Improving the safety of medical handovers through better education, governance and infrastructure

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<table>
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<tr>
<th>Trust name</th>
<th>Mid Cheshire Hospitals NHS Foundation Trust</th>
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<tr>
<td>Provider type</td>
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<td>Site (if applicable)</td>
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<td>Core service</td>
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<td>Trust-wide CQC rating (Overall)</td>
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The challenge

Mid Cheshire Hospitals NHS Foundation Trust is spread over three sites: Leighton Hospital, the Victoria Infirmary and Elmhurst Intermediate Care Centre. The trust has 582 hospital beds and serves a local population of approximately 300,000.

Clinicians were facing significant challenges in two areas:

- patient flow during busy acute medical shifts:
  - poor visibility of patients referred by GP when they arrived to the acute medical unit (AMU) and difficult co-ordination between medics, bed manager and nursing team

- difficulty prioritising which patients to see
  - occasional inefficiencies when it was not clear which new patient was already being seen by a doctor

- safety concerns around out-of-hours care:
  - lack of standardised handover structure on Fridays and evenings
  - lack of visibility by on-call team of potentially deteriorating patients out of hours
  - difficulty allocating resources and prioritising weekend jobs as there was no centralised handover mechanism (each ward kept a list of tasks to do).

The solution

The trust developed a handover improvement project with several initiatives, supported by the Health Education England (HEE) better care initiative and led by a team comprising an AMU consultant, a junior doctor, a project manager and an IT manager.
The project was initially run as a pilot with a number of interventions:

- First, they set up structured handover meetings, three times a day in AMU (9:30am, 4:30pm and 9:00pm), with a clear agenda, terms of reference and attendance requirements (with the consultant always present except 9:00pm on weekends).
- Second, they introduced better training and education on good clinical handover for all doctors.
- Third, they rolled out a new electronic handover tool across the medical division, which works both as a ‘take list’ and an ‘out of hours’ handover list. The tool provides admission and location details, and allows clinicians to record bedside observations schedule and record the completion of clinical tasks electronically.

**Enablers and challenges**

The project team met some IT issues over providing the IT team with an exact specification for the tool and some technical problems when it was first used but these were resolved.

Simply introducing new technology was not the answer. It required a comprehensive improvement initiative, involving bespoke training, handover governance and appropriate infrastructure. External support was also important, along with piloting the new technology on a small scale to iron out initial technical difficulties.

Clinical engagement (through focus groups) and consultant buy in were also very important. Towards the end of the initial pilot phase, consultants were proactively discussing with their trainee which patients should be handed over.

**Impact**

These interventions led to better quality of handover, supported by clear leadership and improved documentation. Doctors were able to prioritise patients more effectively and, thanks to a clear audit trail, the completion rate of tasks handed over improved.

As well as benefiting from new knowledge and skills, trainee doctors reported feeling more at ease with handover, as they trust their patients will be safely looked after by the out-of-hours team. Satisfaction with handover improved, as did overall safety and handover culture.

The improvements in practice and handover systems benefited patients in many ways. For example, thanks to quicker notification of new arrivals, patients referred by their GP were seen sooner and time to medicines reconciliation improved. Follow-up evaluation showed a statistically significant increase in out-of-hours discharges from 34.7% to 44.2%. Moreover, weekend discharges, as a proportion of all discharges, increased from 11.3% to 14.6% (p=<0.05).
Next steps and sustainability

Several measures were put in place to ensure sustainability of the project.

The existing clinical lead for the pilot project maintained ownership of embedding the process in the AMU and across the medical wards. The service manager for the AMU continues to be responsible for ensuring processes are followed and the system is promptly updated.

They also created an end user group, with representation from the multidisciplinary team. This will meet each month to discuss future change requests or process workarounds. Any amendments this group proposes need to be signed off by the clinical lead, before they are put forward to the IT department. This is supported by detailed engagement sessions to transfer knowledge from the experts in the project team to this group.

They developed user guides and standard operating procedures for:

- handover meeting
- creation of handover tasks
- management of the admission list
- managing issues/change requests.

These also clearly document individual responsibility for updating individual patient records for each role.

The registrar assigned to the AMU is expected to take responsibility for providing consistent support to junior doctors.

The IT systems manager involved with the project has responsibility for managing future software implementation. Standard change management processes were introduced between the trust and software supplier. Ownership of granting access to the system, day-to-day user support and issue management have transferred to the internal IT helpdesk.

The clinical lead for the project will be responsible for ensuring that all medical trainees receive adequate training on handover processes and the electronic system.

Thanks to the audit trail of handover tasks generated by the new electronic tool, they are also identifying out-of-hours tasks that could be completed by non-clinicians (rewriting medications, cannulation, and so on) and considering the implications for workforce planning.
Potential developments

They plan to:

- expand the system to enable pharmacy to record medicines reconciliation and report on a monthly basis to confirm compliance with CQUIN, releasing manual audit time

- develop a nursing section of the system to:
  - enable capture of risk markers, such as safeguarding or infection status
  - allow capture of key care requirements, such as high risk of fall, dementia, pressure ulcers
  - raise awareness in the core wards of entering early warning scores for patients that give a clear indication of their clinical priority

- introduce a ‘routine ward jobs’ list to completely replace the paper-based doctors’ job books, providing clear visibility of routine tasks and the length of time to complete

- develop patient flow reporting to confirm timeliness of care in the AMU

- expand the use of the system into other specialties: this has already started with the surgical division.

Want to know more?

Contact the project team lead: Dr Shirley Hammersley on Shirley.Hammersley@mcht.nhs.uk

To see the other case studies in this series: visit the NHS Improvement website at: Improving quality and safety in healthcare.