Royal Hobart Hospital

Clinical Support Services

Department of Health and Human Services

Now we have the data, what does it mean?

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Background

Health Roundtable (HRT) – since 1995

National Allied Health Benchmarking Consortium (NAHBC) – since 1997

- Collect, analyse and publish information comparing
  and identifying ways to improve health services
- Promote collaboration and networking

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Purpose

- Explain variations to the CEO
- Use the information appropriately to improve existing, and develop new services
- Provide feedback to staff on their levels of service compared to other hospitals

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Methods of the retrospective ‘data mining’ survey

- Formed a small team
- Educated the team on DRG codes and hospital coding practices
- Analysed the Health Roundtable reports and data sets
- Consulted clinicians
- Analysed hospital data and patient notes

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Examples discussed

1. DRG I03 (Hip revision or replacement)

2. DRG U66Z (Eating and obsessive-compulsive disorders)

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Table 1:
First part of the screening report for DRG I03 (Hip revision or replacement)

Financial year	Your episode count	Percentage of episodes with any AHP activity	Median AHP minutes per acute episode			Median LOS when AHPs were involved	Median AHP inpatient minutes per day
			Pre-episode time	Acute episode time	Post-episode time		
2003-4	76	99%	50	400	120	9.1	38
2004-5	148	98%	50	320	145	7.9	32
2005-6	142	97%	60	260	165	7.2	33

- a very low episode count in 2003-4
- some pre-episode time
- decreasing AHP activity (acute phase)
- increasing AHP activity (post-acute phase)
- decreasing hospital length of stay (acute phase)
- similar median AHP inpatient minutes per day (acute phase)

Table 2:
Second part of the screening report for DRG I03 (Hip revision or replacement)

Percent of the acute episode where the service was involved and minutes/acute episode by service										
Financial year	Physiotherapy		Social Work		Nutrition		Speech Pathology		Occupational Therapy	
	%	Minutes	%	Minutes	%	Minutes	%	Minutes	%	Minutes
2003-4	100%	280	12%	60					63%	120
2004-5	99%	210	14%	75	3%	80			67%	120
2005-6	99%	180	14%	55	10%	95	4%		63%	80

- grey cells indicating five or less episodes, and low minutes
- decreasing physiotherapy activity over three years
- decreasing occupational therapy activity for 2005-6

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DRG 103 (Hip revision or hip replacement)

Split for complexity – 'adjacent DRGs'

103A: Hip revision plus complications severe or catastrophic (highest resource usage)

103B: Hip replacement plus complications severe or catastrophic/Hip revision minus complications severe
or catastrophic

103C: Hip replacement minus complications severe or catastrophic

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Table 3:
RHH and the average hospital data for 2005-6 for DRG I03 (Hip revision or replacement)

AN DRG	AHP treated in first half of stay RHH (HRT average)	Average length of stay for AHP patients RHH (HRT average)	Complexity for AHP patients RHH (HRT average)	Complexity for non-AHP patients RHH **(HRT average)
I03A *	No data (72%)	No data (17.30 days)	No data (4.59)	No data (No data)
I03B	82% (70%)	12.60 days (13.14 days)	4.18 **(4.69)**	No data **(4.08)**
I03C	89% (83%)	7.11 days (7.21 days)	2.36 (2.18)	No data (2.00)

* Small numbers in RHH
** All patients seen by AHP services

- more RHH patients treated by allied health in first half of stay
- RHH average LOS was lower
- RHH complexity lower for IO3B, higher for IO3C
- patients seen by allied health were more complex overall

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Summary of survey of DRG I03

The example shows how:

- a DRG is split for complexity
- the use of an off-site sub-acute facility assists care type changes
- benchmarking projects can change clinical practice and activity levels

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Table 4:
First part of screening report for DRG U66Z (Eating and obsessive-compulsive disorders)

