Selection criteria for short stay unit: Checklist or clinical judgement?

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Dr Andrew Hardy; Acute Medicine Consultant
Scoring systems

• Preferred patients for short stay unit (SSU)
  – Predicted length of stay (LOS) 0-3 days

• Audit 2011: Consultant accuracy of predicting LOS in unselected admissions
  – For LOS 0-3 days
    – Sensitivity 93%, specificity 65%
    – PPV 80%, NPV 85%

• Document LOS and preferred ward for transfer on the post take ward round (PTWR)
Scoring systems e.g.

MSSU
- Powter et al, 2014
- Age >80
- Medications >4
- Admission last 4/52
- Confusion - new or old

Score <2 predicts LOS 0-3 days

Amb score
- Ala et al, 2012
- Sex
- Access to transport
- Not on IV therapy
- No confusion
- MEWS 0
- No admissions 30/7

Score <5 predicts LOS <1 day
Consultant vs MSSU

• 200 unselected admissions to AMU Oct 2014
• MSSU calculated retrospectively from information in electronic discharge letter
• Comparison for LOS 0-3 days
  – Consultant predicted 114 would have LOS 0-3 days
  – MSSU predicted 123 would have LOS 0-3 days
  – Agreement in 62%- 83 patients
Consultant vs MSSU

Agreement in prediction of LOS

- Agree LOS 4+ days: 21%
- Agree LOS 0-3 days: 41%
- Disagreement: 38%
Actual LOS 0-3 days

- MSSU 4+ days: 28%
- MSSU 0-3 days: 59%
- Con 4+ days: 19%
- Con 0-3 days: 53%
Predicted LOS 0-3 days

Median LOS (days)

MSSU

Consultant
Predicted LOS 0-3 days

<table>
<thead>
<tr>
<th></th>
<th>Consultant</th>
<th>MSSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>79%</td>
<td>77%</td>
</tr>
<tr>
<td>Specificity</td>
<td>56%</td>
<td>51%</td>
</tr>
<tr>
<td>PPV</td>
<td>53%</td>
<td>58%</td>
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<tr>
<td>NPV</td>
<td>81%</td>
<td>72%</td>
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</tbody>
</table>
Combined assessment

LOS 0-3 days

- Agree LOS 4+ days: 21%
- Agree LOS 0-3 days: 74%
- Disagreement: 32%

0% 25% 50% 75%
Limitations

- Only those seen on PTWR
- Patients transferred to “wrong” ward
- Not all data for MSSU on discharge summary
  - If not recorded assume to be not present
- Bias against MSSU in ward selection
  - For those with predicted LOS 0-3 days
  - Consultant: 42% discharge from AMU, 38% to SSU
  - MSSU: 37% discharge from AMU, 28% to SSU
Summary

• Clinician = Scoring system, but...
  – No additional paperwork
  – No additional ward round time

• Combined assessment
  – More accurate
  – Identifies fewer patients for SSU

• We are continuing to use clinical judgement alone
Future work

- Other scoring systems?
- Nurse led assessment?
- How to improve clinical judgement?
- What factors influence clinical judgement?
  - e.g. Frailty scores, NEWS
• Dr Andrew Hardy
  – Acute Medicine Consultant
  – Calderdale Hospital
Thank-you

- @adrianinkennedy
- @aimyorkshire
PRISMA ANALYSIS OF 30 DAY READMISSIONS TO A TERTIARY CANCER CENTRE
safer@home consortium
safer@home consortium

• Research in Acute Medicine has got a low profile
• Existing networks are small and lack high impact publications
• Re-admissions are perceived as a major adverse incident after hospital discharge
• Readmissions would thus potentially tick both the quality and safety box for interest by the public and funding bodies.
Readmissions in cancer

• With an ageing population and improved outcomes following Oncology treatment it is estimated that by 2020 the incidence of cancer will have increased by 33% with a significantly increased prevalence.

