East & South East England Specialist Pharmacy Services

East of England, London, South Central & South East Coast

Why improving transfer of information about patients' medicines is so important

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PART 2
ROYAL PHARMACEUTICAL SOCIETY
Keeping patients safe when they transfer between care providers – getting the medicines right
A guide for all providers and commissioners of NHS services
July 2011
Endorsed by:
ACADEMY OF MEDICAL ROYAL COLLEGES
RCGP Royal College of General Practitioners
Royal College of Nursing
Royal College of Physicians

Root Cause Information for Medication Error Events Reviewed by The Joint Commission

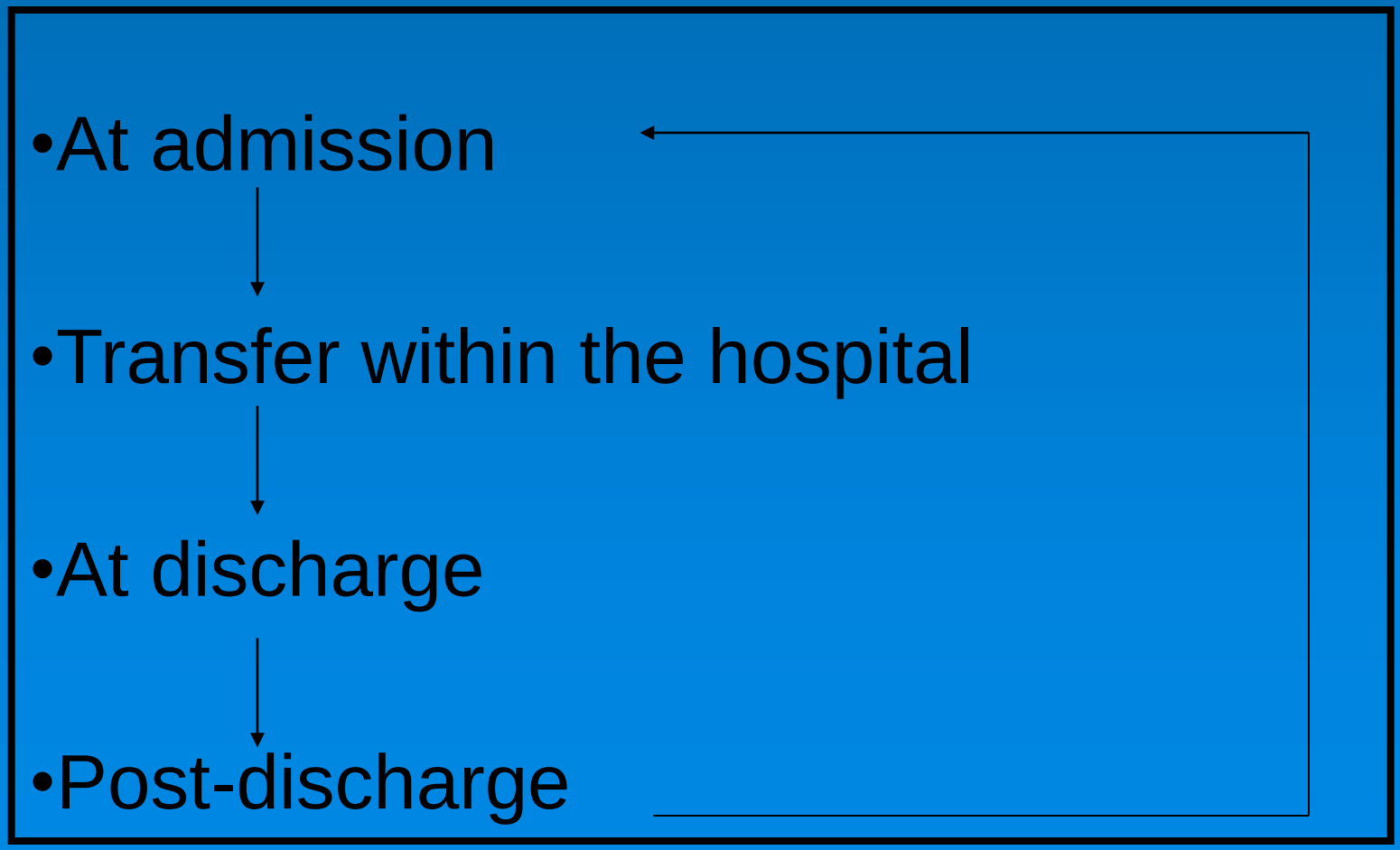
(Resulting in death or permanent loss of function)

