Managing human factors that influence the care of medical boarding patients: improving the quality and consistency of discharge communication with Primary Care

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Background

- The pressures on flow and capacity within the hospital often necessitate the boarding of medical patients to outlying wards. However, this can lead to unfamiliarity that hinders care processes including the timely production and the overall quality of immediate discharge letters (IDL).[1]
- In 2018, we designed a structured template (IDLGM) for IDLs on the medical wards (Figure 1), which has significantly improved their clarity and quality.

[THIS SECTION IS HIGH PRIORITY – PLEASE COMPLETE CAREFULLY]

CHANGES TO DRUGS SINCE ADMISSION (relative to ECS)

Stopped: drug + reason / Nil
Started: drug + reason / Nil
Changed: drug + reason / Nil
Withheld: drug + reason + advice or plan for review / Nil

ALLERGIES / ADVERSE DRUG REACTIONS:

Discharge prescription checked against ECS meds rec: Yes/No (doctor to delete as appropriate)

Pharmacy Check by (enter on Trak): Name: Date: Time:

[THIS SECTION IS HIGH PRIORITY – PLEASE COMPLETE CAREFULLY]

PRINCIPAL DIAGNOSIS:
1.

ACTION REQUIRED FROM GP (do not ask GP to chase blood results): specify / Nil

FOLLOW UP BEING ARRANGED BY HOSPITAL: specify / Nil

Figure 1: A structured template with high priority sections and completion guidance (IDLGM) encourages clear communication of the key information crucial for ongoing care following discharge: **the changes in medicine, reasons for these changes, diagnosis, action for GP and hospital follow-up[2]**

- **Analysis of 160 IDLs from medical boarding wards showed that only 75% and 64% contained reasons for drug changes and GP advice respectively. Furthermore, only 45% of these IDLs communicated all the key information outlined above.**

Aim

In this project, we introduced and encouraged the use of **IDLGM** for **medical outliers** to **standardise discharge communication** and thereby promote **equity in care** for all medical patients across the hospital.

Methods

- 660 consecutive IDLs were analysed across **3 PDSA cycles** between 1st of January and 31st of July 2021.
- The variables examined were boarding ward specialty, training grade of IDL author, the IDL structure used and communication of the key information.

We implemented **three interventions**:

March 2021: Introduction of a prompt to structured daily ward round electronic entry for patients boarded from general medical wards

April 2021: Incorporation of the same prompt in post-take ward round entries for all patients boarded directly from acute medical unit

June 2021: Encouraging the medical team to use these ward round templates to ensure visibility of the prompt.

Escalation/DNACPR:
DESTINATION:
CONTACT DETAILS:

For all IDLs under General Medicine, please use \IDLGM. Thank you

Figure 2: A prompt at the end of the structured ward round template encouraging the use of IDLGM.

- **Process measure**: the use of IDLGM template on discharge
- **Outcome measure:** the communication of key information: medicine changes, reasons for changes, diagnosis, GP action and follow-up
- **Statistical analysis:** comparisons between two or more continuous variables were analysed using ANOVA. Categorical variables were analysed using the chi-square test. Binary logistic regression was used to determine independent factors affecting the use of IDLGM.

Conclusions

- A **structured template** with **clear guidance** for its completion has resulted in a **significant improvement** in **quality and consistency** of the information communicated at discharge from boarding wards.
- The **position** of the headings at the top of the discharge letter allows authors who may be unfamiliar with the patient to **focus** on the key points that are essential for ongoing care. The overall design structure **facilitates workflow** and **communication** across teams.
- The main barrier was the variability in the use of the ward round template that would automatically display the prompt. Thus, for the results to be sustained, it will require a **strong collaboration** from both the **boarding** and the **parent** medical team.

References

1. Perimal-Lewis, L., Bradley, C., Hakendorf, P.H., Whitehead, C., Heuzenroeder, L. and Crotty, M. (2016). The relationship between in-hospital location and outcomes of care in patients diagnosed with dementia and/or delirium diagnoses: analysis of patient journey. BMC Geriatrics, 16(1).

2. Lockman, K.A., Lee, W.H., Sinha, R., Teoh, W.L., Bickler, C., Dummer, S. and Veiraiah, A. (2018). Effective acute care handover to GP: optimising the structure to improve discharge documentation. Acute Medicine, [online] 17(2), pp.68–76.

Results and Analysis

1. The use of IDLGM template in relation to the visibility of the electronic prompt

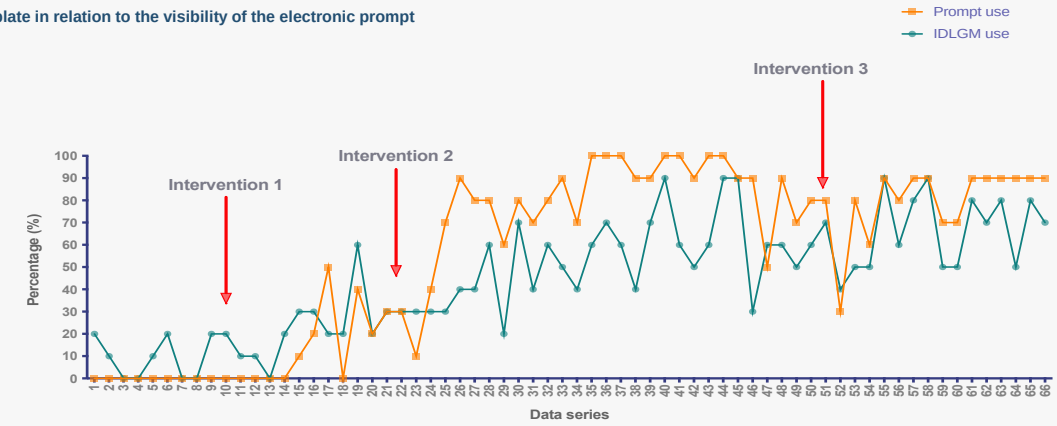

Figure 3: Time series illustrating prompt appearance and IDLGM use for the discharges of medical patients from the boarding wards.

