TITLE

EVALUATING COMPLIANCE AND PROCESS IMPROVEMENT IN INPATIENT DOCTOR HANDOVER USING A STRUCTURED TEMPLATE

INTRODUCTION

The handover process is a critical component of patient care, directly influencing continuity, safety, and clinical outcomes. Ineffective communication during shift transitions is a leading contributor to adverse events and medical errors. Studies highlight that up to 70% of sentinel events are associated with communication failures, particularly during handovers (1). The General Medical Council mandates that clinicians must keep colleagues adequately informed when sharing care responsibility, yet real-world compliance often falls short (2).

Recent quality improvement interventions in UK mental health units demonstrated significant enhancement in trainee confidence and patient safety after structured handover implementation (3). Similarly, implementation of standardized electronic tools in tertiary hospitals has shown improvements in information clarity, accountability, and overall patient management (4,5). Despite these advances, handover practices in many high-volume settings remain non-uniform, lacking real-time feedback, formalized tools, and training.

This project aims to bridge these gaps by designing and implementing a standardized handover tool tailored to a quaternary care setting in India, focusing on in-patient department (IPD) patients. By identifying process inefficiencies and introducing targeted improvements, the study intends to enhance both clinical workflow and patient safety.

RESEARCH QUESTION

Does the implementation of a structured handover template significantly improve the documentation compliance of clinical handovers among doctors in inpatient departments?

OBJECTIVES

- To assess the baseline quality and completeness of handover documentation prior to intervention.
- To design and implement a structured handover template customized to the operational context of the hospital.
- To conduct staff training sessions aimed at familiarizing healthcare professionals with the standardized handover tool.
- To evaluate the post-intervention changes in documentation completion rates.

HYPOTHESIS

Null Hypothesis (H_0): The introduction of a structured handover template does not result in a statistically significant improvement in documentation compliance.

Alternative Hypothesis (H_1): The implementation of a structured handover template leads to a significant improvement in documentation compliance among doctors.

MATERIAL AND METHODS

STUDY DESIGN: Descriptive interventional study with a pre- and post-assessment framework.

SETTING: A quaternary care hospital in India.

STUDY POPULATION: Patients of medical and surgical management.

- **Inclusion Criteria:**
    - Doctors involved in handovers for IPD patients during the study period.
    - IPD patient cases that require formal handover.
- **Exclusion Criteria:**
    - Critical care unit patients (e.g., ICU, CCU) due to separate handover protocols.
    - Daycare patients not requiring overnight admission or transfer.

STUDY TOOLS:

- Baseline observation checklists.
- Semi-structured doctor interviews.
- Feedback forms pre- and post-intervention.
- A standardized handover template (paper/electronic).

DURATION OF STUDY: March to May 2025.

SAMPLE SIZE: Approximately 100 doctor handovers (50 pre-intervention, 50 post-intervention), adjusted based on data saturation.

SAMPLING TECHNIQUE: Purposive sampling involving medical officers and residents engaged in patient handovers.

DATA COLLECTION PROCEDURE:

- Phase 1: Baseline data collection through observation and staff feedback.
- Phase 2: Development and implementation of standardized handover tool.
- Phase 3: Post-intervention evaluation using the same tools.

OPERATIONAL DEFINITIONS:

- *Handover Quality:* Clarity, completeness, and relevance of the information transferred during shift changes.

- *Efficiency:* Time taken and interruptions during the handover process.

DATA ANALYSIS PLAN

Data will be entered and analysed using excel by graphs, charts and tables.

ETHICAL CONSIDERATIONS

Approval will be obtained from the Institutional Ethics Committee.

Informed consent will be taken from all participants.

Confidentiality and anonymity will be maintained throughout. No identifiable data will be published.

IMPLICATIONS OF RESEARCH

The study can guide healthcare administrators and clinical teams in implementing structured handover practices, improving communication, reducing errors, and enhancing patient outcomes in high-complexity hospital settings.

REFERENCES

1. Starmer AJ, Spector ND, Srivastava R, et al. Changes in medical errors after implementation of a handoff program. N Engl J Med. 2014;371(19):1803–1812.
2. General Medical Council. Good medical practice. 2019. Available from: https://www.gmc-uk.org
3. Quality Improvement Project: Improving the Handover Process Between Junior Doctors at the Hammersmith and Fulham Mental Health Unit. BJPsych Open. 2023;9(Suppl 1):S107.
4. Liti R, Kombe F, Chibwana M, et al. Implementation of an electronic handover tool to improve patient handoff in a tertiary hospital in Kenya: A quality improvement project. BMJ Open Qual. 2022;11(2):e001332.
5. Maynard V, Khan F, Barakat AF. Structured handover tool improves patient safety and staff satisfaction: A quality improvement project. BMJ Open Qual. 2022;9(3):e001032.