

Borders NHS Board



**PROGRESS REPORT ON SCOTTISH PATIENT SAFETY PROGRAMME
IMPLEMENTATION FOR NHS BORDERS**

Aim

This is the second report designed to update members of the NHS Borders Board of the progress of the Scottish Patient Safety programme within NHS Borders.

Background

The Scottish Patient Safety Programme has been running now for 18 months. The Board received an update in December 2008 which provided detail on progress of the implementation and compliance against the key changes of the programme within the Borders General Hospital which is the pilot site of NHS Borders.

Summary

This paper is the second report, designed to provide information on the progress to date of the work of the pilot teams and engage the Board in the strategy for spread.

Measurement is becoming well established in the Pilot areas and is being spread to other locations to provide a good baseline of clinical information.

Recommendation

The Board is asked to **note** the report.

Policy/Strategy Implications	This report is in line with the NHS Scottish Patient Safety Programme
Consultation	Not applicable
Consultation with Professional Committees	Not Applicable
Risk Assessment	Non compliance with any of the key changes. Failure to achieve the goals of the programme.
Compliance with Board Policy requirements on Equality and Diversity	The principles of the Programme are that care will be Safe, timely, Efficient, Equitable, Effective and Patient Centred. Success will lead to reduction in patient mortality,

	increase patient satisfaction and experience, decreased clinical adverse events and reduction in length of stay
Resource/Staffing Implications	As the programme is expanded to all Boards within NHS Borders, further support for the administration and education aspects will be necessary

Approved by

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PROGRESS REPORT

ON

SCOTTISH PATIENT SAFETY PROGRAMME

IMPLEMENTATION FOR NHS BORDERS

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August 2009

1. Introduction

The report is based on the activities of the NHS Borders General Hospital Work Streams within the National Patient Safety Programme. The programme is run by NHS Quality Improvement Scotland (NQIS) in partnership with the Institute of Healthcare Improvement (IHI) who act as the Technical Experts in the field of Healthcare Improvement.

There are five main programme goals involving mortality, reduction of harm through recognition of the sick patient, reducing adverse drug events, hospital acquired infection, improving critical care and reducing harm to the patient receiving surgical treatment and care.

The goal for the Chief Executive and the Leadership Team is to drive a leadership culture which promotes quality and patient safety and an environment where continuous improvement in harm reduction becomes routine throughout the organisation. A patient safety culture is where everyone accepts that safety is integral to their responsibilities, with all staff working towards change, taking appropriate action when it is needed.

Board level leadership is essential to the success of the programme. This is being achieved through the development of the infrastructure to support quality and safety improvement, provision of oversight to the programme and promotion of the position of safety and quality in the organisation's agenda. It is not sufficient to sit at the Board room meeting and say that we need to do better. Being out in the clinical areas talking to staff, enabling them to speak freely and openly about safety, understanding their issues and helping to provide solutions moves the patient safety culture a lot closer to reality for all.

Visible commitment by the senior leaders helps to drive the culture change; the Leadership Walkrounds are an ideal means of implementing this, highlighting the obligation of the Executive Team to the creation of a safety culture that puts patients at the centre of everything that we do.

2. Background

The programme uses a transformational/improvement methodology which is focused on evidenced based interventions that will reduce risk and harm associated with healthcare. All of the key changes and subsequent improvements within the work streams can have a significant impact on the effectiveness of care. Safety is a systems concern in healthcare rather than a characteristic of individuals. Designing systems that help prevent errors, or that make it difficult to cause harm from errors that cannot entirely be prevented is essential.

Error reduction techniques have some common themes, one of these is to simplify and stratify care. The simple model for improvement (see diagram) together with the continuous cycle of 'plan, do, study act' is applied to all key changes implemented throughout the programme, this basic methodology is one which can be applied repeatedly to other improvements.

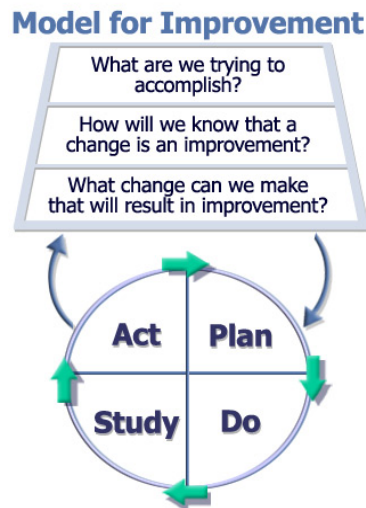


Figure 1

The advantage of the model is that changes are tested in real time and the necessary amendments are made until the change reaches a point where there is sustained reliability. Thereafter the changes can be spread to other areas using the same cyclical approach.

