<table>
<thead>
<tr>
<th>Meeting and date</th>
<th>BOARD OF DIRECTORS – 7 JULY 2016</th>
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<tbody>
<tr>
<td><strong>Title</strong></td>
<td>Harnessing the full potential of electronic rostering</td>
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| **Summary of paper** | This paper provides Trust Board with a status report as to how effective GWH is utilising its e-rostering system compared to best practice sites.  

Electronic rostering has been challenging for the NHS and for GWH to implement, however the benefits of the effective and efficient deployment of our workforce is a vital part of our People Strategy. Further, the effective implementation of electronic rostering supports patient safety and the effective management of our pay bill.  

The Trust has been implementing e-rostering as a wide scale workforce change since 2010 with the first rosters going live in January 2011. The Trust now rosters 1,491 staff using the latest release of Kronos Rosterpro Central, which is now web based to improve speed and functionality. E-Rostering works at its optimum level in wards with standardised shift patterns and low vacancies. On our rostered areas however, there are 133.96 vacancies (nurses and healthcare assistants). This hampers effective rostering and varying shift patterns exist due to the national nursing shortage and our need to remain competitive for staffing.  

The paper also describes the post implementation challenges including lack of user confidence, the ongoing challenge of building capability of rostering managers, system speed, software concerns and compliance with Rostering policy. The paper describes what the Trust has done to address these challenges and constraints and describes what challenges remain for roster managers and the senior team.  

The paper also describes the most significant benefit realised from the system which has been the accurate visibility of hours worked and owed. This transparency has saved the most money in ensuring that substantive staff are being utilised efficiently before overtime and temporary staffing requests are made.  

An audit report from TIAA has also provided assurance in February 2015 that recommendations made in an audit during 2014 had been implemented effectively and the PWC Controls Review recommendations have also been implemented as noted by Finance and Investment Committee. The Trust has made significant steps forward in the last 12 months however there remains work to be continued.  

The recommended next steps to embed the system further include a refreshed system reboot to reinforce ownership at ward level, improved management reporting and ensuring compliance with policy including sign off dates and paperless rostering. Senior leadership is key to driving cultural change required to embed rostering as business as usual. |
A programme of work to review standardised shift times including patterns as we still have a large number of shift times and local rules to improve auto-rostering is also vital. Concerns with the current software provider also continue and a bid for capital funding is being refreshed with a clear benefits realisation plan. The E-Rostering Project Board will oversee the reboot plan and will report through Executive Committee.

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<tr>
<th>Consultation / other committee views</th>
<th>Executive Committee</th>
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<tr>
<td>Recommendations/decisions required</td>
<td>Trust Board receives the status report and supports next steps. Finance and Investment Committee receives a report quantifying the savings going forward by ward.</td>
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**Link to Trust Priorities**

- We will make the patient the centre of everything we do.
- We will innovate and identify new ways of working.
- We will build capacity and capability by investing in our staff, infrastructure and partnerships.

**Link to Quality**

1. Safety (staffing, falls, never events, handover, SI, safeguarding, infection control, environment, medicines, equipment)
2. Effectiveness (HMSR, SHMI, Mortality, Clinical audits, care bundles, deteriorating patient)
3. Caring (patient experience, patient surveys, friends and family test, patient stories, response to call bells)
4. Responsiveness (complaints, waiting times, cancelled operations, ambulance stays, translation services, comfort factors – TV and seating)
5. Well led (staff survey, staffing levels, sickness rates, flu vaccinations rates, board/ward interactions, staff reports, governance and reporting, risk management, financial control)

**Risk issues**

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<th>Risk Register Ref No.</th>
<th>Risk Score</th>
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**Resource Implications**

**Regulations and legal considerations**

**Quality consideration and impact on patient and carers**

Staffing is a key determinant of quality of care.

**Report Sign Off**

**Financial**

**Operational**

**HR**

Oonagh Fitzgerald, Director of Human Resources
1. The original business case for rostering

Electronic rostering was introduced across GWH in 2010 as part of our strategy to ensure that the Trust was maximising the contribution of its nursing workforce and also to assist in controlling the demand for temporary nursing staff. E-Rostering was being introduced across the NHS at the time as an operational efficiency programme of work. There was no financial value of savings attached to the implementation plan at GWH. The benefits realisation plan attached to the PID in 2009 referenced ward managers having greater control and flexibility for keeping within funded establishment but financial savings were not quantified at the time.

The scope of the original E-Rostering Project Plan in May 2010 was limited and it set out to introduce rostering in clear defined areas including ward areas, Day Surgery, Endoscopy and Urology and an integrated nurse bank solution. The project excluded nursing staff in outpatient areas, maternity services, theatres and allied health professionals. However, the project plan was clear that the system selected needed to be suitable for implementation into other clinical areas.