Each data series contained 10 consecutive cases. The mean proportion of IDLGM use were (mean (SD)): baseline (11.3 (9.9)); first intervention (30.9 (11.3)), second (56.7 (17)), and third (70.8 (15)) (p<0.0001). Although the time series demonstrates minimal variation between the 2nd and 3rd interventions, the overall use of IDLGM was sustained.

The appearance of the prompt on the electronic ward round entry increases the use of the IDLGM by 11-fold (OR 11.3 (CI 7.6-16.6) (p<0.0001), adjusting for the training grade of the author and the specialty of the boarding ward by logistic regression. Despite the similar rate of the prompt appearance between medical and surgical boarding wards, the medical wards were twice more likely to use IDLGM (OR 1.9 (CI 1.3-2.78) (p=0.001).

2. Relationship between prompt visibility (process) and communication of key information (outcome)

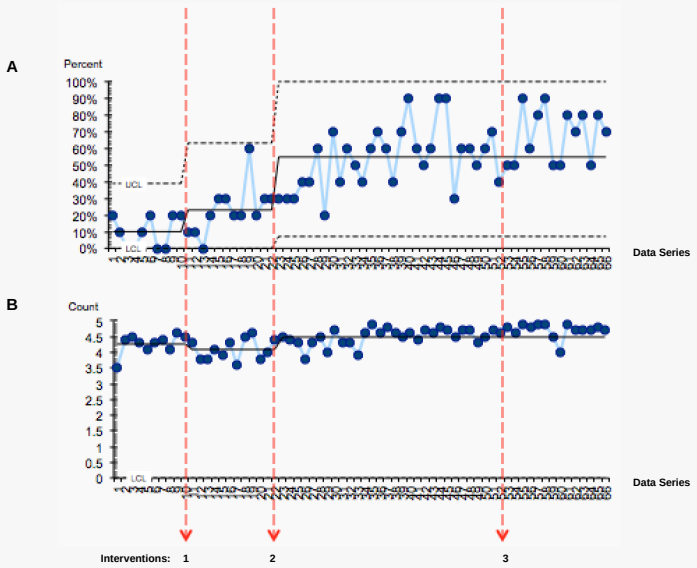

Figure 4: A – p-chart showing % prompt visibility over time; B – c-chart showing mean number of outcomes (key information communicated) achieved over time.

Following the first intervention, the overall outcome was unchanged and this is likely attributed to a large number of patients who were directly boarded from the acute medical unit to an outlier ward with no prompt visible in their electronic notes.
This was rectified by the second intervention but a delay in its effect is noted, which could reflect the time needed for the team to become accustomed to the use of IDLGM.
The third intervention did not impart significant effect on the outcomes achieved, probably because it only targeted staff working within the medical team. However, there is an overall sustained effect, indicating that the change in practice has been better incorporated within the daily work routine.

3. Rate of communication of key information from IDLGM versus other templates

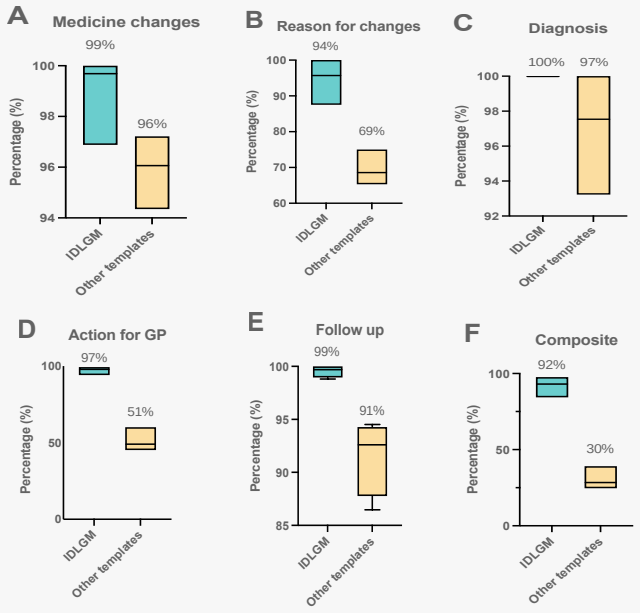

Figure 5: The use of IDLGM significantly increased the communication of: A) medicine changes (p=0.004); B) reason for the changes in medicines (p<0.0001); C) diagnosis (p=0.001); D) action for GP (p<0.0001) and E) follow-up (p<0.0001). As a composite, 92.0% of IDLGM contained all these elements compared with 30.1% in other templates (p<0.0001).