

IMPROVING HOSPITAL EFFICIENCY

Re audit on Delayed Discharge and Inappropriate Admissions

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Halved the number of
inappropriate bed days

What did we study?

- Inappropriate admissions to the medical ward
- Inappropriately delayed discharge from the medical ward

Causes of inappropriate admission

- Failure of community care
- Overflow from other services

Causes of delayed discharge

- Delays in hospital management
- Problems with community care

What is the scale of the problem?

- 27.4% of hospital days inappropriate^{1,2,3,4,5}

Profile of the patients in previous studies

- M=F¹
- Older patients (80-95y)¹ >75y²
- Living Alone³
- Those with high nursing / rehabilitation requirements

Results of our original audit 2005

- 1749 occupied bed days
- 381 inappropriate (21.8%)

- >\$1,000,000 yearly

Suggestions from the original audit

Hospital based

- Expand the role of the Complex Care Coordinator
- Improve staffing
- Improve the rehabilitation service

Suggestions from the original audit

Hospital based

- Improve service availability at Weekends
- Proper allocation based on the admitting specialty

Suggestions from the original audit

Community based

- Support GPs to manage chronic disease in the community
- Improve management of non-urgent conditions
- Better use of ambulatory care

Aims of the re-Audit 2009

- Compare previous and current figures
- Assess the impact of changes made

Methods

- Audits ran over 6 weeks
- Different day each week

- September to November 2005
- February to March 2009

- 1 auditor each time
- Same supervisor

Methods

- All ward notes reviewed to identify -
 - Medically stable patients with delayed discharge
 - Those admitted without an acute general medical problem
- Total number of occupied bed days measured
- Average length of stay measured

Methods

- Same protocol used for each audit
- The investigators individually reviewed 10 random case notes not included in either audit and compared opinions
- Agreement in 90%
- Finance dept assistance sought for calculation of costing

Results during audit period

	Total number of occupied bed days	Average Length of stay (days)	Number of inappropriate bed days	% of inappropriate bed days
2005	1749	5	381	21.8
2009	1670	4	152	9.1

Causes of inappropriate bed days

	Bed days 2005	Bed days 2009
Awaiting placement or community support	180	59
Inappropriate admissions	103	57
Awaiting non urgent consultation, investigation, treatment or transfer	51	11
Awaiting rehbaillitation	47	25
Total	381	152

Patient demographics of those deemed inappropriate

	2005	2009
Average age	70	77
Living at home +/- family	46	15
Living in a R/H	14	4
Total	60	19

Financial implications

Year	Per month	Per year	Cost
2005	254	3048	
2009	101	1216	

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- Cost of a medical bed day in 2009 = \$420

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Financial implications

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- Cost of a medical bed day in 2009 = \$420
- Estimated reduction in cost of inappropriate bed days = \$ 769, 440

Recommendation for further improvement

- Further improve the rest home referral process
- Improve the rehabilitation referral process
- Improve access to specialist consultations
- Repeat the audit

Conclusions

- Implementation of recommendations from well conducted health care research and audits can lead to substantial positive outcomes
- These changes improve hospital efficiency and impacts on the hospital's ability to provide better health service delivery
- The positive outcomes can be achieved when health professionals and managers work together
- Positive gains take time and can only be achieved with proper planning, clear vision and a systematic approach to incremental change

References

- 1) Chopard et al. Predictors of inappropriate hospital days in a department of internal medicine. *Int J Epidemiology* 1998;27:513-519
- 2) McDonagh MS et al. Measuring appropriate use of acute beds. A systematic review of methods and results. *Health Policy* 2000 Nov 17;54(2):163
- 3) Lewis H, Purdie G. The Blocked Bed: a prospective study. *NZMJ* 1988 Sept 14;101(853): 575-7
- 4) Merom D et al. factors associated with inappropriate hospitalization days in internal medicine wards in Israel: a cross-national survey. *Int J for quality in Healthcare* 10:155-162 (1998)
- 5) Sangha O et al. Metric properties of the AEP and predictors of inappropriate hospital use in Germany: an approach using longitudinal patient data. *Int J for Quality in Healthcare* 14:483-492 (2002)

Audit Categories

- 1) Waiting for transfer to the rehabilitation unit
- 2) Awaiting a bed in a RH
- 3) Awaiting assesment for RH placement
- 4) Awaiting nurse maude assesment
- 5) Awaiting RH placement due to funding
- 6) Awaiting a PPR to be enacted
- 7) Awaiting transfer to another hospital
- 8) Awaiting transfer to another HVDHB service

Audit Categories

- 9) Admission for other than a GM problem
- 10) Chronic condition- from RH
- 11) Admission for terminal cares from RH
- 12) Chronic condition that could have been managed in the community
- 13) Awaiting or admitted PG
- 14) Awaiting psych input
- 15) RH refusing patient back- transport
- 16) RH refusing patient back- various

Audit Categories

- 17) Family concerned re safety at home
- 18) More appropriate in convalescence
- 19) Awaiting physio approval
- 20) Awaiting SW approval
- 21) Awaiting OT approval

Audit Categories

- 22) Awaiting Orthotics
- 23) Awaiting HVDHB Radiology
- 24) Awaiting non-HVDHB Radiology
- 22) Awaiting Orthotics
- 23) Awaiting non urgent specialist procedure, treatment or investigation