

Quality Improvement: Improving the Quality and Safety of Evening Ward Cover Medical Handover

Mustafa Q

References

- Royal College of Physicians. Acute Care Toolkit 1:Handover. London. May 2011
- British Medical Association. Safe handover: safe patients. Guidance for clinical handover for clinicians and managers. London: BMA. 2004.
- Dr M Leonard et al. SBAR (Situation, Background, Assessment, Recommendation).Kaiser Permanente, Colorado, USA. Taken from the NHS Institute for Innovation and Improvement website. Available from URL:
- General Medical Council. Domain 1: Knowledge skills and performance. [online] Available at: <https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-medical-practice/domain-1---knowledge-skills-and-performance#paragraph-14> [Accessed 28 May 2018].
- Raduma-Tomás MA, Flin R, Yule S, Williams D. Doctors' handovers in hospitals: a literature review. *BMJ Qual Saf.* 2011;20:128-133.
- Academy of Medical Royal Colleges. A clinician's guide to record standards – parts 1 and 2. London: AoMRC, 2008.



WJMER

World Journal of Medical Education and Research

An Official Publication of the Education and Research Division of Doctors Academy

Subcostal Port and the Port Site Hernia: A Comparative Study

Do Undergraduate Objective Structured Clinical Examinations (OSCEs) Adequately Address the Domains Required of a Safe Physician?

Quality Improvement: Improving the Quality and Safety of Evening Ward Cover Medical Handover

Ectopic Pregnancy and Levonorgestrel - Only Emergency Contraception: A Systematic Review

Factors Affecting Treatment Compliance Among Type 2 Diabetes Patients on Follow-Up at Moi Teaching and Referral Hospital

Tablet Personal Computer Use by Medical Students in China: A Quantitative Study

Treatment of Osteoarthritis in Basilar Thumb Joints – A Review Article



ISSN 2052-1715



Quality Improvement: Improving the Quality and Safety of Evening Ward Cover Medical Handover

Mustafa Q

Institution

Wexham Park Hospital,
Wexham St, Slough SL2 4HL,
UK

*WJMER, Vol 19: Issue 1,
2019*

Abstract

Aims: In the 'Medical Department' at a District General Hospital, Foundation Year One (FY1) Doctors are responsible for evening ward cover (17:00- 21:00), where outstanding jobs are accepted from outgoing teams. Jobs which are not completed by the on-call team are then passed on to the night team. Handover, particularly of temporary "on-call" responsibility, has been identified as a point where errors are likely to occur. This multi-cycle quality improvement project demonstrates a potential model of improvement at hospitals which use a bleep system of handover.

Material and Methods:

PDSA 1: *Identifying the improvement focus:* Medical FY1 surveys (n = 20) covering RCP domains, identified weaknesses in handover and generated improvement recommendations.

PDSA 2: *Baseline analysis:* Audit of ward to 'on-call' handover practices against RCP criteria, to assess the quality of information provided (n = 5 days).

Standards: We evaluated quality of received handover sheets with "Acute Care Toolkit: 1 (RCP)"

PDSA 3: *Intervention:* Pilot introduction of a structured handover sheet and its use audited against RCP criteria. (n = 5 days).

Results: Only 46% of FY1s agreed that the handover process was done well. Only 5 doctors felt "almost always" able to comfortably communicate jobs they had been unable to complete to the night team. Less than 15% of all FY1 doctors used a structured handover sheet, despite 100% strongly agreeing that the quality of evening handover affected the night. Additionally 80% strongly agreed in the introduction of a handover sheet.

The baseline audit identified that key parameters were not being documented. Only 8% of all jobs had all three patient identifiers with S.B.A.R documented in less than half. Subsequently, 8% of all jobs audited were not completed. Introduction of a structured handover sheet resulted in 100% completion of all jobs being handed over by increasing the quality of information documented.

Conclusion: The QIP found that we are not meeting the standards for effective handovers. The handover process is strengthened by introducing an "on-call" pro-forma, allowing clearer documentation of patient identifiers, past history, jobs and clinical priority, facilitating clear baton passing.

The handover sheet has now been made available and re-auditing has demonstrated that it is a useful addition to the evening handover process.

Key Words

Quality Improvement; Audit; Safety; Handover

Corresponding Author:

Dr Qamar Mustafa; E-mail: qamar.mustafa@nhs.net

Introduction

In the 'Medical Department' at our District General Hospital, Foundation Year 1 (FY1) doctors are responsible for 'on-call' evening ward cover (17:00-21:00), where outstanding jobs are accepted from outgoing teams. Jobs which are not completed are passed on to the night team.

