eRostering Improvement Collaborative Benefits Realisation

How Allocate-Insight, focused improvement and leadership over 90 days can make changes that deliver immediate results and reduce unbudgeted spend by £32m per annum

Meeting the workforce challenge with a rapid improvement programme that has led to significant savings for 18 NHS trusts

Introduction

Managing the healthcare workforce is a complex task. The financial imperative to reduce spending means NHS trusts have to find ways to make improvements quickly whilst at the same time ensuring patient safety is not compromised. A good starting point is the data and when this is backed up with understanding and detailed investigation, it is possible to cut through the complexity and identify areas where change is needed.

Thanks to a 90-day Improvement Collaborative, 18 NHS trusts were able to show that marginal gains from focused and rapid improvements can deliver greater and more sustainable change faster and with greater impact and staff engagement. Although large, all-encompassing strategic projects have their place, every trust involved was able to see the benefit of being a member of the Collaborative.

Our aim is to help the spread of data-driven rapid workforce improvement across the NHS and the programme was delivered as part of our service at no extra cost to customers. In the first intake, we brought together a group of 18 NHS trusts, focusing on six metrics relating to staffing: unavailability, additional duties, approvals, temporary staffing, hours balance and unfilled duties. The first intake was led by Lyn McIntyre MBE, Collaborative Lead, supported by Allocate Software's Insight team and customer success team of workforce experts.

Data from Allocate Insight was used to engage staff at all levels, in particular, senior management. The Collaborative as a forum helped staff build their confidence in using the data to shape practical actions which in turn then led to evidence of improvement. Data from Allocate Software's Insight was critical in this respect.

By focusing on improving staff confidence at all levels in using the data as well as creating an environment of trust around e-Rostering, the Collaborative was shown to have made an impact across all metrics (unavailability, additional duties, approvals, temporary staffing, hours balance and unfilled duties) but was particularly successful within unavailability and unfilled duties.

How small marginal gains can make a significant difference

Unbudgeted spend relates to predicted workforce costs associated with each of the key metrics. By focusing on wards and units with high unbudgeted spend the trusts identified where they needed to better manage the existing substantive workforce, whilst also identifying alternative workforce models and ways of working which meant that over time they will be able to operate within their established budget. These small marginal gains soon add up. The Collaborative provided the conditions for its participants to improve their average scores for two of the indicators within a matter of weeks. This equated to reducing the unbudgeted spend from £7,400 per WTE in September 2016 to £5,500 in January 2017.

Note: The Estimated Annual Unbudgeted Spend is predicted based on the known unbudgeted spend for the periods analysed, it does not take into account the planned or predicted variance in demand, seasonal variation or budgetary/establishment changes

£1900 WTE **=** **£32.1m** savings per annum **18** organisations

> "The Allocate Software Improvement Collaborative was an invaluable networking opportunity and came at a time when we needed to benchmark our rostering processes. The events were a great forum to tap into advice and expertise from seasoned rostering managers and system specialists that I wouldn't otherwise have the chance to talk to."

Karen Purdie, eRostering Implementation Manager, Kettering General Hospital NHS FT

Benefits of the 90-day Improvement Collaborative

- New or improved services developed by trusts working to the same goal – being more efficient with the workforce resources they have
- Being able to identify which changes give most efficiency gain
- Engaging organisations in the process and management of change which will result in greater culture change and sustainability
- Wider geographical reach or access to new beneficiary groups who may have made improvements in areas causing some organisations difficulty
- Financial savings and better use of existing resources
- Sharing the risk in new and untested projects
- Capacity to replicate success
- Better co-ordination of organisations' activities
- Mutual support between organisations; and,
- Knowledge, good practice, information sharing and the development of case studies of success for dissemination across NHS trusts

1. Improvement – the metrics

Staffing data is a hotly-debated topic within the NHS. Finding a small number of commonly agreed metrics (or KPIs) for rostering to make monitoring and measuring improvement easy is an important first step. The Insight data is centered around just six high level KPIs that tell the story of rostering:

- How nursing rosters are planned and managed against contracted hours (roster approvals and hours balance)