2004 through 2011 (N=333) *The majority of events have multiple root causes*	
Medication Use	292
Leadership	248
Communication	242
Human Factors	239
Assessment	138
Information Management	127
Physical Environment	63
Continuum of Care	33
Care Planning	32
Patient Education	8

The Joint Commission

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

Where can it go wrong?



At admission

- Meta-analysis[1] of 22 studies
  - errors in medication histories in 67% patients admitted to hospital
  - 59% errors clinically relevant
- Review of 3091 medicines reconciliations from 30 acute Trusts[2]
  - 1.3 omitted/ wrong dose errors per MR
  - 31-52% judged as potentially serious enough to be clinically detrimental

At admission

One UK analysis[3] of 6605 prescription orders showed:

16.3% of medication orders on medical admission wards were erroneous

equates to 80 errors every 100 patient days

average 0.5 doses given/ omitted before error detected

Transfer within the hospital

One study[4] showed:

- a 62% chance that patient would experience 1 or more medication errors on transfer between inpatient units
- half these errors were omissions
- over one third had potential to cause discomfort or clinical deterioration

At discharge

The likelihood that an elderly medical patient will be discharged on the same medicines that they were admitted on is less than 10%[5]

28-40% of medicines are discontinued during hospitalisation[6]

45% of medicines prescribed at discharge are new medicines[7]

60% of patients have 3 or more medicines changed during their hospital stay[8]

At discharge

- Error rate for medication reconciliation at discharge is between 25% and 70% of which 30% are likely to cause patient harm or discomfort[6]

Post-discharge

Adverse drug events occur in up to 20% patients after discharge[6]

One study estimated that risk of an ADE post-discharge increased by 4.4% for every drug alteration or change[9]

Estimated that 11-22% of hospitalisations for exacerbations of chronic disease are direct result of non-compliance with medication[6]

The evidence that it can be rectified

- RCT[10] comparing hospitalisation rates in "coached" individuals (n=257) in 6 acute hospitals in the US vs standard care (n=736)
  - Showed a 30% reduction in 30-day readmission rates (12.8% vs 20%)

The opportunity to get it right

Medicines reconciliation in place

Targeted and New Drug MURs being set up

Green bag initiatives already in place in 200 Trusts

Medicines optimisation on the NCB agenda

Patient safety and patient experience being actively monitored

Medicine use in the NHS?

References

1 Frequency, type and clinical importance of medication history errors at admission CMAJ 2005; 173: 510-5

2 Which patients benefit most from medicines reconciliation? Linda Dodds via NeLM

3 Prescribing errors in hospital inpatients: a three-centre study of their prevalence, types and causes. Postgrad Med J 2011 (early on-line)

4 Medication reconciliation during internal hospital transfer and impact of computerised prescriber order entry. Ann Pharmacotherapy 2010; 44: 1887-95

5 Relationship of in-hospital medication modifications of lederly patients to postdischarge medications, adherence and mortality. Ann Pharmacotherapy 2008; 42: 783-9

6 Health care system vulnerabilities: understanding the root causes of patient harm. Am J Health Syst Pharm 2012; 69: 43-5

7 What happens to long-term medication when general practice patients are referred to hospital? Eur J Clin Pharmacol 1996; 50: 253-7

8 Drug changes at the interface between primary and secondary care. Int J Clin Pharmacol Ther. 2004; 42: 103-9

9 Adverse drug events due to discontinuations in drug use and dose changes in patients transferred between acute and long-term care facilities. Ann Intern Med 2004; 164: 545-50

10 The care transitions intervention. Arch Intern Med 2011; 171: 1232-7