This system of 'handover' is where responsibility for immediate and outgoing care is transferred between different medical teams.¹ Good handover, underpinned by clear communication, ensures continuity of care is maintained, identifying to incoming teams unstable, sick patients and important, time critical tasks with a clear baton-passing of responsibility.⁵

Handover, particularly of temporary "on-call" responsibility, has been identified as a point where errors are likely to occur.^{1,2} Suboptimal handover, particularly in poor communication, has been noted to be a major preventable cause of harm, giving rise to delayed decision making, misidentification, repetitions and poor communication with patients and their families.^{1,2}

Anecdotal evidence for FY1 doctors suggests this on-call handover process at our hospital is currently unsatisfactory, leading to instances of poor communication which have generated this multi-cycle quality improvement project.

Aim

The aims of the project were:

1. To formally identify weaknesses in the evening on-call handover process at WPH and test the intervention using multiple Plan, Do, Study, Act (PDSA) cycles.
2. To develop a quality improvement project to improve patient handover, based on recommendations.
3. To introduce an on-call evening ward cover FY1 pro-forma (handover sheet)
4. To develop audit standards to ensure recommendations are maintained
5. To improve satisfaction with the evening on-call handover process within Medicine.

Material and Methods

PDSA 1: Identifying the Improvement Focus:

In March 2018, a questionnaire (appendix: 1) was distributed to FY1's (n = 20) covering domains and identifying weaknesses in handover. From these results we generated improvement recommendations based on our local practices.

Standards: Domains of best practice, as stipulated by 'Safe Handover, Safe Patient' guidelines and the 'Acute Care Toolkit 1: Handover', produced by the Royal College of Physicians (RCP).¹

PDSA 2: Baseline Analysis of Documentation During Evening 'On-Call' Handover:

Audit of ward to 'on-call' handover practices against RCP criteria, to assess the quality of information provided (n = 5 days).

Standards: We evaluated the quality of received handover sheets, over one week, with "Acute Care Toolkit: 1 (RCP)".¹

PDSA 3: Intervention- On-Call Proforma:

On-call doctors were briefed about the ideal

handover process and this was discussed on an individual basis prior to FY1's going on-call. Pilot introduction of a structured handover sheet (Figure 2) and its use audited against RCP criteria. (n = 5 days).

Standards: We evaluated the quality of received handover sheets, over one week, with "Acute Care Toolkit: 1 (RCP)". We compared the results with our baseline analysis.¹

Summary of Audit Standards (Expected Compliance of 100%):

1. Ensure that on-call ward cover doctors use an "on-call proforma" to document jobs.
2. Ensure that all jobs handed over include all three patient identifiers, including:
 - Patient name,
 - Hospital number
 - Date of birth.
3. Ensure that all incoming jobs include correct location, including the ward and bed number.
4. Ensure that any outstanding jobs are handed over to the night team.

Results

PDSA 1: Identifying the Improvement Focus:

In the qualitative arm of this project, the response rate was 71% (20/29) of FY1s. All had experienced at least one evening on-call ward cover shift. Only 46% of FY1s 'agreed' that the handover process was done well (mean 2.7).

Handover is highly variable, with different communication strategies used. Only 1 FY1 reported that they 'often' received SBAR handovers with 5 'almost always' accepting an instant messaging handover. On average, FY1 doctors were only sometimes provided with all three patient identifiers (mean 3.3)

Less than 15% of all FY1 doctors used a structured handover sheet to document the jobs generated (mean 3.4), and only 20% of FY1s would "almost always" give this same list to the night team (mean 3.7). Despite 100% strongly agreeing that the quality of evening handover affected the night (mean 5), the current handover mechanism would suggest that continuity of care is leading to repetitions and incomplete handover such that only 5 doctors felt "almost always" able to comfortably communicate jobs they had been unable to complete, to the night team (mean 3.7). Sometimes, FY1 doctors received all three patient identifiers (mean =3.3) and there were occasional instances where tasks could not be

completed because of misidentification.

It was found that 80% strongly agreed that the handover process should be standardised using a proforma (handover sheet), especially as all doctors reported that they were pushed for time (mean 3.3) and distracted when taking handovers (mean 3.1). This would go on to be the focus of our improvement project.

