eWIN

GOOD PRACTICE
CASE STUDY

Yorkshire and the Humber

NHS

HARROGATE & DISTRICT NHS FOUNDATION TRUST

eROSTERING
USING ROSTERPRO CENTRAL

SUMMARY

Implementation of RosterPro Central - the eRostering system by SMART.

Prior to the implementation of RosterPro Central, the Trust used a variety of legacy systems to produce and manage staff rosters. This included; an electronic system, which was largely unsupported, Excel spreadsheets, paper rosters and paper timesheets. The variety of legacy systems caused data to be not easily accessible to the Trust to enable reporting and population of the Payroll system.

KEY OUTCOMES

- **Roster Planning Benefits** – Prior to the implementation of eRostering the planning of rosters was often carried out on paper or spreadsheets over a number of days and then, in the case of the wards, input into an electronic system. Due to the fragmented nature of the roster planning using legacy systems, and the fact that some planning was carried out in managers own time, it was difficult to quantify the amount of time taken to plan rosters prior to the implementation of RosterPro. However, it was estimated, for complex wards or departments, that planning would have taken several hours.

  Rosters are now being planned electronically with all the required information readily available. The time taken to plan a ward roster has been found to vary between 2 and 4 hours, dependent on the complexity of the ward. Departments using fixed patterns of shifts for their staff can further reduce the roster planning time to minutes rather than hours.

- **Quality Benefits –** Rosters are planned using staff requests and the rules, which determine the shift patterns that can be worked. Managers no longer have to refer to off duty request books or annual leave request documents to plan the roster. Therefore, the rosters more closely match the flexible working requirements of the staff whilst providing the correct skill mix and staffing levels to meet the need of both the Trust and patients.

- **Data Analysis Benefits –** Rostering data is now being stored in one central database, which allows the Trust to analyse this information. The RosterPro reporting system contains many standard data analysis reports such as sickness analysis. In addition, it is possible to setup a synchronised copy of the database and develop more in depth analysis that would have been impossible using the legacy systems. The Trust can now report on real time data which changes by the minute as opposed to retrospective data in the Electronic Staff Record (ESR) system, such as timesheet or sickness information, which was only uploaded into ESR on a monthly basis.

- **Efficiency Benefits –** Savings are driven by the accuracy of planned rosters and the efficient use of staff therefore reducing the need for agency staff. The implementation of the payroll interface has also delivered significant efficiency gains.

  Managers and matrons can now view all areas under their responsibility and quickly identify staffing issues. They can then drill down through their areas to identify which departments or wards have understaffing and overstaffing issues for any given shift and redeploy staff between rosters with a 'few clicks of the mouse'.

  Rostered shift fill rates have been examined for a medical ward. Using the legacy system the fill rate was shown as 90% for February 2009. For February 2010, the fill rate using RosterPro Central was 96.43%. Note that although these figures show a significant increase in the fill rate they should be taken as an indication only, as the staffing requirements for wards and departments vary over time due to the needs of the Trust and patients. Absences for such reasons as maternity leave and sickness episodes can also have a significant effect on the fill rate.

Information regarding shifts worked, sickness episodes, enhancements, additional or overtime shifts are now electronically loaded into the Payroll system at the end of each month. The electronic transfer of information has removed the need to input timesheet information manually for every member of staff. It is envisaged that once the payroll interface is fully rolled out across the Trust there will be a saving of two Whole Time Equivalents (WTE) of support staff time. This time will then be utilised providing other efficiencies within the payroll team and allow the workload to increase without the need to increase the staff levels within the department.

- **Financial Benefits –** The benefits realisation work is ongoing, any financial benefits information is indicative only and will vary depending on variables such as maternity leave, sickness and the changing needs of the Trust and patients over time.

  Initial investigation compared one ward in April 2009 with April 2010. There was a significant decrease of total overspend for the ward of £7,424 down to £476 for that one month alone.

  A comparison of the same ward for the 08/09 financial year against 09/10 financial year showed that there was a decrease in spend on Bank Staff of £24,761.

- **Implementation to Date –** As of July 2012 the Trust has implemented RosterPro Central across 136 rosters covering approximately 2500 staff. The eRostering solution has been used throughout the Trust in all departments, both clinical and non clinical, with the exception of Medical Staffing. During 2012/13 RosterPro Central will be rolled out to approximately 1000 Community staff.

KEY AIMS

- Automated roster planning to reduce the time spent by managers on non-clinical commitments.

- To centrally store all rostering data.

- To provide visibility of staff shortfalls, over staffing and the redeployment of

BACKGROUND

Harrogate & District NHS Foundation Trust is an integrated care (acute and community services) NHS foundation trust.

The Trust is the principal provider of hospital services to the population of Harrogate and surrounding district and to north Leeds. This represents a catchment population of approximately 200,000. In addition, on 1 April 2011, the Trust took on responsibility for a wide range of community based services covering the Harrogate and District locality and some services covering the whole of North Yorkshire, as part of the Transforming Community Services programme.