- How shifts are filled or added to (unfilled and additional duties)

- How elements of unavailability impact on staffing

- How rostering behaviour impacts on temporary staffing usage

Using simply presented and readily available data has to be the starting point for understanding which metrics need to be addressed first. Each trust within the Collaborative was asked to select two or three of the key metrics to focus on during the 90-day project. The majority of trusts (67 per cent) chose to focus on unavailability followed by:

- Additional duties - 50 per cent

- Approvals - 47 per cent

- Temporary staffing - 28 per cent

- Hours balance - 22 per cent

- Unfilled duties - 11 per cent

The collaborative covered just 90 days between October and December 2016. During this time, an average of 548 clinical rosters were assessed in each period and 16,895 staff (WTE) were included.

2. Improvement – the journey

What trusts did to improve

By focusing on those areas where there was scope for improvement, trusts were able to develop simple action plans to bring about significant change at speed. The improvement planning process included learning sessions (face-to-face meetings with all trusts involved), the use of data as presented via the Insight portal, peer Trust site visits led by the Collaborative Lead, a collaborative portal for sharing and communicating virtually and the adoption of the Plan Do Study Act (PDSA) improvement model (see diagram below).

There were three learning sessions and the first was used to set the vision for the Collaborative and introduce trusts to the Improvement methodology and the Insight benchmarking data and managed reporting system. At subsequent learning sessions, Collaborative team members were able to learn from each other as they reported on progress, successes, barriers, and the lessons learned in general, presenting back in workshops, storyboard presentations and informal exchange.

During the action periods (October 2016, November 2016 and December 2016) and between the learning sessions, teams tested and implemented changes in their local settings and collected data to measure the impact of those changes. The team established what worked and what did not help them reach their objectives of improved efficiency and productivity in relation to their chosen metrics.
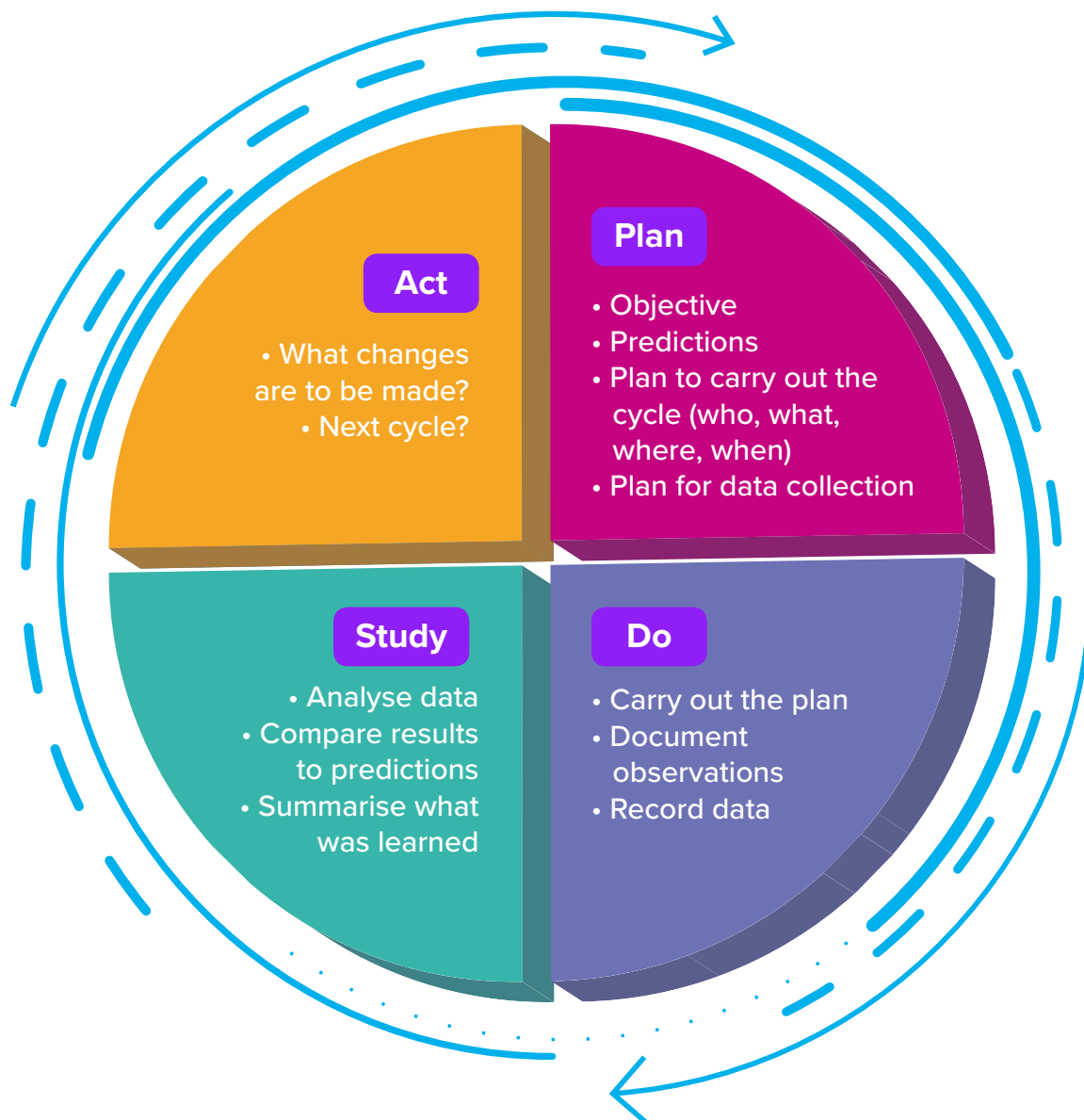
The trusts involved submitted monthly progress reports and were supported by teleconference calls, peer site visits and bespoke improvement coaching by the Collaborative Lead. The programme was aligned with Allocate Software's portfolio of products including WebEx sessions that focused on the models for change and steps for improvement and explored how best to combine the technology modules, improvement methodology to drive efficiency and productivity.