Key measures are used to clarify the aim and make it tangible. Each work stream has several change elements to implement and in order to know whether these are making any improvement, the changes need to be measured. A measure is used to track the delivery of interventions, and to monitor progress over time. Measures fall into two major categories, process and outcome measures

Outcomes Measures: How are we performing, what results do we have? An example of an Outcome Measure would be the percentage of patients who received antibiotic therapy timeously prior to surgery

Process Change: A specific change in a process in the organisation. A process change describes what specific changes should occur. For example, "Institute a standard warfarin management protocol for patients receiving warfarin" would be an example of a process change. Figure 2 details the progress of the measures that are being collected within the pilot teams to the end of July 2009

Pilot Team	Outcome Measures Total	In Place	Process Measure Total	In Place
1. Critical Care	9	9	9	7
2. General Ward	5	5	9	3*
3. Medicines Management	0	0	3	2
4. Peri-operative	1	1	7	3
5. Leadership	0	0	2	2
Totals	15	15	30	17

Figure 2

*In the General Ward process measures, there are two change processes that are sub divided into three separate outcomes.

3. Implementation

Two further Learning Sessions (*Learning sessions are the major integrative events of the Scotland Patient Safety Programme*) have been held this year. The first one in January 2009 and the second one in May 2009. At the January session NHS Borders were asked by the Scottish Patient Safety Programme Faculty to present our work on the Outreach Team Service and the Critical Care work on the Ventilator Associated Pneumonia 'Bundle.' The General Ward work stream staff also presented the Observation Chart that is used to identify a patient whose condition is deteriorating and the Safety Briefings that are used in the ward.

The faculty invited us to present again at Learning Session 4 in May 2009. The peri-operative work stream had carried out a Patient Safety Attitude Survey with all permanent staff in Theatres. IHI were interested in the findings and asked if we could show case a Scottish experience alongside the results from the USA. At that time, we were the only Board in Scotland to have taken the step of conducting this survey. Our outcomes were similar to those from other units, which were mainly systems issues. As expected, many of these were outwith theatres such as incomplete patient preparation, ward bed availability, cancelled operations. Others issues raised were team work and communication, equipment factors and managerial problems which included staff numbers. However, positively, the majority of staff who responded stated that they would feel safe being treated by NHS Borders as a patient and that patient safety is valued.

In February/March 2009, the Programme Manager was part of a pilot cohort for a Patient Safety Leadership Development Course held in Edinburgh over 5 days. The course was organised by Scottish Government Health Department (SGHD), NHS Education Scotland (NES), NHSQIS and the Scottish Patient Safety Programme (SPSP) Faculty. The main focus of the programme was to enhance understanding of how to develop measurement for improvement and the enhancement of existing skills. It was an excellent opportunity to learn and network with other programme managers and people from other work streams using similar methodologies.

The Conference Calls for each work stream are scheduled regularly plus the email network for the SPSP called 'Litserve' continues to provide communication and learning opportunities throughout all Boards in Scotland.

4. Progress to Date

Developing the competency of staff in the use of model for improvement has been challenging but it has been embraced by staff who have responded positively regarding the adoption of change packages and the model itself. Please see Appendix 2 for an overview of the goals and key changes.

In the General Ward work stream the changes are now being 'spread' to four further wards who have adapted the tools used for their own areas and are now testing these using the model for improvement methodology. The Safety Briefing is a good example; the aim of the briefing is to

- Increase staff awareness of patient safety issues
- Create an environment where staff regularly share information about risk issues on the ward/department with as many people on the ward or department who require to know
- Integrate safety into the daily routine
- Improve the safety culture

Safety briefings are carried out daily using a list of identified safety issues. These short briefings help to ensure that key staff are all fully aware of current safety problems or concerns on the ward that day.

A recent example of the benefit of the safety briefing in the ward was an instance where a patient had been highlighted as a risk of wandering off the ward. The patient's description and details of the clothing the patient was wearing were included in the briefing. The patient did subsequently wander out of the ward. The nurse who called the alert reported that due to the briefing, the information regarding the patient was accessed and communicated quickly and accurately with the result that the patient was located promptly.

