The Health Foundation
Inspiring Improvement

CASE STUDY

The Safer Patients Initiative

General ward workstream in practice: Bradford and York teaching hospitals

1. INTRODUCTION

In late 2004, the Health Foundation funded the Institute for Healthcare Improvement (IHI) (based in Cambridge, Massachusetts) to begin an initiative aimed at making United Kingdom (UK) hospitals safer for patients. Called the Safer Patients Initiative, this four-year project (spread over two phases) was designed to reduce harm to patients receiving healthcare within inpatient settings.

Throughout the initiative, 24 hospitals across the UK worked collaboratively with the Health Foundation and IHI to test, implement, and spread the success of 29 different interventions. These interventions had an established and accepted evidence base in the UK and were in five workstream areas:

- medication management
- general ward
- perioperative care
- critical care
- leadership.

Interventions were implemented concurrently, along with improvements in hospital infrastructure, measurement systems, and leadership support. As a result of this work, the participating hospitals began working on reducing their adverse events and mortality rates.

The work of both phases of the Safer Patients Initiative helped spread patient safety principles and improvement throughout the UK – improvement that has continued following completion of the programme. Although phase two of the Safer Patients Initiative concluded on 30 September 2008, it has helped establish patient safety as a priority for the participating hospitals and set the stage for further work in improving the safety of patients.

2. BACKGROUND

For the organisations participating in both phases of the Safer Patients Initiative, the general ward workstream was a large focus and ideal for improvement work. Two particular issues that posed safety risks were the rapid assessment of, and response to, deteriorating patient condition and infection prevention (particularly from methicillin resistant *Staphylococcus aureus* (MRSA).

This case study discusses two organisations' work in addressing risks in the general ward workstream: Bradford Teaching Hospitals and York Teaching Hospital.

About Bradford Teaching Hospitals

Bradford Teaching Hospitals NHS Foundation Trust is a two-hospital, 1,000-bed healthcare system located

in north England. Each year, the organisation receives 120,000 admissions, treats 500,000 outpatients, and performs 30,000 surgical procedures.

Bradford Teaching Hospitals applied to participate in phase two of the Safer Patients Initiative because of the organisation's corporate strategy to improve patient safety.

'We felt that the Safer Patients Initiative would help us get the right services in place to reduce risk and ultimately improve the safety of our patients,' said the deputy medical director for Bradford Teaching Hospitals.

About York Teaching Hospital

York Teaching Hospital NHS Foundation Trust is a 750-bed organisation that houses more than 30 wards. The organisation provides acute hospital services for approximately 350,000 people living within the York area. It also provides a range of specialist services to a wider catchment area of around 500,000 people living in north Yorkshire.

York Teaching Hospital considered its participation in phase two of the Safer Patients Initiative as a logical choice.

'Intrinsically, we had a focus on patient safety, but we felt that the programme could help us bring the topic more explicitly to our organisation's agenda and involve a wider variety of staff: doctors, nurses, pharmacists, executives, and so forth. We saw what organisations participating in the first phase of the Safer Patients Initiative accomplished and thought that the programme's approach would work well here,' said the former project lead for the Safer Patients Initiative at York Teaching Hospital.

3. WHAT WE DID

Rapidly assessing and responding to deteriorating patients

Before the start of phase two of the Safer Patients Initiative, both Bradford and York Teaching hospitals had an outreach team. This team consists of clinicians who bring critical care expertise to the bedside who can help respond to deteriorating patients quickly and prevent crash calls.

To help staff on the general wards determine when to call the outreach team, both organisations used an early warning system (EWS) that outlined what conditions to use to identify a deteriorating patient. Staff members used the EWS to record certain conditions every time a set of observations were made. The recorded information was then aggregated to yield a score, which could be used to trigger a call to the outreach team.

The general ward workstream at York focused much of its efforts during the Safer Patients Initiative phase two programme on increasing the number of calls to the outreach team and decreasing crash calls.

'We felt this area had a more urgent need for improvement than hand hygiene or MRSA, and so we focused a lot of energies here,' said the former project lead at York Teaching Hospital.

York Teaching Hospital began its work by examining current performance.

'We had an EWS in place before commencing phase two of the Safer Patients Initiative, but we learned that no one was really using it the way they should,' said the chief nurse for York Teaching Hospital. 'As we began measuring our calls to the outreach team, we discovered that staff members on the wards were not calling the team nearly enough.'