As part of the delivery of the programme and to set up the peer learning and support in a timely manner, a Collaborative portal was set up. The portal was accessible from the Allocate Software website and as a members only area featuring all programme papers, calendars of key dates with reminders, learning session agendas and presentations, evidence based papers, Allocate Software updates and key facts as reminders to trusts and messages to Collaborative members.

To apply changes in their local settings, Collaborative participants learned an approach for organising and carrying out their improvement work, called the Model for Improvement. The Model for Improvement required Collaborative teams to ask the three questions:

- What are we trying to accomplish?

- How will we know that change is improvement?

- What changes can we make that will result in improvement?

Figure 1: Model for Improvement

Act
- What changes are to be made?
- Next cycle?

Plan
- Objective
- Predictions
- Plan to carry out the cycle (who, what, where, when)
- Plan for data collection

Study
- Analyse data
- Compare results to predictions
- Summarise what was learned

Do
- Carry out the plan
- Document observations
- Record data

One of the biggest challenges facing most NHS trusts in the Collaborative was how to reduce the amount of unavailable days and ensure early roster approval to avoid relying on costly agency staff. Unavailable days are those that are not worked because of annual leave, study days, management days, sickness absence.

Each improvement programme had a focus at all levels within the organisation, from ward managers to senior leaders representing boards. Everyone had a part to play in the improvement journey. There were many lessons learned along the way (see below) and most trusts used their involvement with the Collaborative to ensure staff were trained appropriately to make the best use of e-Rostering software.

There was acknowledgement of the role that data played in making the case for change at ward level. Following the success of these improvement initiatives, the data from Allocate Insight has now been embedded in most of the improvement initiatives of the trusts involved in the Collaborative programme.

The lessons we learned

1. **By focusing on good rostering processes (that are then enabled by the software) engagement with HealthRoster has improved along with the quality of the data that can be extracted from it**

2. **Collaborative participants have proved they can make better use of all available substantive staff and that workforce improvement is not just about training more nurses**

3. **The programme has shown that improvements can be achieved by managing existing staff and resources better via regularly monitoring our net hours balances**

Securing ongoing support from board representatives is critical in enhancing the confidence of roster leads who can then effectively lead change to rostering practice across the hospital.

