Initial analysis of newly added data items. Do they provide insights of value?

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Abstract
Presentation to the AFRM Annual Scientific Meeting 20 September 2013

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INITIAL ANALYSIS OF NEWLY ADDED DATA ITEMS. DO THEY PROVIDE INSIGHTS OF VALUE?

Presentation to the AFRM Annual Scientific Meeting
20 September 2013

Frances Simmonds, Director AROC
Tara Stevermuer, AROC Data Manager
What is AROC?

• The national rehabilitation medicine clinical registry for Australia and New Zealand

• AROC began as a joint initiative of the whole Australian rehabilitation sector (providers, payers, regulators and consumers) with support from key New Zealand providers

• Established 1 July 2002 as a not-for-profit Centre

• The Australasian Faculty of Rehabilitation Medicine (AFRM) is the auspice body

• The Australian Health Services Research Institute (AHSRI) at the University of Wollongong is the data manager and responsible for AROC’s day to day operations
AROC Reporting

• Annual reports summarising national data
  – Australia
  – New Zealand

• Benchmarking reports
  – Core Report (six monthly)
  – Outcome Target Report (six monthly)
  – Impairment Specific Reports (annually)
    • Stroke
    • #NOF
    • Ortho replacements
    • Reconditioning
    • Brain Injury
    • Amputee
    • Spinal Cord Injury
V4 dataset structure

• V4 AROC dataset introduced 1 July 2012
• Bank of data items describes 6 possible clinical pathways
  • 3 inpatient
  • 3 ambulatory
• Chosen pathway determines which data items need to be completed
• Each pathway requires the collection of the statistical linkage key
Pathways – Inpatient rehabilitation

• **Pathway 3 – Inpatient direct care**
  Standard inpatient rehabilitation care. ‘Bed card’/medical governance is with the rehabilitation physician

**Pathway 2 – In-reach rehabilitation care**
Rehabilitation and acute team provide care at the same time. ‘Bed card’/medical governance is with acute team
e.g. Patient in ICU under of Neuro surgeon and rehabilitation team has started providing (big R) rehabilitation

• **Pathway 1 – Consult liaison; one off assessment**
  Consultative care (see patient only once)
e.g. Provision of a ‘second opinion’, advice on a particular problem, case review, one-off assessment or therapy session
Pathways – Ambulatory rehabilitation

• **Pathway 4 – Ambulatory direct care**
  Standard ambulatory rehabilitation care

• **Pathway 5 – Ambulatory shared care**
  Shared care arrangement between a number of providers (rehab, non rehab & other sub acute services)
  e.g. Cancer patient is receiving home based therapy from community rehabilitation team as well as palliative care services

• **Pathway 6 – Ambulatory shared care; one off assessment**
  Consultative care (see patient only once)
  e.g. Provision of a ‘second opinion’, advice on a particular problem, case review, one-off assessment or therapy session
Pathway 2
In-reach rehabilitation - casemix

Re-conditioning
Orthopaedic
Brain/Neuro
Other
Pathway 2 - In-reach rehabilitation
Preliminary analysis

• Overall the average length of stay was 7.9 days, improving 8.1 FIM points from a start of 75.1

• Reconditioning episodes
  – average start FIM 75.5 (compared to 87.6 in pathway 3)
  – 70% discharged directly to community, half of those to a private residence

• Orthopaedic fracture episodes
  – average start FIM 74.4 (compared to 82.5 in pathway 3)
  – 50% discharged directly to community, a third of those to a private residence
Pathway 2
In-reach rehabilitation

- Early days
- Growing number of facilities utilising this model of care
- Initial results look promising
- Next steps for AROC
  - Link pathway 2 and 3 episodes
  - Compare outcomes of people who had both pathway 2 and 3 with those who went directly to inpatient rehab
v4 – new data items

• to understand timeliness and processes related to access to rehabilitation …
  – Date of injury
  – Date of acute admission
  – Date of referral to rehabilitation
  – Date of assessment of suitability for rehab
  – Date clinically ready for admission to rehab
  – Date of actual admission

• … as well as the processes including potential barriers to discharge
  – Date clinically ready for discharge
  – Actual date of discharge
Time since injury to episode start