To achieve improvement, the outreach team began providing training to the ward nurses.

'Many nurses weren't aware we even had an outreach team,' said the chief nurse. 'Thus, a primary purpose of this training was to introduce the team to the nurses and start to build a relationship between them. We wanted the nurses to feel comfortable calling the outreach team and know that the team was there to partner with the nurses in treating the patient.'

York Teaching Hospital also worked to refine its EWS and educate staff on how to use it. The hospital used plan, do, study, act (PDSA) to adjust their EWS system and spread its use across the wards.

Like York Teaching Hospital, Bradford Teaching Hospitals focused on improving its use of an EWS to prompt a call to the outreach team.

'Although we had an outreach team, staff members

weren't calling the team nearly as often as they should,' said the general manager of medicine at Bradford Teaching Hospitals. 'This prompted us to retrain staff and provide a lot of education to both ward leaders and front line staff. We started off with three wards and then spread the education to other wards as well. Eventually, we embedded the training into new staff orientation.'

To further improve communication between the outreach team and ward staff, the general ward workstream at Bradford Teaching Hospitals introduced the idea of situation, background, assessment, recommendation (SBAR) to help structure the interactions.

'Using SBAR helped raise the profile of our EWS and how to use it,' said the general manager of medicine at Bradford Teaching Hospitals. 'To introduce SBAR, we provided online training to both outreach team members and frontline staff. We also used plan, do, study, act to incorporate SBAR into communications and encouraged outreach team members to only accept calls in SBAR.'

Bradford Teaching Hospitals used plan, do, study, act to spread change throughout the general wards.

'The workstream lead and members of the workstream group were in charge of spread. The data lead and key contact monitored spread and encouraged leads to also implement change when it was required. Through the workstream meetings, which included the key contact or data lead, the decision was taken where to spread to next and how to do this,' said the general manager of medicine of Bradford Teaching Hospitals.

The outreach team and front-line nurses still use a type of SBAR to share information, however it is more informal. 'Although we don't call it SBAR, the approach we now use is similar and has helped further improve communication in this area.'

Addressing MRSA

A part of Bradford Teaching Hospitals' work in phases two of the Safer Patients Initiative involved a multifaceted effort to reduce methicillin-resistant *Staphylococcus aureus* (MRSA).

'At the start of the programme, we had an unacceptable MRSA bacteraemia rate, and so we were very keen to make improvements in this area,' said the general manager of medicine for Bradford Teaching Hospitals. 'We had a multidisciplinary group who met weekly and coordinated the work. They focused on many different initiatives, including hospital cleanliness, handwashing, proper dress code, and so on.' The organisation also began requiring all new admissions to be tested for MRSA. This helped identify patients that needed early treatment before they infected other patients.

A critical activity in reducing MRSA is improving hand hygiene. Prior to joining phase two of the Safer Patients Initiative, Bradford Teaching Hospitals had begun work on improving hand hygiene, however the Safer Patients Initiative programme focused and accelerated that work.

'When we started collecting real-time data on our hand hygiene rate for the Safer Patients Initiative, we were very surprised at our poor compliance. We were initially achieving only 60%-70% compliance and our target was 100%,' said the deputy medical director for Bradford Teaching Hospitals.

At the same time as phase two of the Safer Patients Initiative, Bradford Teaching Hospitals was working on a trust-wide initiative to improve hand hygiene.

'Between our trust-wide initiative and the Safer Patients Initiative, I think we were able to better address this issue,' said the deputy medical director. 'As part of these two programmes, we provided training on hand hygiene using posters, light boxes, presentations from our infection control team, and so forth.'

In January 2008, Bradford Teaching Hospitals began monthly audits of hand hygiene. Trained observers from one ward would monitor another ward and document hand hygiene efforts. The organisation shared the audit results on a dashboard, which could be accessed via their intranet. In June 2008, the organisation also launched a comprehensive education programme to further raise hand hygiene efforts.

'We did weekly monitoring of our MRSA bacteraemia rate based on national reporting guidelines that had been in place for some time,' said the general manager of medicine for Bradford Teaching Hospitals. 'We used a dashboard to communicate about these data and provide feedback

to staff. Executive leadership of the hospital got involved in encouraging staff when the MRSA rate slipped below targets.'

