Managing shifts through e-rostering

In this article...

- Why a trust decided to introduce e-rostering
- Implementation of the e-rostering tool
- The financial, service and human benefits of e-rostering

E-rostering

The complexity of organising staff rosters ("off-duty") prompted the trust to look at e-rostering.

As an acute medicine department, the infection and travel medicine ward has high-quality patient care as its top priority, yet the growing burden of administrative duties was preventing us from spending enough time with our patients.

Before the technology was installed, it could take up to a week to finalise the off-duty roster, and more than two to fill in time sheets. It was common to spend up to five hours filling in the documents, which often meant taking paperwork home. Because this was such a time-consuming and laborious exercise, the roster was often delivered late, which meant that staff would only find out what shifts they would be working a few days in advance.

E-rostering enables us to manage off-duty in minutes, and plan shifts up to six weeks in advance.

We have also connected the roster and payroll systems so information is fed directly to the finance team, rather than us having to manually input data for them to process. This ensures everyone is paid the correct amount on time.

Implementation

Implementation of the e-rostering system began in September 2010, and we were using the system unassisted within three months.

A project team was on site to provide
training for the first month, and we were given complete control of the technology the following month.

The company provided telephone support to assist with any problems, and the project team offered informal ongoing support, then returned in November to assess our progress. By then we had developed confidence in the system and were using it for rudimentary tasks; the final month of training was spent exploring new capabilities and uses for the system.

Support from the manufacturer was available throughout the implementation stage.

All new recruits are offered training in how to use the system, and existing staff are invited to attend refresher or advanced training courses to develop their skills.

**Using the e-rostering tool**

Before implementing e-rostering technology, it is essential to clarify and agree a rostering policy.

Initial implementation of the technology requires a substantial one-off investment of time to input staff details, shift requests and ward rules on shift allocation. This enables the system to balance preferences against demand without compromising safety.

Once the necessary data has been migrated, you can hover over a staff member’s name and a history of the shifts they have worked pops up on the screen. Holiday requests can be viewed a year ahead, the roster can be accessed six weeks ahead, and the number of hours staff have worked can be checked.

Although the system is automated, it can be overridden if necessary, but manual intervention is rarely necessary.

Managing a roster is a complex task, and many things need to be considered (Fig 1). These include:

» **Before rostering:** Patient demand for staff must be clearly understood and budgets aligned with this. Staffing issues that may prevent this demand being met, such as vacancies and inflexible working, must be clearly understood. Staff unavailability must also be managed; this includes sickness absence, study time and management time;

» **After rostering:** Bank requests must be mapped to the unfilled demand, and payroll calculated to ensure staff are paid correctly.

**Data entry**

Healthroster acts as a central hub and a single interface, relieving administrative duties by minimising data entry points. This means information only has to be put into the system once and is immediately sent to other relevant systems.

The following information is recorded:

» Annual leave requests and records of previous annual leave taken;

» Changes in staff shift preferences;

» Staff movement between wards;

» Availability of medical supplies, such as stock levels of face masks in the event of a pandemic;

» Sick leave notifications;

» Staff skills.

**Benefits of e-rostering**

The e-rostering system has had many benefits for the trust, including a more accurate payroll system, better shift planning, a fairer rostering system, and freeing up senior nurses’ time so they can spend longer providing direct patient care.

**Payroll accuracy**

The system removes repetitive processes, making payroll management much easier.

Before it was implemented we had to complete multiple forms, including the off-duty roster, weekly attendance management forms, monthly sickness absence statistics and monthly time sheets.

With e-rostering, any changes made to a roster are forwarded to other departments, including payroll, so we can be certain pay is accurate.

**More time for patient care**

Freeing up time spent on administration means senior nurses can spend more time on the wards, tending to patients and doing the job they signed up for.

**Shift planning and managing supplies**

E-rostering enables us to plan shift rotations well in advance and forecast staffing requirements. This has helped reduce our reliance on agency staff, saving the ward a significant amount of money. It has also helped us monitor overtime. As it holds information on medical supplies, it has also helped us save money by addressing waste and managing resources better.

**Fair rostering**

Allocating shifts can be a sensitive issue, especially when trying to accommodate different and often conflicting personal preferences of staff.

E-rostering means the burden is on the system to make the right judgment, in accordance with safety rules set by management. This is invariably less divisive and more popular with staff.

E-rostering has proved particularly beneficial in the run-up to national holidays. In the past, there were tense negotiations around who was and was not scheduled to work over holidays such as Easter and Christmas. Next year, we will be able to quickly pull up historic records and let the system make these decisions, based on the relevant information. The same applies to popular shifts such as bank holidays, which offer double pay. We now have a “league table” of requests that we can share with the team to demonstrate that cover has been awarded on a fair and equitable basis.

E-rostering also helps to balance annual leave across the year. Employees can go into the system to check their remaining holiday allowance, making it easier for them to plan ahead. From a management perspective, we can check that holidays are evenly spread, rather than having to cope with a scramble at the end of the year.
Incident planning

E-rostering puts control back into nurses’ hands, while ensuring care comes first. It also protects frontline staff during times of the year when workloads are particularly intense by ensuring cover is adequate.

For example, it is difficult to deal with a flu pandemic if 35% of staff are on annual leave. The system means we can plan staff leave so we always have enough people on duty and are ready to deal with unforeseen outbreaks or major incidents.

New skills

The e-rostering system has also enabled senior nurses to develop valuable new skills.

While the system interface is intuitive and easy to use, mastering it is a valuable skill, particularly for nurses in positions of responsibility and those with managerial aspirations.

Discussion

Introducing new technology is always a daunting task, requiring investment in time and effort to get used to a new way of working.

The technology will do as much or as little as you want; once a trust is trained and ready to use the tool, it is responsible for making the most of the investment.

With NHS budget restraint creating a demand for more efficient systems, and the prospect of greater competition from the private sector, it has never been more important to modernise ways of working.

Nurses’ time is often wasted through the inefficient management of the workforce. Since e-rostering was introduced, we are not only running our wards more efficiently and within budget but also setting examples of best practice for other trusts to follow.

Based on the success of the tool to date, the trust is now planning to extend the system to all wards and departments. With this fairer, safer and more efficient system in place, we have saved money by using our workforce more effectively and reducing our reliance on bank and agency staff.

At ward level, we still have the flexibility to exercise our own judgement, but are able to identify gaps in the rota and address any shortfalls. For example, when two nurses got married at the same time last year, the system was flexible enough to allow for the additional leave, even though it overlapped, while enabling us to consider our staffing options well in advance.

Conclusion

With the current focus on improving frontline services, ensuring the correct skill mix of ward staff is crucial to patient safety. The new rostering system has now been rolled out across 66 clinical areas. It gives us that certainty, while allocating shifts in a fair and constructive way.

Not only are we equipped to offer the best possible patient care, but our staff are happy too.

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Box 1. Benefits of E-rostering

- Payroll is accurate
- Zero reliance on agency staff once fully established
- Ward sisters can manage their budgets accurately, helping the trust to save money
- Nurses can spend more time on the ward
- Annual leave requests are processed in a fairer way
- Understaffing can be prevented through forward planning

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