The hospital has an Emergency Department, extensive outpatient facilities, Intensive Therapy Unit and High Dependency Unit, Coronary Care Unit, plus five main theatres and a twenty place Day Surgery Unit with two further theatres. The Macmillan Dales Unit provides assessment and treatment, principally for the diagnosis and treatment of patients with cancer or dermatological conditions. Dedicated purpose built facilities are also provided on site for Cardiology, Radiology, Pharmacy, Pathology, Endoscopy and Therapy Services. The Trust also has a central delivery ward and maternity services, together with an Early Pregnancy Assessment Unit.

In terms of community based services, the Trust provides the following:

- **Older People and Vulnerable Adults Services;**
- **Specialist Community Services;**
- **Children and Family Services;**
- **Minor Injury Units and Walk In Centre Services;**
- **GP Out of Hours Services;**
- **Prison Healthcare;**
- **Smoking Cessation Services;**
- **Community Equipment and Wheelchair Stores;**
- **Salaried Dental Services;**
- **Safeguarding Children Services;**
- **Community Podiatry Services, and;**
- **Infection Prevention and Control/TB Liaison Services.**

The overall catchment population for these services can be as great as 800,000.

staff between departments to reduce agency costs.

- To allow access for staff to request and manage both annual leave and working shifts.

- To provide equality and transparency in the allocation of shifts and annual leave using a scoring system to allow identification of priority requests and fair allocation of requests where there are insufficient staffing requirements to allow all requests to be granted.

- Skill mix and staffing level requirements planning.

- Rostering rules at both staff level and location level to match existing flexible working agreements to ensure that the roster is planned fairly.

- Visibility of the planned rosters for each staff member.

- Electronic maintenance of rosters to reflect the changes of the roster.

- Management of sickness episodes and their effect on planned rosters.

- Immediate access to up-to-date roster information.

- Interface with the Electronic Staff Record System (ESR) for Payroll.

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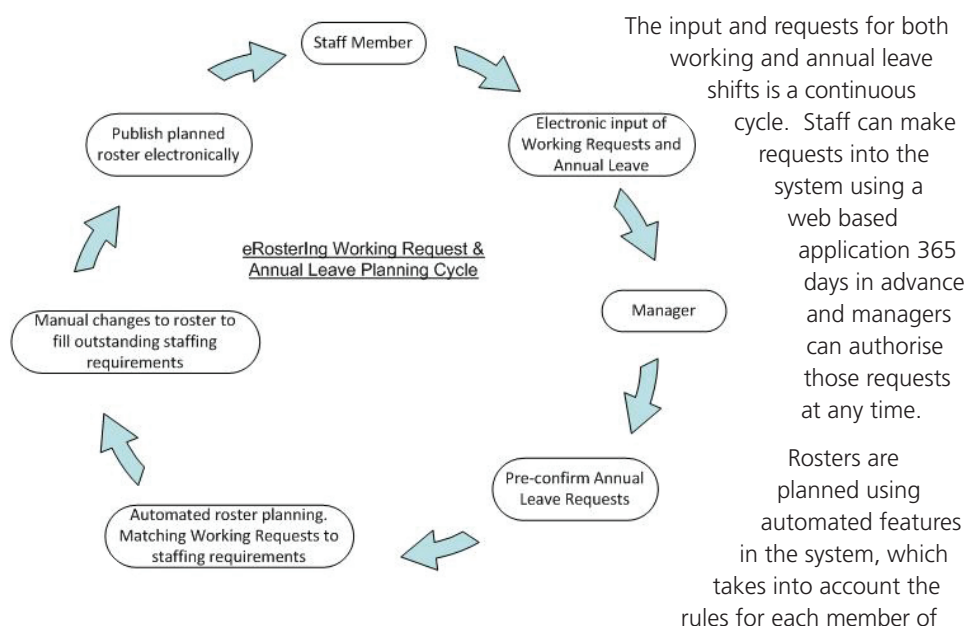
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KEY STAGES

- RosterPro Central by SMART Systems selected as the preferred eRostering system (2008). The selection panel consisted of matrons and managers from across the Trust.

- Implementation began on all medical and surgical wards in December 2008. It has since been rolled out to all other areas of the Trust. The RosterPro team consisting of a Workforce Systems Manager and a RosterPro Support Officer carried out the rollout. A Project Manager oversaw the rollout.

- Each ward or department underwent a consultation to gather the required information (including shift patterns, current working arrangements, rules for locking out holiday periods, establishment figures and other local departmental rules, which affected the creation of rosters) and the system was configured to the individual department's requirements to produce rosters that met their needs. The consultations were carried out by the RosterPro team with the workload shared out equally in line with the project plan.

- Details about staff including; pay band, working hours, shift rules, nursing registration and any training were entered into the system along with the staffing levels and skill mix required to

run the ward or department on a daily basis. The staff details and required skill mix were entered into the rostering system by the RosterPro team.