4. OUR LEARNING

Rapidly assessing and responding to deteriorating patients

In using PDSA to develop the EWS, York Teaching Hospital found they overused the methodology, possibly impacting on staff engagement.

'Although this methodology was helpful, I think we did too many of the PDSA cycles, because we noticed over time enthusiasm began to wane. It took us three years to spread the changes to all the wards. That's a long time to maintain a high level of buy-in and support. With that said, we were ultimately able to embed the use of the scoring system across the wards and make it part of our culture,' said a ward sister for elderly medicine at York Teaching Hospital.

Addressing MRSA

Bradford Teaching Hospital found that collecting real-time data on their hand hygiene rate was instrumental in identifying actual rates. The hospital also learned that using a dashboard to communicate MRSA monitoring data helped staff see the impact of their work and where they needed to improve.

Bradford Teaching Hospital also identified that support by senior leaders was vital in raising hand hygiene compliance and gaining staff buy-in.

'We had done education programmes before this point, but the one in June really helped push us forward,' said the deputy medical director for Bradford Teaching Hospitals. 'Our chief executive definitely set the tone for this education programme. He made it very clear that the organisation would not tolerate anything but a major turnaround in hand hygiene performance. This support from a senior leader was instrumental to furthering our success.'

5. IMPACT

Rapidly assessing and responding to deteriorating patients

As a result of its efforts, York Teaching Hospital was able to increase the number of calls to the outreach team.

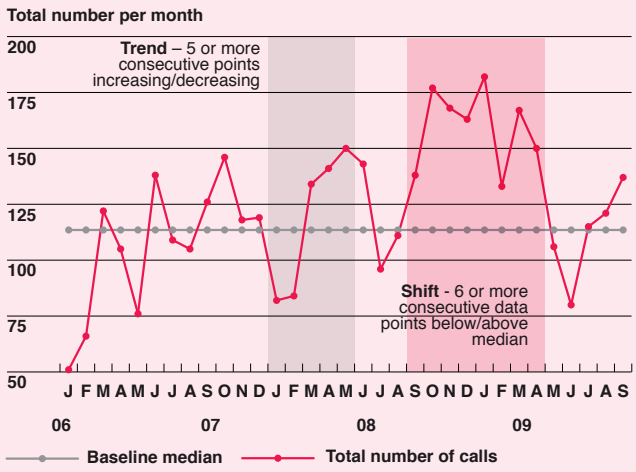

Figure 2.2: Number of calls to the outreach team, York Hospital, York Hospitals NHS Trust

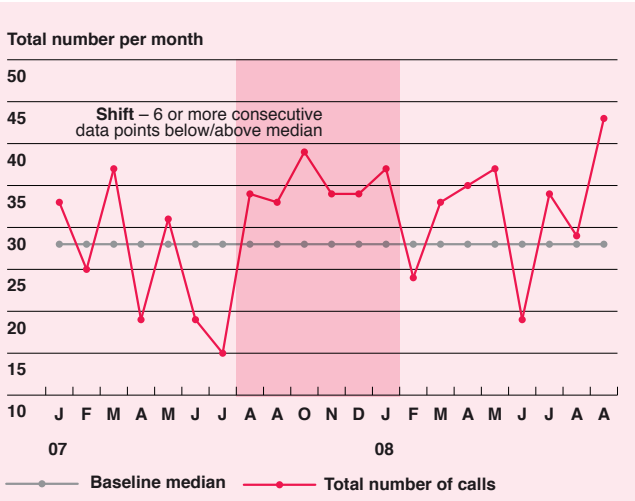

Figure 2.3: Number of calls to the outreach team, Bradford Royal Infirmary, Bradford Teaching Hospitals NHS Foundation Trust

'This is what we wanted because it showed that more staff members were recognising deteriorating patients and calling the team and this helped proactively reduce the risk of crash calls,' said a ward sister for elderly medicine at York Teaching Hospital.

Involvement in the Safer Patients Initiative also had a positive impact on Bradford Teaching Hospitals. The organisation successfully increased the number of calls to their outreach team and decreased their crash call rate over the course of the programme.