PDSA 2: Baseline Analysis:

Prior to the implementation of the on-call proforma, we analysed the current recording of information during a week of evening on-call shifts, against RCP standards for documentation.

There was a marked variability in documentation, with all 5 handover sheets recorded on sheets of paper, with a variable organisation of information.

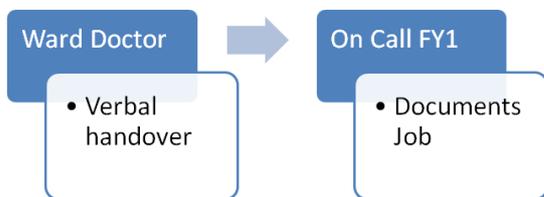


Figure 1: Process mapping – this process focussed on downstream solutions

Mixed data collection was observed and key parameters were not being documented: only 8% of all jobs had all three patient identifiers with S.B.A.R documented in less than half of all jobs.³ Importantly, 8% of all jobs audited were not completed. This is as a direct consequence of poor patient identification, with incorrect patient identifiers, failing to record the patient location meaning that the job could not be followed up or no patient background to contextualise and adequately respond to the job.

Contextualisation of an ideal handover process aimed to focus improvement on the downstream handover process, whereby the FY1 doctor receives and documents the handover. This was chosen because this would directly involve a key stake holder (FY1s) and allow suboptimal handover to be signalled by the receiving FY1 doctor who could then prompt out-going medical teams to follow a standard system of communication. The FY1 would be guided by a new handover proforma, written to be aligned to the ideal order of proceedings for our local centre. Columns were created for bleep number, location (ward and bed number), patient identifiers, including name, hospital number and date of birth, background (incorporating SBAR) and reason for handover. This form was made compliant with the Academy of Medical Royal Colleges (AoMRC) national standards.⁶

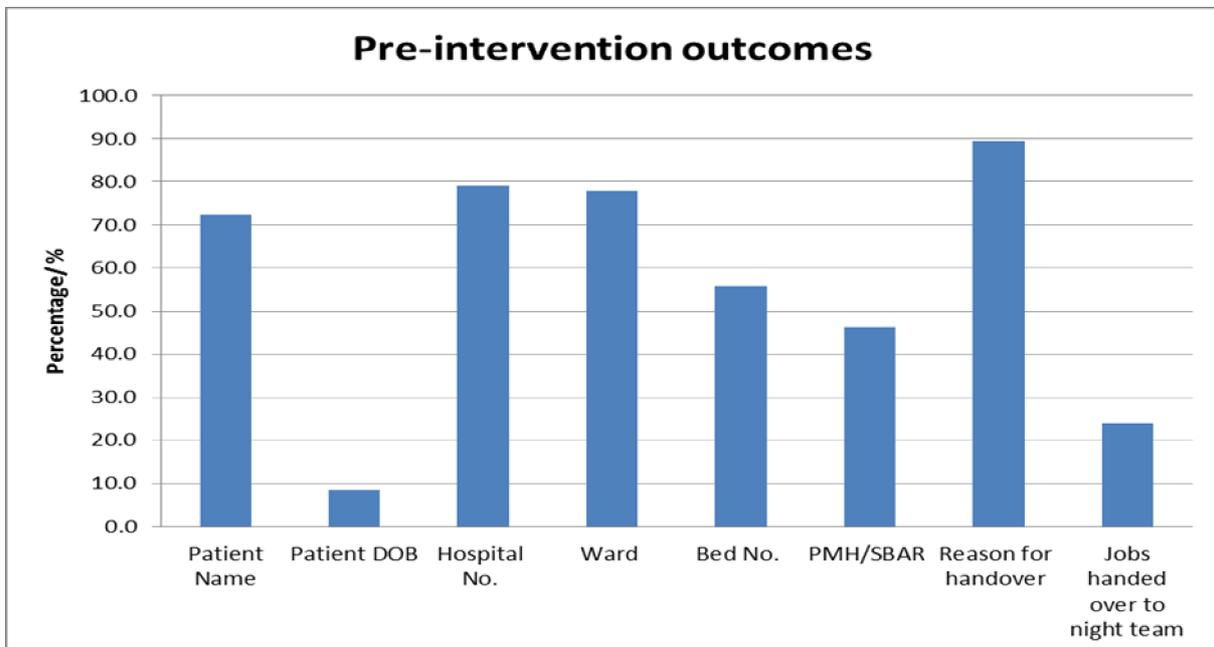


Figure 2: Pre-intervention handover outcomes

PDSA 3: Intervention – On-Call Proforma:

Wexham Park Hospital: Out of hours handover Date: _____ Name: _____

| Bleep | Ward, Bed No. | Patient Identifiers (Name, DOB, Hospital number) | Background (S.B.A.R) | Reason for handover | Clinical Priority? |
|-------|---------------|--|----------------------|---------------------|--------------------|
| | | | | | |
| | | | | | |

Figure 3: New handover pro- forma

Introduction of a structured handover sheet resulted in 100% completion of all jobs being handed over by increasing the quality of information documented. Inclusion of all three patient parameters rose from 8.4% to 51.8% with the introduction of the new handover sheets and 87% had at least 2 patient identifiers. All jobs handed over had a clear reason for the handover and this led to all jobs being either completed by the evening on-call team, or being passed to the night team.

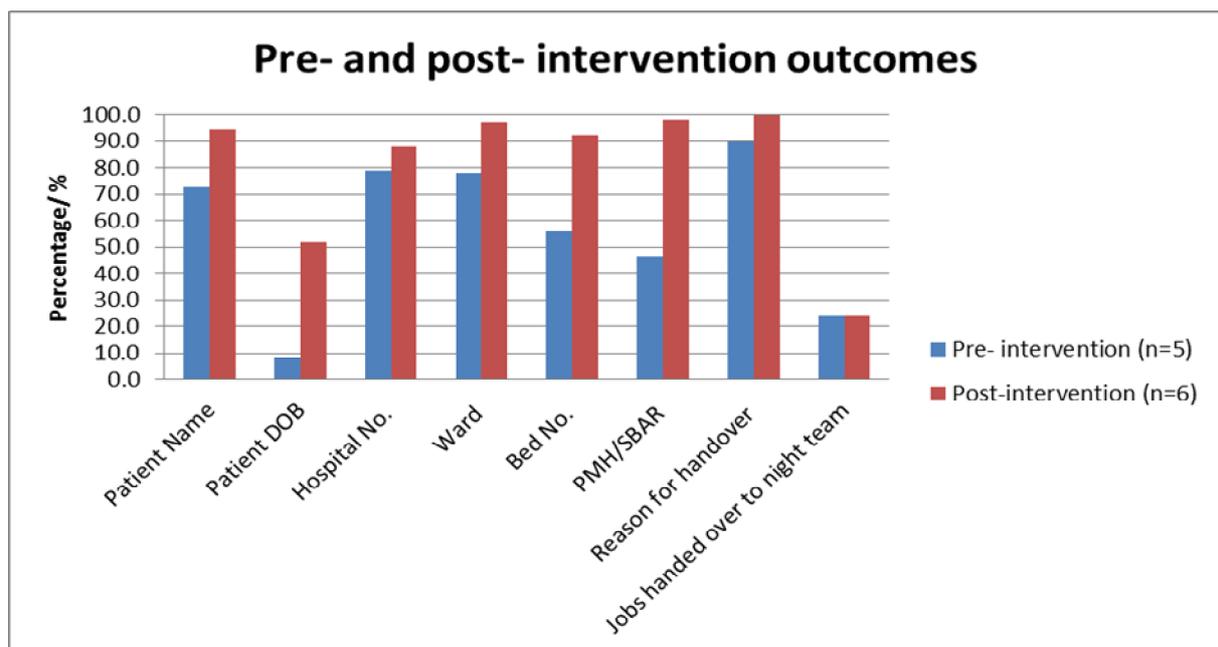


Figure 4: Comparison of pre and post intervention outcomes

Discussion

This QIP was generated from anecdotal evidence suggesting that the evening on-call handover process could be improved. The qualitative arm of this project aimed to identify these problems by engaging the key stakeholders (FY1 doctors). The questionnaire revealed widespread problems with variable handover practices including inconsistent documentation leading to inefficiencies, repetition and incomplete jobs, contributing the unsatisfactory handover later that evening.

The handover process was rationalised into an algorithm, and analysed to generate a downstream improvement recommendation to bring in a pro-forma with the aim of standardising the handover process. Focussing on the receiving end of the handover process ensures that the onus is on the on-call doctor to record correct information. The order to the sheet ensures the handover process flows as per the typical handover conversation with bleep number, location, patient identifiers, background (SBAR), and reason for handover to mirror the ideal handover process. Where there are deviations from this, the on-call doctor can prompt the referrer as per the headings on the handover sheet.