• Cancer patients comprise approximately 15% of all acute inpatient hospital stays and half of all spending on cancer patients is spent on delivering this care.

• Cancer patients have an increased risk of readmission.
PRISMA analysis

• PRISMA is a tool to analyse the root causes of unintended events and a taxonomy to classify these has been accepted by the World Alliance for Patient Safety of the World Health Organisation

• To identify causal factors for acute readmissions from a patient safety perspective using the PRISMA-method at a tertiary cancer hospital
PRISMA components

• Causal tree created
• Root causes
  • TECHNICAL
  • ORGANISATIONAL
  • ACTIVE (HUMAN HEALTHCARE PROVIDER) FACTORS
  • PATIENT FACTORS
• Analysis may give insight into the factors that contributed to the acute readmissions
Methods

• 50 consecutive 30 day readmissions from the 1\textsuperscript{st} November 2014

• Patients admitted to the MAU are 16 years +, undergoing active cancer treatment and are admitted via specialist clinics, treatment centres or self-referral via a specialist nurse-led telephone hotline

• Patients readmitted for elective chemotherapy or radiotherapy were excluded
Demographics collected

• Cancer type
• Reason for index admission and subsequent readmission
• HOSPITAL score – a prediction tool to identify patients at high risk of 30 day readmission.
• Clinical frailty scale
• Early warning score on discharge – a marker of physiological stability.
• Time to clinic follow up
<table>
<thead>
<tr>
<th>Patient characteristics</th>
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<tbody>
<tr>
<td>Age (years)</td>
</tr>
<tr>
<td>Sex - Male</td>
</tr>
<tr>
<td>Cancer type</td>
</tr>
<tr>
<td>Haematological</td>
</tr>
<tr>
<td>Head and neck</td>
</tr>
<tr>
<td>Gastrointestinal</td>
</tr>
<tr>
<td>Gynaecological</td>
</tr>
<tr>
<td>Lung</td>
</tr>
<tr>
<td>Sarcoma</td>
</tr>
<tr>
<td>HPB</td>
</tr>
<tr>
<td>Melanoma</td>
</tr>
<tr>
<td>Cancer of unknown primary</td>
</tr>
<tr>
<td>Time to readmission (days)</td>
</tr>
<tr>
<td>HOSPITAL score</td>
</tr>
<tr>
<td>MEWS score on discharge</td>
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<tr>
<td>Clinical frailty score on discharge</td>
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</tbody>
</table>
Results

• PRISMA analysis demonstrated that 4 (8%) of the readmissions had active (human) related elements.
• Patient readmitted with vomiting 36 hours post discharge following an admission with neutropenic fever and felt not to be fully recovered from initial episode.
• Patient with metastatic colorectal carcinoma readmitted with vomiting and abdominal pain 48 hours post discharge following a similar initial admission and felt not to be fully recovered from initial episode.
• Patient readmitted with electrolyte disturbances secondary to type 2 renal tubular acidosis (RTA) related to ifosfamide treatment. He was initially admitted with cellulitis but notes review revealed electrolyte disturbances consistent with the type 2 RTA following his initial ifosfamide treatment.
• Patient readmitted following displacement of an NG tube in the community which was being used for nutritional support as a result of oral mucositis.
Results analysis

• All of the readmissions were driven by a medical condition related to the patients underlying cancer

• These were usually related to recognized treatment toxicities, new infective conditions or disease progression

• Only 4 (8%) readmissions were felt to be potentially preventable
Limitations

• Technical and organizational causes are difficult to ascertain from retrospective notes reviews

• Subsequent work should include interviews with health care professionals and patients to help elucidate these and additional human factors
Readmissions

• Hospital readmissions are a complex phenomenon with a wide range of contributing factors
• There have not been any studies demonstrating an intervention that reduces readmissions in patients undergoing cancer treatments
• Hospital readmissions may act as a rescue with the decision to readmit reflecting sound clinical judgement rather than poor care
Conclusion

• Readmissions in patients undergoing cancer treatment appear to be related to the underlying condition and as such are predictable but largely not preventable.

