

The Effect of an Integrated Medicines Management Programme on Medication Appropriateness

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Buenas tardes señoras y señores.

Es un honor estar aquí.



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“Medicines management in hospital encompasses the entire way that medicines are selected, procured, delivered, presented, administered and reviewed, to optimise the contributions that medicines make to producing informed and desired outcomes of patient care”

Audit Commission (2001)



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Medication non-adherence costs an estimated \$100 billion a year in the United States and leads to thousands of serious adverse events or deaths each month

Arch Intern Med (2006)



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MEDICATION-RELATED INCIDENTS

- 10-12% of all hospital admissions are due to adverse drug reaction
- 5% of inpatients suffer an adverse drug incident
- In Northern Ireland this equates to a health resource loss of £61 million in terms of bed days



National Institute of Clinical Excellence (NICE 2009)

- Error rate for admission histories taken by medical staff
44 / 100
- Error rate for admission histories taken by pharmacy staff
19 / 100



Integrated Medicines Management (IMM) in Northern Ireland (Scullin et al Journal of Clinical Evaluation 13, 781-8 (2007))

- Drug history at admission
reduction of 4.2 errors per patient
- Length of stay reduced by 2 days
- Increased time to readmission (20 days)
- Kardex monitoring (inpatient)
5.5 interventions per patient
- Faster medication rounds > 25 minutes per
day saved
- Faster discharge > 90 minutes quicker
- More accurate discharge < 1% error rate
compared to 25% by medical staff

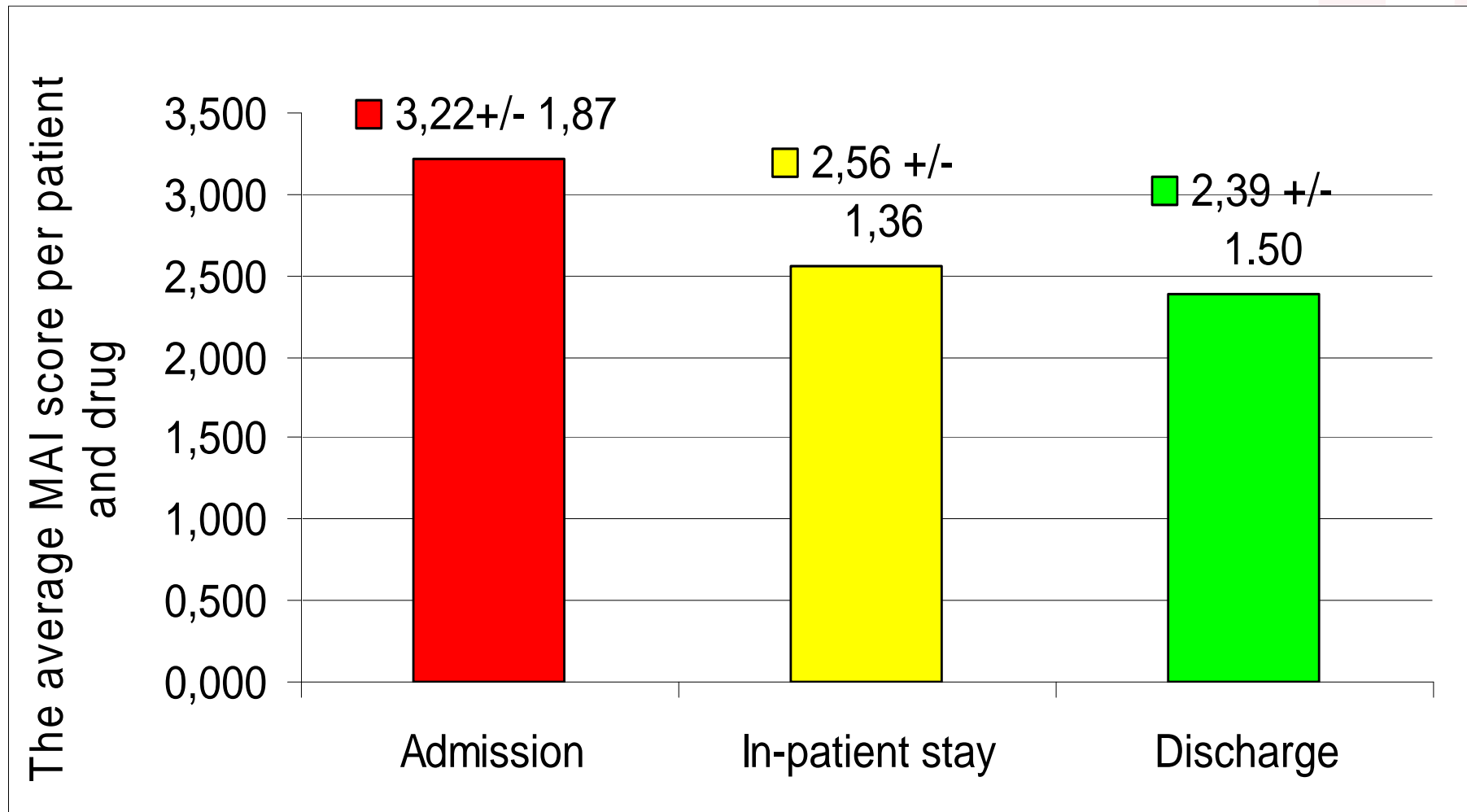


MEDICINES APPROPRIATENESS INDEX (MAI) (Burnett et al American Journal of Health System Pharmacy 66,854-9 (2009))