- Managers and staff were then trained to use the system to input requests and plan rosters. Deputies in each location were also trained to provide backup should a manager be unavailable to produce or update a roster. The IT Training team carried out the training of staff to input requests, the RosterPro team carried out the manager training.

- Wards with complicated rules were revisited in mid-2010 by the RosterPro team to ensure the accuracy of rules and configuration. Both formal and ad hoc retraining sessions were provided to refresh managers RosterPro skill sets if required.

- In late 2009, the interface to the Payroll system was implemented following extensive testing by the RosterPro team. The rollout is being carried out on a ward by ward and department by department basis, typically between 3-6 wards or departments per month, with each department or ward parallel running RosterPro with their legacy system in the first instance prior to going live. Both the RosterPro team and the Payroll department carry out a comparison

of the data received into the Payroll system to ensure that the data matches the data in the legacy system. Only once this comparison is complete and an error rate of less that 5% is achieved is the ward or department informed that they are 'fully' live on RosterPro and they can stop using their legacy system.

- The implementation of the Payroll interface is already providing benefit to the Trust as the Payroll department previously had to manually input information for timesheets and the legacy systems each month. Now the data is electronically taken from the rosters and fed directly into the Payroll system for each employee's working assignment. Eliminating the manual input stage ensures that manual input errors do not occur and managers can then be confident that the accurate data they enter into the rosters is used to pay staff correctly.

- Furthermore, our staff are now able to view their enhancements, additional and overtime information that has been sent to the Payroll department. This will cut down significantly on the queries received by both managers and Payroll staff.

HOW IT WORKS

eRostering Working Request & Annual Leave Planning Cycle

The input and requests for both working and annual leave shifts is a continuous cycle. Staff can make requests into the system using a web based application 365 days in advance and managers can authorise those requests at any time.

Rosters are planned using automated features in the system, which takes into account the rules for each member of

staff, contracted hours and the skill mix required. Manual changes are made to assign any outstanding staffing requirements and the planned roster is then available electronically to staff. Rosters can be printed for placing on notice boards for those staff that have not accessed their electronic rosters.

Once the roster is live, changes are then made retrospectively to reflect any changes that have happened. After all changes for a calendar month have been made, the roster manager verifies them. When a department or ward is live on the Payroll interface, the verified data is transferred onto the Payroll system on a monthly basis so that the correct payments are made to members of staff.

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RESOURCES

- An existing IM&T Project Manager was nominated as the RosterPro Central Project Manager.

- A Workforce Systems Manager and RosterPro Support Officer were employed to carry out the implementation and to provide continuing support and training for the rostering system.

KEY CHALLENGES

- **Resistance to Change –** the legacy systems, that were in place previously, had been in place for a number of years. For example, the electronic legacy system that was used on the wards had been in place since 1993. Staff on wards were used to using the legacy system and did not fully understand the benefits of changing to RosterPro Central; this was particularly the case for staff who were not confident using computers or Information Technology.

  This was overcome by the RosterPro team promoting RosterPro in a positive manner to show all of the available features that the system has. Significant amounts of tailored training and support were also given to ensure that each user obtained the skill sets they needed to use the relevant features of the system.

- **Communication –** In early 2010, it was highlighted that there were issues with the new system, in that the automatic rostering function was not working. In fact, the automatic rostering function was working but it was running according to outdated rules due to changes, which had not been given to the RosterPro team to input.

  A meeting was held between key roster managers, the RosterPro team and HR to address any issues that they were having with the system. The fact that rules need to be up to date in order for the automatic rostering function to give accurate output of shifts was reiterated. Wards with complicated rules were revisited in mid-2010 to ensure the accuracy of rules and configuration. Both formal and ad hoc retraining sessions were provided to refresh managers RosterPro skill sets if required.

KEY LEARNING

- Communication with all staff is crucial to a successful rollout. Communication was in the form of attending department and team meetings, presentations, e-mail bulletins and Question & Answer sessions at the Trusts team brief sessions, which were held monthly.

- Continuity of training and the availability of trained support to all managers is essential.

- eRostering can be integrated into existing processes to provide benefits around efficiencies, time savings and better use of roster data to inform and empower both staff and managers.

SUSTAINABILITY

RosterPro Central is an integral management tool that is used on a daily basis for roster planning, shift management, annual leave management, sickness management and ensuring that correct payments are made to staff on a monthly basis for shifts worked.

NEXT STEPS

- **ESR Outbound Interface –** this will provide automated employee record synchronisation, therefore providing up-to-date information to be stored in RosterPro Central.

- **NHS Professional (NHSP) Interface –** this will enable managers to identify any shifts on the roster that need to be covered by agency staff. Requests can then be made electronically through RosterPro Central to NHSP. When the shift is then covered by NHSP a response will be sent back to RosterPro Central and the shift will automatically populate the roster.

FURTHER LINKS

Relevant Websites

www.smart-rostering.co.uk

CONTACT FOR FURTHER INFORMATION

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