The initial post implementation challenges between 2011 and 2013 were consistent with those widely experienced across the NHS and were as follows:

- User resistance. Ward staff didn’t like using the system and continued to work out rosters on paper before inputting the information into the e-roster on a shift by shift basis which led to speed of processing issues
- There were software issues and an inadequately resourced e-rostering team which meant that requirements were not being updated to reflect changes in staff (starters and leavers), service design and delivery
- Misconception that the electronic system would auto-roster the same roster as before taking into account all of the non-standard start and finish times and flexible working needs
- Move from employee preference on shift requests to service preference was and continues to be a significant cultural change. It is difficult and inefficient to accommodate large numbers of requests in a standardised system
• Limited embedding and technical support available corporately to support rostering managers
• Lack of consistent ownership of the system at ward and matron level

In summary, the level of manual creation and changes led to system speed issues which hampered staff engagement with the system. Any benefit from auto-roster and the fair application of shift requests was not therefore fully realised. There were examples of over and under staffing as a result of manual intervention.

2. How have we addressed the original implementation challenges?

In 2013 due to a gap between the original implementation plan and feedback from users and the Executive team, the Trust had a system reboot and went back to basics. As a Trust we had to learn how to make the most of the e-rostering system 2-3 years after it was installed. A dedicated Roster Team was created which included technical experts, user support and a nursing champion. This team had knowledge of system functionality and supported:

* Education, support and challenge in effective rostering practice including a rebuild programme
* Making the most of the software and upgrading to latest versions
* More timely roster builds
* Extended the scope of rostering at GWH outside the remit of the original project implementation plan for example, into maternity services, outpatients and theatres. We now roster 65% of the nursing workforce.
* Bank staff can see unfilled shifts and can book onto those shifts from home
* Monitoring and management of e-rostering through KPI reporting and visibility at Executive Committee
* Project board oversight to drive cultural change

3. What does best rostering practice look like?

Northern Lincolnshire & Goole NHS Foundation Trust have used an e-roster system for five years. Like GWH, they experienced a number of implementation challenges in the early years which meant that the electronic roster was an add-on to what roster creators were doing before.

**Best practice case study from Northern Lincolnshire & Goole NHS Foundation Trust**

**Actions undertaken to improve rostering included:**

• standardisation of shift times
• incentivising staff to use the system by moving the booking of request such as annual leave onto the system
• pro-active management of annual leave to ensure that every shift had an experienced, substantive staff member who could take charge
• Roster managers were urged to use the auto-roster option in the software
• Re-built rosters when there was an increase in establishment to ensure the skill mix was correct
• Annual leave rules built into the system
• Matron ownership to ensure that rosters are signed off in advance
• E-roster system was linked to the bank system so temporary staff know what shifts are available

Source HFMA February 2016
4. What benefits have we gained from the rostering system?

**Productivity gains** - To get the system properly embedded, the main objective since 2013 has been to introduce live paperless rostering. The main productivity and financial gain has been accurate visibility of hours worked and owed, which has led to contracted hours being used before temporary staff requests are made. Hours owed or owing are reported in the KPI table. Maternity services are the exception however a plan is in place to achieve paperless by Q2.

In total 1,491 staff (65% of our total nursing workforce) and Bank workers are paid electronically as at May 2016 via an interface with ESR (Electronic Staff Record) removing the need for paper timesheets. All absence (Annual Leave, Sickness, Study and Maternity Leave) reporting is undertaken via the ESR interface, thus removing the need for paper based returns.

**Ownership** – Ownership of the system at ward and matron level continues to be a challenge and there is inconsistent compliance with policy. Corporately we have incentivised staff to use the system as booking requests such as annual leave and study leave can only be made through the electronic system. This has partly supported the cultural change and ownership needed. Timely roster creation is not however always achieved thus limiting our chance of securing bank workers to fill gaps.

**Best practice at GWH**

Ward managers such as Andrea Plumb on Mercury Ward owns her roster, rebuild programme and rules. All Andrea’s 40 members of staff work 12 hour shifts and she can roster in 2 hours. “As a ward manager I find the electronic roster to be an essential and invaluable tool. I initially set out to completely understand how the roster works, and programmed my ward’s roster to exactly match our staffing model, working patterns, shift choices, and staff contracts. As a result, I can produce a roster within 2 hours, and know that I have a reliable, live working record of the ward”.

This leadership is not consistent across all our wards. A visit and audit programme is underway to test the live paperless system as concerns exist that certain wards/departments are reverting to paper. Julie Brown, Lead Nurse for Rostering and Bank visits wards and asks nurses “if you want to know who’s working tomorrow, how do you find out?” The answer has been over the last year, ‘the roster, not the allocation book”.

**Financial savings** - Budget and costs of temporary staffing were built into the e-roster system in 2014 so that managers can see the cost of temporary staffing and achievement against their ward budgets overall. The e-rostering system has also increased control for requests for temporary staffing. These can now only be made when there is a clear need identified within the system and with a fully integrated Bank module communications are clear and also provide lines of accountability in respect of the authorisation process for temporary staffing requests.