- 1171 medications prescribed for 117 patients
- **MAI Scores**
Intervention (5.69) v Control (9.97)
P < 0.03 at discharge
- **MAI Scores**
Intervention (5.69) v Control (17.48)
P < 0.0003 between admission and discharge

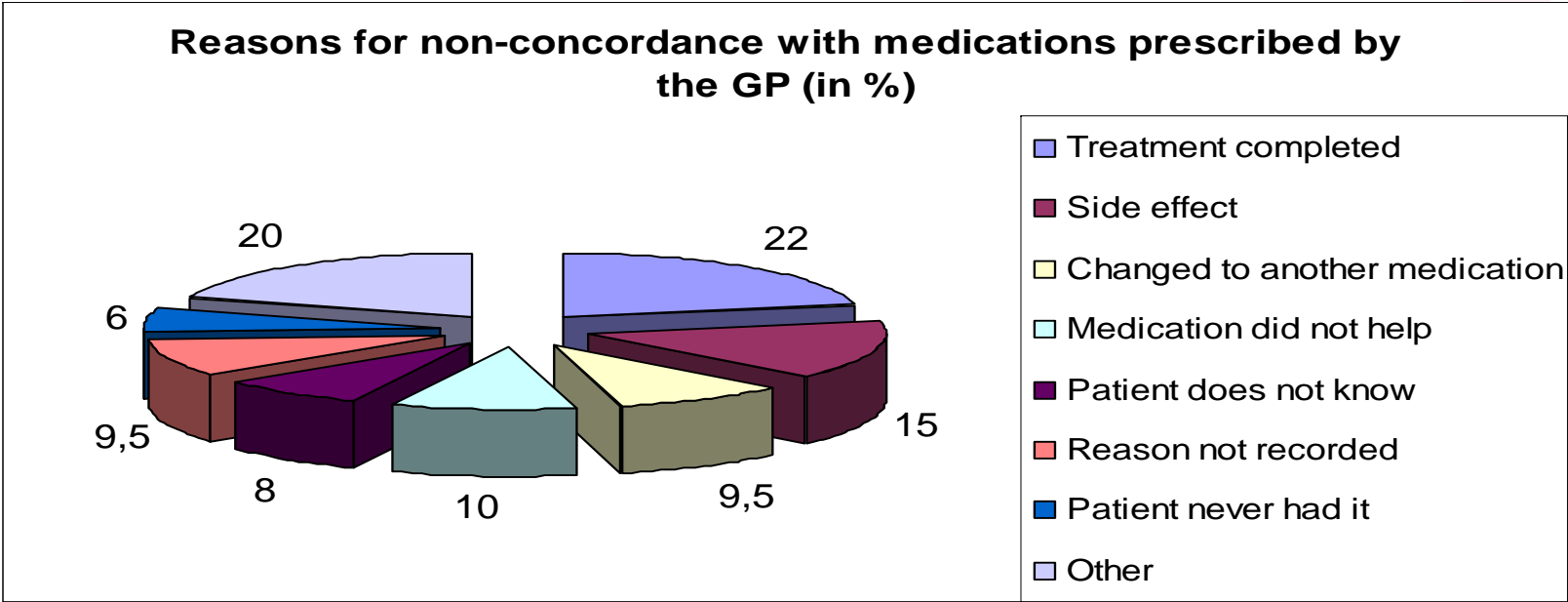


MEDICINES APPROPRIATENESS INDEX (MAI)



RESULTS

Treatment completed was the most common reason for non-concordance to the GP-list.



DISCHARGE AUDIT – Some Key Findings

- Warfarin dose not stated in 35% of cases
- Night sedation not stopped in 74% of cases
- No explanation for medication discontinuation in 78% of patients
- No explanation for any new medicines for 55% of patients
- No explanation of future monitoring in 51% of patients



ONE-STOP DISPENSING (OSD) (2)



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ONE-STOP DISPENSING (OSD) (3)

- 89% reduction in total journey time
- Discharge turn-around time reduced from 64.5 > 26.1 minutes
- Missed doses reduced from 50 before OSD to 4 after OSD
- Potential drug cost savings of £30,000 per ward



MEDICINES RECONCILIATION

“A process of identifying the most accurate list of all medications a patient is taking, including name, dosage, frequency and route”

International Healthcare Institute (IHI)

MEDICINES RECONCILIATION (McKenna, Friel and Scott 2009)

- GP list accuracy
54% to 83%
- Accurate admission record
29% - 70% (P < 0.001)
- Significant increase in accuracy when the Medicines on Admission form used
(P < 0.001)
- Significant increase in accurate discharge medication information
58% - 82% (P < 0.01)



IMM ROLL-OUT

- Reduced length of stay
1.43 days
- Reduced length of stay on readmission
5.8 days
(60% of IMM and non-IMM patients re-admitted within 12 months)
- For every 100 patients receiving IMM the opportunity cost is £135k



RE-ENGINEERED MEDICINES PROCESS

- Optimising the benefit that patients get from their medicines
- Improved medicines use
- Significant reduction in healthcare resource use



FUTURE WORK PLAN

- Roll-out of OSD
- Use of self-administration schemes
- Hybrid independent prescribing pharmacists
- Seven-day week availability of clinical pharmacy services
- Robot introduction
- Electronic medicine information transfer
- Electronic prescribing



WEBSITES

- www.stepselect.com
- www.medicines-management.ie



Muchas gracias por su invitación.

**Ha sido un honor y un privilegio estar
con ustedes hoy.**



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