• This adds further support to the evidence that hospital readmission is not a good quality indicator in this cohort of patients.
• Questions
Transforming Medical Reviews and Handover on AMU and Medical Wards

- Dr Ed Hewertson and Dr Johnny Drayson
- Geriatric and GIM Registrars
- University Hospital Southampton (UHS)

- With thanks to Dr Jules Kause and Dr Sarah Rumbold
Background

• Handover and weekend working are key areas for improvement throughout the NHS.

• Acute Medical Units and Acute Medical Wards are the largest and most difficult areas to handover and cover out-of-hours and over the weekend.

• University Hospitals Southampton (UHS) is a large tertiary hospital with a 54 bedded AMU and approx 1000 inpatient beds across all specialties.
Introduction

• A team of general medical registrars and consultant physicians at UHS worked together to improve handover and weekend working.

• Previously there was inadequate medical handover for patients transferred from AMU to the inpatient medical wards.

• There was no method for triaging patients. Therefore, the most unwell and dischargeable patients were not easily identifiable.
The ‘Traffic Light Handover System’

• Four Acuity Scores
  • Red - Unwell and Unstable
  • Amber - Unwell but Stable
  • Green - Medically well awaiting tests or social care
  • Blue - Dischargeable
Implementing the System

• We had help from IT development to integrate the system into the IT access tool used at UHS (Doctors’ Worklist).
• Doctors’ Worklist had already been used to log the Time, Date and consultant name for first consultant review.
• Now one extra click sets the Acuity Score.
• The Acuity Score appears with the patients name on Doctors’ Worklist and can be updated as clinically indicated.
How it looks

<table>
<thead>
<tr>
<th>Last Seen By</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Seen On</td>
<td></td>
</tr>
<tr>
<td>Seen By</td>
<td></td>
</tr>
<tr>
<td>Seen On</td>
<td></td>
</tr>
<tr>
<td>Primary Patient Category</td>
<td>Respiratory</td>
</tr>
<tr>
<td>Secondary Patient Category</td>
<td></td>
</tr>
<tr>
<td>Patient Acuity</td>
<td>Unwell and Unstable</td>
</tr>
</tbody>
</table>

Ensure the patient category is set correctly for triage /pick-up notification?

Worklists | Allergies | Scratchpad |
How it looks

Use this filter to arrange the patients under your care by their acuity score.

Update the acuity score at any time as the clinical situation changes.
How the system is used

• At every handover on the Acute Medical Unit - All Red patients are handed over.

• To direct ward rounds - Prioritising Red and then Blue patients ensuring patient safety and timely discharge.

• To direct weekend reviews - All patients transferred from of AMU to other wards are reviewed. Now Red and then Blue patients are seen first.

• At 23.00 daily hospital briefing all Red patients under every specialty are discussed.
Audit Data

- 100% Red Patients reviewed before 12pm by senior doctors at the weekend (improved from 43%)
- 50% Blue patients seen before 12pm at weekends (improved from 20%)
- 63% Blue patients discharged the same day (improved from 30%)
The benefits of the system

- It provides reliable information to highlight patients who need early and regular review.
- This is particularly important for patients moving between clinical areas, most notably from AMU to inpatient medical wards.
- It is also useful to guide handover and ward rounds.
Conclusions

Our simple ‘Traffic Light Handover System’

• Can be added to existing software.
• Is easy to use.
• Provides accurate information on patients acuity.
• Can pick out the patients that will benefit most from early review.
The future

• Other specialties in the Trust are already using the system their own version of the traffic light system.

• Other healthcare professionals are starting to using it as well – pharmacists and nurses

• The hope is that this systems are similar systems will be used in other hospitals.
Any questions?