"Applying a 'measurement for improvement' approach to rostering data has reduced the volume of data, and identified the key KPIs required by boards to monitor rostering practices within the hospital"

Lyn McIntyre MBE

Why workforce improvement is not just about training more nurses

While there is a very real challenge with vacancies, the Collaborative has proven that improvements can be achieved by managing existing staff and resources. For example, informing staff of rosters well in advance will reduce the amount of unavailable days and in turn reduce reliance on temporary and agency staff. It also has the important added impact of improving the clinical staff's working lives giving them greater visibility and control.

Case study 1

Increased understanding of e-Rostering ensured improved staff management and cost-savings

At Barts Health NHS Trust a health checklist was rolled out across all 86 inpatient wards. The metrics focused on ensuring six-week roster approval while also reducing the amount of temporary staffing by improving the lead time for bank shifts. Changes included:

- rolling out a Ward Manager Accelerator Programme, which included ward manager training in finance, e-rostering and HR policies to ensure sound knowledge on effective rostering and how to achieve it

- delivering roster health care checks in all inpatient wards

- piloting a band 8 programme for senior nurses/matrons

- developing a sustainability plan to embed trust-wide improvement

- ensuring demand templates were correct and matched safe staffing review and budgets

- changing a roster calendar to include a time frame for shifts being sent to the bank

Creating major change in such a short time frame was not without its challenges. Rolling out the health checklist to 86 inpatient wards within 90 days was difficult, as was ensuring managers carried out actions from the checklist in a timely manner, so as not to hold up rostering approval times.

It was also vital to ensure that rosters were not changed substantially following approval, as this would undermine the improvement process. Engagement from all parties was also critical to the success of the programme.

Results:

Following the 90-day plan the outcomes included:

Increased auto-rostering

Reduced use of temporary staffing

Greater understanding of how to use the Roster Analyser to create a safe and effective roster

Efficient allocation of annual leave

Safe and effective care

Despite the short time frame, the trust managed to complete delivery of the 86 health care checks. Six ward manager accelerator programmes were delivered involving 93 per cent of ward managers and two band 8 leadership programmes were delivered.

Financial savings were also achieved within the 90 days. An analysis of three pilot wards showed a decrease in the spend on temporary staff of £22,361. There is also an anticipated reduction in the run rate of around £5,000 per ward.

Case study 2

## How a whole-trust approach to e-Rostering helped to cut agency spend

The Royal Free London NHS Foundation Trust has ensured that efficient e-Rostering is now seen as a whole trust approach with open and transparent discussions about e-Roster efficiencies at all levels of the organisation. It has developed good e-Rostering processes, controls and reporting

mechanisms that support divisions to make informed choices about their workforce.

Constant scrutiny and challenging of data has empowered staff to take control and effectively manage their workforce. Such improvements have led to efficient multi-disciplinary working with safety, quality, fairness and the effectiveness of good roster management at its heart.

Results:

During the 90-day period additional shift and agency hours were reduced, as was unavailability

Legend:
- Previous
- Now

X-axis: 0 to 90
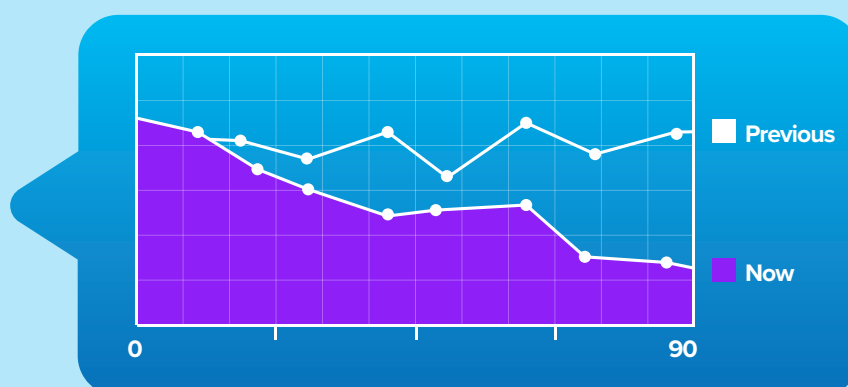
Roster approvals also saw major improvement with 59 per cent approved within four weeks and 23 per cent meeting the six-week target. Before the collaboration plan just 23 per cent of rosters were approved within four weeks