The GWH nursing budget was £1.3m underspent at year end and there was a 16% reduction in agency spend for nursing staff in 15/16 compared to 14/15. The reduction in nursing agency spend which equated to £872,973 cost avoidance saving was partly due to rostering. The following were contributing factors:
<table>
<thead>
<tr>
<th>Contributing factors</th>
<th>Saving</th>
<th>%</th>
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<tr>
<td>Direct requests only from roster to bank service</td>
<td>£43,648.65</td>
<td>5%</td>
</tr>
<tr>
<td>Redesigning shift patterns for example introducing 12 hour shifts *</td>
<td>£174,594.60</td>
<td>20%</td>
</tr>
<tr>
<td>Pro-actively managing annual leave</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours owing and hours due clear on roster</td>
<td>£130,945.95</td>
<td>15%</td>
</tr>
<tr>
<td>Compliance with Rostering Policy – rosters signed off on time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction of paperless rostering</td>
<td>£87,297.30</td>
<td>10%</td>
</tr>
<tr>
<td>Increase authorisation levels for agency staff and introduction of toolkit</td>
<td>£87,297.30</td>
<td>10%</td>
</tr>
<tr>
<td>Clarity on costs for agency staff, costs in system and Trust’s financial position</td>
<td>£43,648.65</td>
<td>5%</td>
</tr>
<tr>
<td>Ban Thornbury agency staff achieved because above was delivered.</td>
<td>£174,594.60</td>
<td>20%</td>
</tr>
<tr>
<td>No Agency HCA’s from 1/07/16</td>
<td>£130,945.95</td>
<td>15%</td>
</tr>
<tr>
<td>Total</td>
<td>£872,973</td>
<td>100%</td>
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* Planned Care saved £137,984 in 15/16

Exemplar sites including Northern Lincolnshire and Goole NHS Foundation Trust and Royal Devon and Exeter NHS Trust have achieved maximum efficiency by redesigning all the shifts so that they had the same starting and finishing times. These were predominantly long days. North Devon now have 80% of staff in in-patient areas working these shifts making auto-rostering more effective. At GWH, a programme of work has been underway since 2014 to introduce 12 hour shifts across the Trust or 6 hour blocks where appropriate. In total, 29 out of 36 rostered areas (80.5%) run 12 hour shift patterns though not all staff work this pattern of work. The standardised pattern has saved overlap costs but due to our vacancy levels we continue to offer flexible working in order to attract hard to recruit staff.
5. **What are the current constraints to gaining maximum efficiency from the system?**

5.1 The system the Trust purchased has inherent glitches and software limitations and thus hampers user confidence. For example, putting new starters on the roster is essential for effective rostering but distorts the unused hours dashboard.

5.2 Management reporting from the system is problematic. For example, the senior nursing team require an overview daily safer staffing report and our current provider wants to charge £13,000 to develop the report, which is unacceptable. In the meantime, matrons are still collecting safer staffing data manually every day. A bid for capital funding is being refreshed.

5.3 Technical support has been problematic over the six months due to staff turnover in the rostering team and more frequent system rebuilds are needed. These system rebuilds could release clinical time as they review the number of shift patterns and local rules (e.g. specific skills required and agreed flexible working patterns).

5.4 KPI’s are being reviewed so that they provide the senior nursing team with clear, timely and accurate management reports related to staff sickness, training time, clinical competence, annual leave taken and left, requests, unavailability and restrictions to working patterns.

5.5 Increase permanent staffing levels as this will support efficient auto-rostering and therefore reduce costs associated with the use of agency staff.

5.6 Improving compliance with rostering policy. The most recent roster publication date was 29th May 2016 for the roster period 10th July to 6th August 2016. In total, 57% of rosters were compliant with the sign off deadline. For those wards that were non-compliant, the E-Roster Clinical Lead Nurse is working with the matrons and Divisional Directors of Nursing representing the wards to understand why and what action needs to be taken to ensure future compliance. Reasons for late sign off include new ward manager in place, roster rebuild underway, matron unhappy with roster.

5.7 Implement the agreed roll out programme across the organisation to drive further efficiencies and reduce pay bill costs. The programme’s financial outputs will be quantified and reported to Finance and Investment Committee.

6. **Governance**

The E-Roster Board, chaired by the Deputy Director of Human Resources is responsible for overseeing the e-rostering programme across the organisation. Feedback on compliance against policy and achievement against KPIs are reported through to Optimising Nursing and Midwifery Programme Board, Executive Committee and People Strategy Committee.

The E-Roster Policy is also in place to support the Trust and its employees in the efficient management of the workforce by ensuring safe and appropriate staffing levels are provided for all wards/departments.

The current TIAA audit opinion is that the organisation has implemented any changes that were recommended by the auditors in 2015.