

# Improving junior doctor handover between jobs

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## Abstract

Patient safety is one of the most important issues in healthcare. In recent years there has been much focus on "Black Wednesday"; the day that Foundation doctors start their first jobs. Great efforts have been made to ensure that patient safety on this day has improved, with the main example being that newly qualified doctors now use some of their free time between medical school and starting their first job to shadow their outgoing counterparts.

However, because Foundation doctors start a brand new job approximately every four months for two years, subsequent job changeovers were identified as a time of potential problems and increased patient risk. It is not practical to shadow prior to every job because junior doctors are needed in their current post right up until changeover day, so a simple way to smooth this transition was needed.

A handover lunch seemed to be a feasible solution. The day before Foundation doctors change jobs, an hour is dedicated for Foundation Year 1 doctors (F1's) to sit down together over lunch (provided by the mess) and take a formal handover of all relevant information about their forthcoming job and discuss current inpatients.

Results showed that 100% of those surveyed mentioned face to face handover as essential, 93.75% said it was either helpful or extremely helpful to have a dedicated time for F1's to handover, and 12.5% said they would not have sought a face to face handover otherwise. Apart from being extremely simple and cheap, it was very popular with the F1's in the trust. It enables effective working from day one and is a great team building activity.

## Problem

Foundation doctors are required to change jobs regularly; this is to ensure a well-rounded and varied training programme that enables experience to be gained in different areas of medicine. However, it also means that junior doctors regularly find themselves working with new teams, environments, and specialties that they have never worked in before.

This could lead to problems with both patient safety and efficient working. This is not because junior doctors are unsafe doctors; they simply don't have a huge bank of personal experience to fall back on and don't know the pitfalls and problems that come with every job. For example, one team of junior doctors started a new job in surgery and were under the impression that regular medications would be prescribed on admission by the person who clerked the patient, ie the accident and emergency (A and E) doctors for emergency admissions and the anaesthetist for elective admissions. However, this was not the case and lead to a patient not receiving his anti-epileptic medication for more than 12 hours and suffering a seizure as a result. This was clearly a patient safety issue that could have been avoided.

The above problem and many others could potentially be prevented if the roles and responsibilities of Foundation doctors were clearly identified prior to the start of a new job. Upon reflection and discussion with colleagues over the stresses associated with changing jobs, it was clear that leaving handover between Foundation doctors to chance was not working. Although most

junior doctors questioned said they would seek a face to face handover, not all did and even if a face to face handover was sought it was likely to be rushed and interrupted.

## Background

Communication and team work have long been known to be very important, if not the two most important factors contributing to critical incidents in healthcare. Both are listed in the World Health Organisation's (WHO) 10 key topics that influence patient safety.[1] In addition, much research is now focused on these so called non-technical skills to bring healthcare into line with other high risk industries such as aviation.[2] With the media branding the day new junior doctors start as "Black Wednesday" and reporting an up to 8% rise in death rates among emergency medical patients on this date[3], this is an important issue.

Steps have been made in recent years to improve patient safety on so called "Black Wednesday" with the introduction of junior doctor shadowing schemes. However, the focus has primarily been on new junior doctors starting their first job with little attention paid to the fact that Foundation doctors change jobs every three to four months. Although much experience is gained during the first weeks and months as a Foundation doctor, this is not enough to guarantee patient safety at the start of the second and third posts. Moreover, patient safety incidents are rarely caused by a lack of clinical knowledge and experience but by a breakdown in communication [2, 4] - see figure 1.

Summary of evidence: communication and teamwork are key to patient safety

- As many as 98,000 patients die in US hospitals each year from preventable medical errors [5]
- 70% of events analysed by one group were due to communication failures and 75% of patients involved died [4]
- 50% of incidents analysed in the ITU setting were attributable to failures of non-technical skills [2]
- Shift or patient handovers are key areas where problems can occur [1]
- Structured communication improves the effectiveness of information transfer [5].

Figure 1. Summary of evidence: communication and teamwork are key to patient safety

Communication is defined as "the transfer of information, ideas or feelings. It involves the sender encoding their idea into a message, transmitting that to one or more receivers who then decode it back into the original idea".[1] It can be one way, eg a written message, or two way, eg a conversation.[1] When we think about communication in this way it becomes clear that there are many stages that have the potential for misunderstanding. Figure 2 provides a useful table to categorise communication problems (WHO 2009), and although not specifically about healthcare it is easy to see how these problems could occur in the healthcare setting. One paper states that all too often communication is personality and situation dependent and that standardisation of communication tools has been proven to reduce risk in other industries such as aviation.[4]

Categories of communication failures:

- Organisational system failures in which the necessary channels for communication do not exist, or are not functioning, or are rarely used
- Transmission failures in which the channels exist, but the necessary information is not transmitted (eg sending unclear or ambiguous messages). Difficulties due to the transmission medium (eg background noise). Physical problems in sending the message (eg when wearing protective equipment)
- Reception failures, in which the channels exist and the necessary information is sent but is either misinterpreted by the recipient (eg expectation of another message, misinterpretation, or disregard of the message) or timing (eg arrives too late). May be caused by physiological problems (eg impaired sight or hearing) or equipment problems (eg poor radio reception)
- Failures due to interference between the rational and emotional levels (eg arguments).