Roster approvals
4 weeks

Target
6 weeks

59%
23%
- Now
- Previous

X-axis: 0 to 28 days

23%

There were some challenges to overcome while making the improvements:

- managing the tight turnaround deadlines for improvements

- trying to make change across multiple sites

- highlighting the need to implement and embed new ways of working for the long term rather than just for short-term improvement

Case study 3

Why staff development is key to making long term gains

Staff development was a major part of the improvement process at North Middlesex University Hospital NHS Trust. The key areas it focused on during the Insight collaboration were ensuring demand templates were up to date, but also that they were correctly aligned to the finance budget.

Other areas to come under scrutiny included:

- vacancy rates
- staff turnover
- sickness rates and return to work interviews
- NHSP fill rates

By investigating the data and research in these areas, the hospital was able to make significant improvements to roster approval times and also unavailability rates.

Results:

2.2 To 3.9

Six-week roster approval lead time, improved from 2.1 weeks to 5.0 weeks in the pilot wards. The trust wide average improved from 2.1 to 3.9 weeks

Unbudgeted spend reduced from 87 WTE to 49 WTE

26.2 To 22.9

Unavailability - sickness and annual leave rates were reduced from 26.2 per cent to 22.9 per cent

87 To 49
WTE   WTE

The trust is continuing to work on a number of initiatives to ensure the success of the project continues. This includes:

- training for new roster creators
- e-Rostering guidance leaflets
- HR developing guidance for completing

return to work interviews where staff member is also under performance management

- training for managers to have difficult conversations with staff
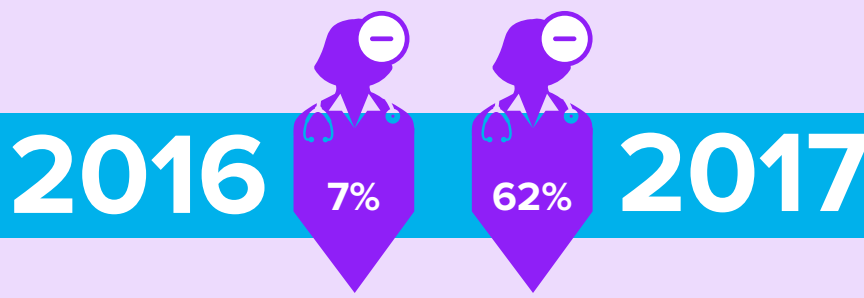- implementing a yearly annual leave planner
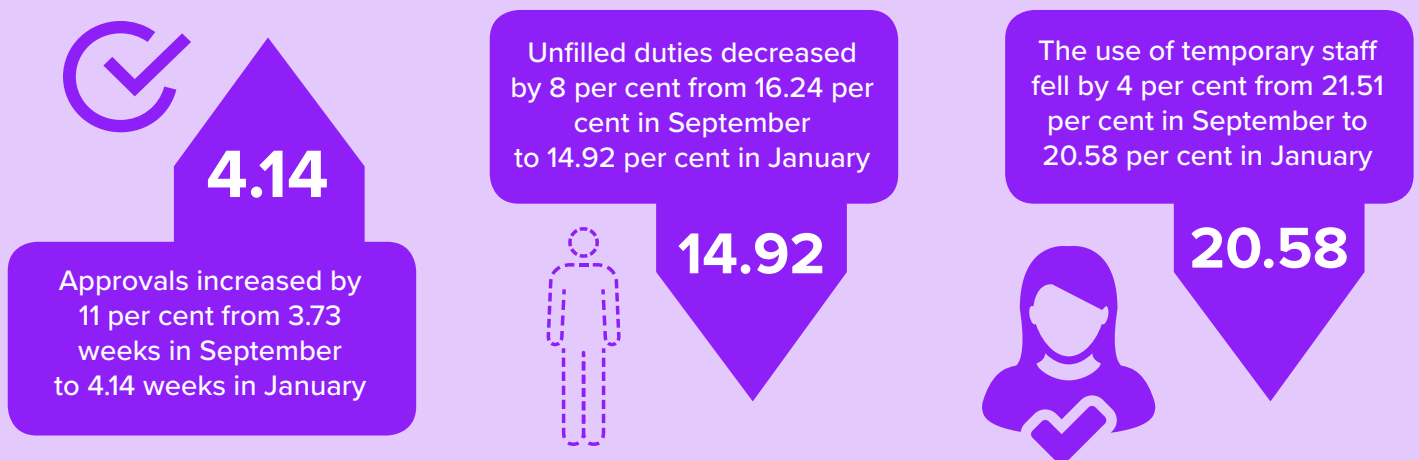
Improvement in figures