To test the fidelity and feasibility of the intervention, the baseline audit demonstrated that handover is highly variable, with different communication strategies used. Box method was the preferred medium of documenting accumulated jobs. Auditing the quality of information based on RCP handover standards led to the conclusion that best practice standards were not being followed. Specifically, incomplete patient identifiers, absent past medical histories and inchoate locations strengthened the argument in favour of the need for a structured handover sheet, connected to the outcomes of improving quality of written information.

The implementation of the handover sheets into a previously unstructured system, not only improved patient safety, by preventing misidentification and clearly identifying the patient location, it also gave more relevant patient background to assist the on-call team in handing over outstanding jobs to the night team. Furthermore, a box for clinical priority crudely stratifies jobs based on clinical urgency and is a further safeguard for patient safety when prioritising jobs.

The handover process is strengthened by introducing an "on-call" pro-forma, allowing clearer documentation of patient identifiers, past history, jobs and clinical priority, facilitating clear baton passing and providing a further safeguard for patient safety. This intervention is cost effective, easy to

implement and standardises the system of documentation and of order of proceedings and tied to the local unit and needs.

Limitations

This Quality Improvement Project touches on a small piece of the grander handover conundrum. We have focused on a downstream solution and further work would aim to tackle the upstream processes including communication training and engaging doctors who refer patients to the 'on-call' service.

Sustainability of this project will be dependent on maintaining standards, to prevent performance reverting to pre-intervention. Measures to secure this have included uploading the pro-forma onto the internet and incorporating handover into the induction agenda for junior doctors. Ongoing education and training will be essential and will need to cover generic and local requirements, the use of specific terminology, how to prioritise patients and work, training in specific communication techniques and skills, engaging multiple stakeholders and apply to all handover interactions across disciplines and groups.

Conclusions

This project demonstrates a potential model of improvement at hospitals which utilises a bleep system of handovers. Specifically, the project found that we are not meeting standards for effective handovers, presenting a patient safety issue as time critical jobs may not have sufficient information to allow for their completion. The handover process is strengthened by introducing an "on-call" pro-forma, allowing clearer documentation of patient identifiers, past history, jobs and clinical priority, facilitating clear baton passing.

This is a sustainable project as further audits have demonstrated that the standards are being maintained. Key stakeholders have been engaged by delivering focussed teaching sessions to the new incoming FY1 doctors, and with the intervention now available on the local intranet, this downstream improvement has anecdotally improved satisfaction with the handover process and objectively improved the quality of information communicated and documented.

Further work would focus on introducing this intervention to other departments within the hospital with the end aim of developing Trust wide guidelines to formally embed evening on-call handover into hospital policy and culture. Moreover, more work could be done to identify upstream solutions to create improvement recommendations such as a communication

workshop. This would align with national guidelines, which call for training in specific communication techniques and skills.^{1, 3, 4}

References

1. Royal College of Physicians. Acute Care Toolkit 1:Handover. London. May 2011
2. British Medical Association. Safe handover: safe patients. Guidance for clinical handover for clinicians and managers. London: BMA. 2004.
3. Dr M Leonard et al. SBAR (Situation, Background, Assessment, Recommendation).Kaiser Permanente, Colorado, USA. Taken from the NHS Institute for Innovation and Improvement website. Available from URL:
4. General Medical Council. Domain 1: Knowledge skills and performance. [online] Available at: <https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-medical-practice/domain-1---knowledge-skills-and-performance#paragraph-14> [Accessed 28 May 2018].
5. Raduma-Tomàs MA, Flin R, Yule S, Williams D. Doctors' handovers in hospitals: a literature review. *BMJ Qual Saf.* 2011;20:128-133.
6. Academy of Medical Royal Colleges. A clinician's guide to record standards – parts 1 and 2. London: AoMRC, 2008.

The World Journal of Medical Education & Research (WJMER) is the online publication of the Doctors Academy Group of Educational Establishments. It aims to promote academia and research amongst all members of the multi-disciplinary healthcare team including doctors, dentists, scientists, and students of these specialties from all parts of the world. The journal intends to encourage the healthy transfer of knowledge, opinions and expertise between those who have the benefit of cutting-edge technology and those who need to innovate within their resource constraints. It is our hope that this interaction will help develop medical knowledge & enhance the possibility of providing optimal clinical care in different settings all over the world.



WJMER

World Journal of Medical Education and Research

An Official Publication of the Education and Research Division of Doctors Academy

ISBN 978-93-80573-67-0



9 789380 573670 >