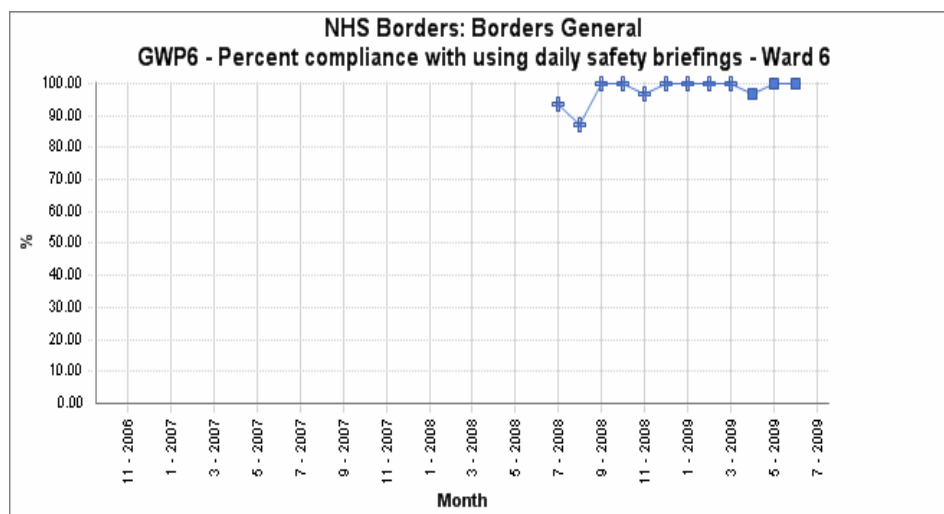


Figure 3

There has been good compliance on the pilot general ward, where they are conducting briefings twice daily - Figure 3

4.1 Adverse events

Each month, 20 randomly selected sets of case notes are reviewed using a tool called the Global Trigger Tool. The traditional means of detecting adverse events is heavily reliant on staff voluntarily reporting when an event has occurred and it is well accepted that this is not the most effective way to identify events that cause harm to patients. The use of 'triggers' to spot events during a manual review of case records has been used very successfully in other countries to measure the levels of harm. The reviews seek to identify unintended events occurring in association with medical care which caused harm to the patient. The tool includes categories to describe the type of harm ranging from temporary harm (that required intervention) to severe harm.

The reviews are conducted by two members of staff separately reviewing each of the 20 sets of notes for a 20 minute period for each set of notes. A third member of staff, who must be at medical consultant level, will review those case notes where events have been identified and this is to further ratify the findings of the review. The outcomes from these reviews have been that the level of harm being identified is either temporary harm to the patient and required intervention or, temporary harm to the patient and required initial or prolonged hospitalisation.

4.2 Infection Control Measures

One of the main goals of the programme is the aim to reduce and lower the spread of infection through the implementation of basic measures such as good hand hygiene and using contact precautions where patients are known to be infected. Also the use of 'bundles' (a grouping of researched based interventions known to be of benefit to patients). The results of the activities in the General Ward and Critical Care work streams can be seen in the graphs attached which demonstrate sustained improvement over the period since the start of the programme in January 2008 to current date.

4.2.1 Staph aureus Bacteraemias (SABs)

The rate of staphylococcus bacteraemia (SAB) is calculated by dividing the total number of patient episodes where a patient had a positive test result for the bacteraemia, with the total number of acute occupied bed days for the same time period.

