, mean of remaining cases was allocated to maintain stable data
Methodology/Analysis

• Analysis
  – data was analysed using SPSS package and PC Grouper
  – LOS used as a proxy for cost
  – Judgements made by clinical staff with regard to Major Head Injury/Trauma, Amputation, Spinal and Burns categories—low numbers, LOS varied, high cost, long stay

• All Rehab Agencies in Victoria
  – Modelled data from 26 agencies -
  – Comprising over 11,000 inpatient overnight cases
  – Inpatient ALOS for state was 28 days (now 26.5)
  – Inpatient average age for state was 73 years
Results of Modelling

- PC Grouper identified Barthel admission score as significant measure of dependence in the VAED, based on a low and high measure of Barthel

- Number of classes identified: 16

- Plus a short stay category was created for overnight stays less than 4 days (considered not true rehabilitation which usually commences an average 3 days after admission in Victoria – more like an assessment period or to cover patients who do not commence rehab for one reason or another)

- Decision to apply CRAFT only to agencies with 20 beds or more – minimise provider risk
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Casemix Rehabilitation and Funding Tree (CRAFT)

All Cases: 10,238

Stroke/Neurological n=2632

Orthopaedic n=4112

Cardio/Pulmonary n=579

Amputees n=515

Head Injury/Trauma n=154

Spinal n=122

Burns n=21

Other n=2103 (includes Pain, major dis.)

Low Admit Barthel

High Admit Barthel

Fractures

Replace Hip/Knee

Other Ortho

Low Admit Barthel

Hi Admit Barthel

Low Admit Barthel

MedAdmit Barthel

Hi Admit Barthel

Hi Admit Barthel

Low Admit Barthel

Source: VAED
Definition of an Inpatient Episode

• Short Stay: 1-3 days overnight

• Outliers – low and high
  acute model multiply or divide ALOS by 3
  clinician/industry resistance to lengthy inlier e.g. +/- 14 or +/- 10 days
  final definition of risk favoured industry: +/- 4 days

• Inlier- episode agreed therefore ALOS +/- 4 days
  – Boundary points: low = ALOS-4; high = ALOS+4

• Leave
  – As per current DHS policy – readmit within 7 days for same clinical sub-program = continuation of first episode
Episode Range for Rehabilitation

Admission

Low Outliers
(Inlier payment/Low Boundary Point)

4 days
Low Boundary Point

Inlier Range
(4 days +/- 4 days)

ALOS

High Boundary Point

High Outliers
(.09 x Inlier payment/ALOS)

4 days
Short Stay payment

Length of stay (Days)
Costing weights

- Clinical costing data from selected hospitals are used to derive cost weights based on average total cost and length of stay per CRAFT category
- Initially 4 hospitals provided cost data
- By 2008-09, 11 hospitals were providing costing data that is fully usable
- Cost weights are used to calculate Rehabilitation Weighted Units (RWU) for each VAED CRAFT episode
- These units are summed to monitor activity against target
## Weights for CRAFT Categories

### VicRehab Units: 2010-11 rehabilitation weights

<table>
<thead>
<tr>
<th>CRAFT Categories</th>
<th>Inlier Boundaries</th>
<th>DHS Average Length of Stay</th>
<th>Short Stay Weight</th>
<th>Low Outlier per Diem</th>
<th>Inlier Weight</th>
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*Note: 2010-11 cost weights have been set using 2008-09 Victorian hospital cost data*
Summary of VicRehab

• Funding model
  12 categories of episode payments (Rehabilitation Weighted Units) based on CRAFT - 65% of budget
  Remaining Level 2 classes for spinal, amputee, major head injury and burns continue to be paid by per diem (called special Level 2) to minimise risk to provider
  Block per diem grants continue for Level 1 and DVA

• Cost weights derived annually from latest data available, for example weights for 2010-11 were derived from 2008-09 cost data

• Nearly 70% of designated units are now funded by VicRehab – episode payments (20 Rehab units within 14 health services)
Summary of VicRehab

- **CRAFT report**
  - target monitoring for both department and agencies
  - planning for both financial year and future,
  - benchmarking with other agencies

- **CRAFT calculator**
  - allows agencies to develop an ongoing database that provides both speedy and timely information/reports to management, planners, project officers, etc.
  - agencies can calculate CRAFT scores immediately, and analyse data
  - updated annually with the new annual cost weights