When data from Insight was cross-referenced with other data sources and additional research, trusts were able to identify areas for improvement.

In addition to the data, trusts in the Collaborative were able to benefit from Learning Sets, which helped members create action plans and share their experiences. This was one of the catalysts for mobilising change in areas such as reducing unavailability.

Between September 2016 and January 2017, the trusts were able to make significant improvement in two areas: unavailability fell by seven per cent and additional duties reduced by 62 per cent.

2016   7%   62%   2017

Improvements were also seen in the other metrics:

4.14

Approvals increased by 11 per cent from 3.73 weeks in September to 4.14 weeks in January

Unfilled duties decreased by 8 per cent from 16.24 per cent in September to 14.92 per cent in January

14.92

The use of temporary staff fell by 4 per cent from 21.51 per cent in September to 20.58 per cent in January

20.58

The figures show that when trusts combine and share information and see where they stand in relation to others, while focusing on key indicators for improvement, it is possible to make significant changes quickly. Insight was shown to be a powerful tool to prompt further questions and investigation into key areas.

Impact on finances

Improving staff management (e.g. reducing unavailable time, reducing temporary staff and approving rosters six weeks ahead of time) does not just have an impact on patient safety and the smooth running of the trust, it also has a positive impact on trust finances.

£1900
unbudgeted spend per WTE saved

During the 90-day rapid improvement period, unbudgeted spend across the Collaboratives reduced from £7,400 per WTE to £5,500.

Many trusts recorded a reduced spend in temporary staffing due to rosters being approved early enough to send to hospital bank teams rather than relying on agency staff. For example, at Barts NHS Trust, financial analysis on three pilot wards showed a decrease in temporary spend of £22,361.

"The Improvement Collaborative led by Allocate Software had a significant contribution to the success of our staff management and cost-savings project because it provided a renewed focus, reinforced the approach we were taking and the outcomes. The data from Insight was invaluable in underpinning this process."

Tracy Brown, E-Rostering Project Manager, Barts Health NHS Trust

Benefits summary

By providing the 18 trusts in the Improvement Collaborative with relevant and timely data as well as a support package, including implementation of the Plan Do Study Act (PDSA) model, we were able to help them make significant improvements in a short period of time. These improvements, or marginal gains, soon add up and were shown to reduce unbudgeted spend by £1,900 per WTE.

Our key learning was that for rapid improvement programmes to be successful they need the ongoing support of the board. Without this support roster leads do not have the confidence to lead change to rostering practice across the hospital.
At a time when workforce challenges loom large for every member of the board, getting behind such initiatives is a must and this means having accurate and timely information about what is happening on every ward in the trust.

Conclusion

The Improvement Collaborative has made significant improvements in staffing metrics thanks to Insight and an improvement approach which provided accessible and meaningful data highlighting areas of focus.

Given the speed of improvement and the way in which Insight data has become embedded in the improvement process at each trust, Allocate Software has decided to continue investment in the Collaborative.

Workforce 2.0

Making it happen