Addressing MRSA

In undertaking work to address MRSA rates, Bradford Teaching Hospitals successfully reduced the MRSA infection rate. Hand hygiene may have played a significant role in this success. Over the course of the Safer Patients Initiative and beyond, Bradford Teaching Hospitals successfully increased staff compliance with hand hygiene.

Cultural improvement in patient safety

Both Bradford and York Teaching Hospital saw the Safer Patients Initiative as a starting point for patient safety improvement.

'We had some good success during the Safer Patients Initiative (phase two), and that success has continued in the years since the programme ended,' said the general manager of medicine for Bradford Teaching Hospitals. 'This work contributed to an overall culture change in the hospital where staff members are now more committed to reducing safety risks. For example, infection is no longer viewed as a by-product of care, but a preventable event that we have an obligation to address.'

Following the official end of phase two of the Safer Patients Initiative in September 2008, Bradford Teaching Hospitals decided to continue the programme's measures for an additional year. In June 2009, the organisation signed up to join the Safer Patients Network and continue the work it started in phase two of the Safer Patients Initiative for a further three years.

'Since the official end of programme, we have maintained the support structures we had in place for the majority of the interventions,' said the general manager of medicine for Bradford Teaching Hospitals. 'Each workstream still has a workstream lead who is supported by members of the workstream group. They meet to discuss how to challenge barriers and make improvements in the workstream. The Safer Patients Initiative hospital executive group has also continued and involves senior leaders and workstream leads. The group reviews progress against the measures and challenges areas of concern.'

The Safer Patients Initiative also had a positive and long lasting effect on York Teaching Hospital.

'SPI helped us learn a different approach to practicing healthcare where we focus on measuring performance and proactively identifying areas of improvement,' said the chief nurse for York Teaching Hospital. 'It taught us that standardised processes can yield more reliable care, and that visible improvement can be very powerful in motivating staff. This programme helped prepare our organisation for further improvement and was a good investment in our future.'

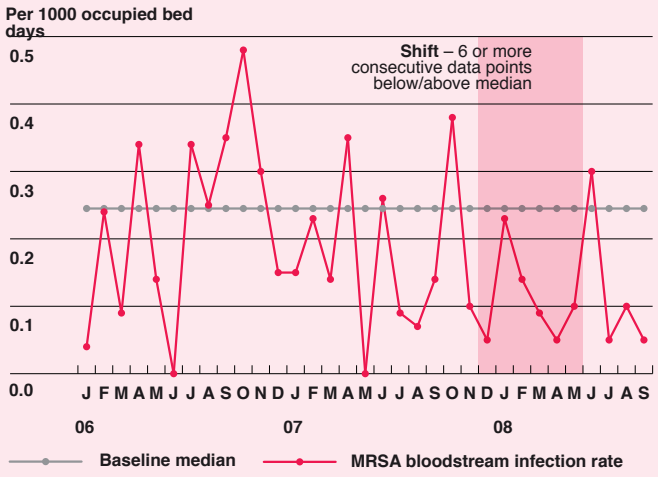

Figure 2.1: MRSA bloodstream infection rate, Bradford Royal Infirmary, Bradford Teaching Hospitals NHS Foundation Trust

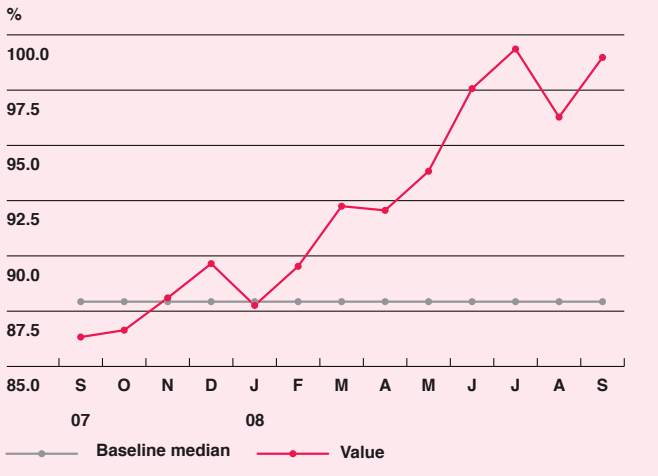

Figure 2.5: Trust-wide percent compliance with hand hygiene, Bradford Royal Infirmary, Bradford Teaching Hospitals NHS Foundation Trust

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