Financial year	Your episode count	Percentage of episodes with any AHP activity	Median AHP minutes per acute episode			Median LOS when AHPs were involved	Median AHP inpatient minutes per day
			Pre-episode time	Acute episode time	Post-episode time		
2003-4	**13**	**69%**		**130**		**23.2**	**7**
2004-5	**21**	**38%**	**50**	**2350**	**95**	**47.6**	**61**
2005-6	**10**	**70%**		**2370**	**40**	**21.6**	**76**

- 2003-4 and 2005-6: episode count lower than the average
- 2003-4: AHP time lower than the median
- 2004-5 and 2005-6: acute AHP time higher than the median
- 2003-4: inpatient time per day lower than the median
- 2005-6: inpatient time per day higher than the media

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Table 5:
Second part of screening report for DRG U66Z (Eating and obsessive-compulsive disorders)

Percent of acute episode where service was involved and minutes/acute episode by service										
Financial year	Physiotherapy		Social Work		Nutrition		Speech Pathology		Occupational Therapy	
	%	Minutes	%	Minutes	%	Minutes	%	Minutes	%	Minutes
2003-4			56%	110	56%	180				
2004-5					100%	1185			100%	750
2005-6	86%	305	86%	520	100%	500			86%	1925

- 2004-5: change in activity in all disciplines

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Table 6:
Principal diagnoses covered by DRG U66Z

Code	Description	Code	Description
F42.0	Predominately obsessional thoughts/ruminations	F50.3	Atypical bulimia nervosa
F42.1	Predominately compulsive acts/rituals	F50.4	Overeating associated with psychological disturbance
F42.2	Mixed obsessional thoughts and acts	F50.5	Vomiting associated with other psychological disturbance
F42.8	Other obsessive-compulsive disorders	F50.8	Other eating disturbances
F42.9	Obsessive-compulsive disorder not otherwise specified	F50.9	Eating disorder unspecified
F50.0	Anorexia nervosa	F60.5	Anankastic personality disorder
F50.1	Atypical anorexia nervosa	F98.2	Feeding disorder infancy and childhood
F50.2	Bulimia nervosa	F98.3	Pica of infancy and childhood

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Table 7:
Comparison of RHH and HRT hospitals' primary diagnoses under DRG U66Z (Eating and obsessive-compulsive disorders) for 2005-6

Primary diagnosis code	Description	RHH %	RHH F50.0 and F50.2	Average across all hospitals %	All hospitals F50.0 and F50.2
F50.0	Anorexia nervosa	38%	63%	71%	81%
F50.2	Bulimia nervosa	25%		10%	
F50.9	Eating disorder unspecified	13%		9%	
F42.9	Obsessive-compulsive disorder not otherwise specified	0%		6%	
F50.8	Other eating disturbances	0%		2%	

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Other areas of interest

Royal Hobart Hospital patients compared to the average HRT hospital

2004-5

- had a higher 'separations per patient ratio' (the same four patients accounted for 2/3 of the episodes)

2005-6

- were three times more complex
- had a length of stay twice that of the average HRT patient

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Summary of survey of DRG U66Z

The example shows how:

- a DRG can cover a number of primary diagnoses
- the hospital's balance of these primary diagnoses can impact on allied health activity levels
- small numbers of patients and re-presenting patients can skew the data
- patient complexity can increase activity levels
- delayed care type changes in the acute phase affect allied health activity data
- changes in clinical management affect the data

Lessons learnt

1. A team is required

- Coding manager
- Data consultants and manager
- Allied health service director and managers
- Clinicians

2. Trust the data only so far

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3. Many factors affect the data

- the DRG itself
- the hospital's casemix
- the hospital's coding practices, care type changes, off-site facilities
- individual patient variations
- clinical management
- allied health professional data entry
- allied health professional service levels

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4. The process is time consuming, but worthwhile

5. No discipline - no hospital - is an island

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Conclusion

Need to understand the factors impacting on the data before it is used in any way

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Competing interests

The authors declare they have no competing interests and they take full responsibility for the content of the report and the conclusions reached.

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