- **Stroke**: 0.4 days from injury to acute admission, 13.3 days from acute admission to episode start
- **Ortho. fractures**: 0.5 days from injury to acute admission, 12.3 days from acute admission to episode start
- **Re-conditioning**: 0.6 days from injury to acute admission, 14.9 days from acute admission to episode start
- **AUSTRALIA**: 0.6 days from injury to acute admission, 12.1 days from acute admission to episode start
- **Stroke**: 0.3 days from injury to acute admission, 10.6 days from acute admission to episode start
- **Ortho. fractures**: 0.7 days from injury to acute admission, 12.8 days from acute admission to episode start
- **Re-conditioning**: 1.2 days from injury to acute admission, 15.0 days from acute admission to episode start
- **NEW ZEALAND**: 0.7 days from injury to acute admission, 13.5 days from acute admission to episode start

Average number of days
Time sequence – referral to episode start

Average days between:

- **Stroke**
  - Referral to assessment: 1.1
  - Assessment to clinically rehab ready: 1.4
  - Clinically rehab ready to episode start: 1.2

- **Ortho - fractures**
  - Referral to assessment: 1.1
  - Assessment to clinically rehab ready: 1.2
  - Clinically rehab ready to episode start: 0.5

- **Re-conditioning**
  - Referral to assessment: 1.2
  - Assessment to clinically rehab ready: 1.3
  - Clinically rehab ready to episode start: 0.6

- **AUSTRALIA**
  - Referral to assessment: 1.3
  - Assessment to clinically rehab ready: 1.3
  - Clinically rehab ready to episode start: 0.5

- **Stroke**
  - Referral to assessment: 0.8
  - Assessment to clinically rehab ready: 0.8
  - Clinically rehab ready to episode start: 2.0

- **Ortho - fractures**
  - Referral to assessment: 0.7
  - Assessment to clinically rehab ready: 0.9
  - Clinically rehab ready to episode start: 1.4

- **Re-conditioning**
  - Referral to assessment: 0.8
  - Assessment to clinically rehab ready: 1.0
  - Clinically rehab ready to episode start: 1.4

- **NEWZEALAND**
  - Referral to assessment: 0.8
  - Assessment to clinically rehab ready: 1.0
  - Clinically rehab ready to episode start: 1.6

Average number of days between dates

- Stroke
- Ortho - fractures
- Re-conditioning
- AUSTRALIA
- Stroke
- Ortho - fractures
- Re-conditioning
- NEWZEALAND
Proportion Episodes with Delay in Admission

Number of delays in episode start

- Stroke
- Ortho - fractures
- Re-conditioning
- AUSTRALIA
- Stroke
- Ortho - fractures
- Re-conditioning
- NEW ZEALAND

Proportion with delay

- Proportion with delay:
  - 0%
  - 10%
  - 20%
  - 30%
  - 40%
  - 50%
  - 60%
  - 70%
  - 80%
  - 90%
  - 100%

Colors:
- 0: Blue
- 1: Red
- 2: Green
- 3: Purple
- 4: Cyan

Legend:
- 0: Blue
- 1: Red
- 2: Green
- 3: Purple
- 4: Cyan
Reasons for Delay in Admission

- Patient related issues
- Service issues
- External support issues
- Equipment issues
- Behavioural issues
- Reason(s) not specified

[Bar chart showing percentages of delay reasons for Australia and New Zealand]
Proportion Episodes with Delay in Discharge

Number of delays in episode end

Stroke
Ortho - fractures
Re-conditioning
AUSTRALIA
Stroke
Ortho - fractures
Re-conditioning
NEW ZEALAND

Proportion with delay

75%  80%  85%  90%  95%  100%

0  1  2  3  4
Time sequence – delay in episode end

Clinically ready for discharge to episode end

- Stroke: 0.8
- Ortho - fractures: 0.5
- Re-conditioning: 0.5
- AUSTRALIA: 0.5
- Stroke: 1.5
- Ortho - fractures: 0.7
- Re-conditioning: 1.0
- NEW ZEALAND: 0.9
Reasons for Delay in Discharge

![Bar chart showing reasons for delay in discharge comparing Australia and New Zealand.]

- **Patient related issues**: Australia - 40%, New Zealand - 30%
- **Service issues**: Australia - 30%, New Zealand - 20%
- **External support issues**: Australia - 20%, New Zealand - 10%
- **Equipment issues**: Australia - 10%, New Zealand - 5%
- **Behavioural issues**: Australia - 5%, New Zealand - 10%
- **Reason(s) not specified**: Australia - 0%, New Zealand - 0%
Outcomes by timeliness of access
Insights of Value?

• Yes?
"Yes, but mine is an educated guess; yours is just a guess guess."
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