Figure 2: Categories of communication failures [1]

As can be seen above, good communication is essential and handover of patients between professionals is a potential source of

communication break down. There has been significant emphasis on handover elsewhere in healthcare in recent years[5]. For example, nursing staff handover from the night team to the day team, on-call teams handover admissions and unwell patients, juniors handover outstanding jobs and patients needing overnight review when they leave at the end of the day. However, there is no formal handover when changing jobs. This project aimed to use the knowledge summarised above to address this problem and reduce patient risk.

## Baseline measurement

Before this project there was no formal handover between Foundation doctors when they changed jobs. Some doctors would find the outgoing team for a few minutes and try to get the important details, but there was no dedicated time for handover. Although not evaluated formally by the trust prior to this project, there is anecdotal evidence describing problems encountered when changing jobs. This is in addition to the concerning figures previously mentioned regarding death rates on the day when newly qualified doctors start.

## Design

Handover needed dedicated, bleep-free time. The most logical time seemed to be lunchtime as most junior doctors take a short break over lunch, so handover could be combined with lunch to limit the amount of time taken out by the Foundation doctors that day.

The other thing required was incentive, as handover would only work if at least one member from each team attended. Mandatory attendance with a register was considered, however this could add an element of stress and Foundation training already has a significant number of mandatory requirements. Following consultation with the mess treasurer it was decided that the mess could provide lunch thus adding a morale boosting element and the incentive needed to ensure people attended.

The initial event was organised through the quality improvement programme, though the post-graduate centre in conjunction with the mess treasurer have taken on the organisation of subsequent handover lunches with very good effect and should continue to do so year on year. The sustainability of the project is ensured by the fact that the event requires minimal prior organisation and no funding from the Trust itself.

The final result was a one hour dedicated handover slot where the post-graduate centre manages the bleeps, the mess provides lunch, and the new Foundation doctors take handover from the outgoing Foundation doctors before starting their new job.

## Strategy

PDSA cycle 1: Informal feedback from colleagues and seniors in various teams demonstrated some of the issues arising when Foundation doctors changed jobs. Ideas were discussed with a number of foundation colleagues and positive feedback was

received regarding the concept of a dedicated time for handover. However it was felt that it should be trialled initially.

PDSA cycle 2: Handover lunch was initially trialled at the end of the first rotation. During informal face to face discussions there was good feedback from both the Foundation doctors who took part (approximately 50% of the F1 doctors) and the post-graduate centre. Both parties were keen to repeat the event at the end of the second rotation but suggested collection of some formal, anonymous feedback in the form of a questionnaire.

PDSA cycle 3: Handover lunch was trialled for the second time at the end of the second rotation with the post-graduate centre and mess treasurer doing the bulk of the organisation. Formal, questionnaire based feedback showed very positive results. Handover lunch will now be continued at the end of rotations 1 and 2 for Foundation Year 1 (F1) doctors starting in 2013, with the previously mentioned shadowing programme in place for the transition period at the end of rotation 3.

## Results

After the second trial of handover lunch, approximately 50% of the F1's were surveyed. 100% said face to face handover was essential for patient safety and efficient working when starting a new job. 93.75% said it was either helpful or extremely helpful to have a dedicated time for F1's to handover and 12.5% said they would not have sought a face to face handover otherwise. Other comments included "essential to avoid chaos and aid a smooth transition" and "a great boost to team morale."

## Lessons and limitations

In retrospect a more formal assessment of the problem before embarking on the project would have been helpful, because despite there being good anecdotal evidence that a problem existed there was no formal documentation of this from within the trust. In addition, any future study should aim to collect data from 75-80% of the cohort rather than 50% to give more accurate results.

One possible extension to the project would be to extend handover and team building to the multi-disciplinary team. It may prove extremely beneficial for incoming Foundation doctors to meet with nursing staff, physiotherapists, occupational therapists, etc. This would serve to firstly introduce themselves but also to discover any problems or improvements that could be addressed with the start of a new team.

In summary, a positive lesson from this project is that problems can be solved to good effect with simple, cheap interventions.

## Conclusion

Communication is well known to be a vital part of delivering safe, high quality health care, and can sometimes have disastrous consequences when it is done badly. A small amount of time and money can make significant improvements and any attempt to

improve communication between professionals should be welcomed. Handover lunch is a simple, cheap, and effective way to ensure a dedicated time for Foundation doctors to hand over to one another between jobs. It is easy to organise, popular, sustainable, and ensures that during those first few days the basic roles and responsibilities of the team are met in a calm and efficient fashion. This leaves more time to ensure the delivery of high quality medical care and maintain patient safety.

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## Declaration of interests

None declared.

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