Digitising the medical take: An electronic medical admissions system. Implementation and experience in a busy acute hospital

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Patients being seen by the right person, at the right time = improved patient care

What is the background and setting for this project/initiative?

- On call medical teams working across multiple sites, including emergency department and medical admissions unit.
- Overreliance on paper for patient list
- Combined medical and geriatric on-call (based on age), but separate post-take ward rounds.

What did you do?

I designed, built, implemented and managed a database for on-call medical teams at busy district general hospital for over 5 years.

Multiple user levels are supported depending on role; add new patients [Medical], edit existing patient [ED], readonly [Bed manager]. The system is accessible from any Trust networked computer with appropriate login.

Security: frontend/backend design, fully encrypted database, without direct access and audit trail stored.

Project need and design was trainee led and managed; with support from all medical consultants, medical director and service manager. Negotiations with IT managers regarding deploying database, safety of code, and support arrangements were navigated.

What impact did you see?

The system has allowed accurate audit of times of referrals from GPs and other inpatient teams, arrival times of patients, decision to admit, admission; and prompted changes to on call pattern of junior doctors including twilight shift.

Patient flow has improved because we can see how long patient has been waiting, to be seen/reviewed/admitted. Clinical acuity is prioritised by location (ED resus) and diagnosis. Due to accurate up-to-date list, no expected medical patient has been double clerked by emergency physicians.

Considerable time saving has been achieved. The junior doctor no longer has to transcribe the take (approximately 50 patients per 24 hour period) into to two separate post-take wardround lists. Unnecessary phone calls between ED and medical registrar to confirm whether a patient is expected, or telling medical team that patient arrived or changed location, have been eliminated.

Consultants are able to see active snapshot of situation, even if in clinic on different site, and can re-deploy staff or offer senior support. Database allows medical registrar to take GP calls anywhere in trust and update on-call list from any networked computer, and integrates all members of team, including DVT nurse, seeing GP referrals independently. Bed manager is able to predict bed requirements, at least 4 hours in advance and potentially longer if GP referral, because patient enters system on referral and will not be in hospital yet.

What lessons did you learn?

I have learnt PDSA cycles(1) and process mapping to develop an intuitive system which improves care.