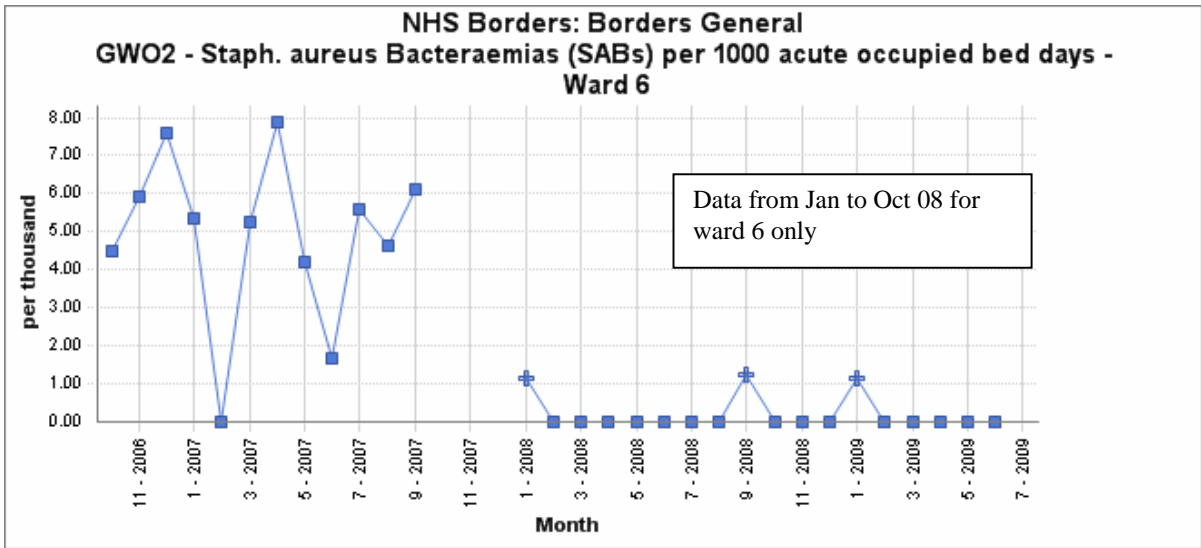


Figure 4

General Ward 6

Figure 4 shows that there has been a sustained reduction in the rates of SAB in Ward 6 over the period January 2008 to June 2009, with only three cases in the period since the implementation of the Patient Safety Programme.

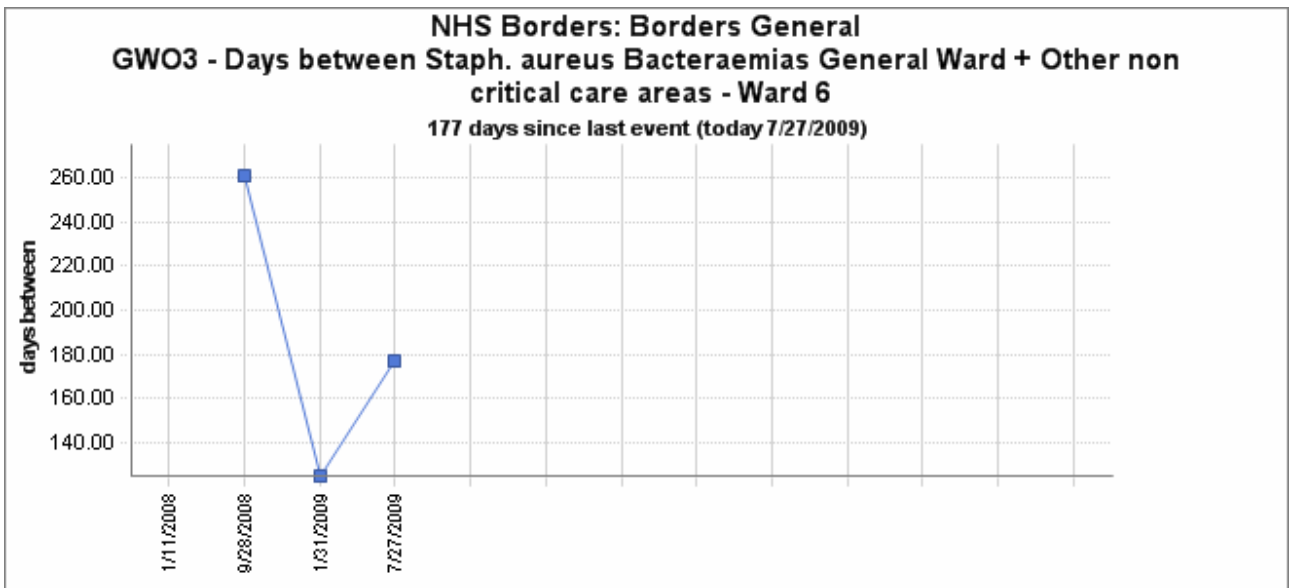


Figure 5

As at the 27th July 2009, there has been no Staph. aureas bacteraemias since 13th January 2009 in Ward 6

4.2.2 Critical Care

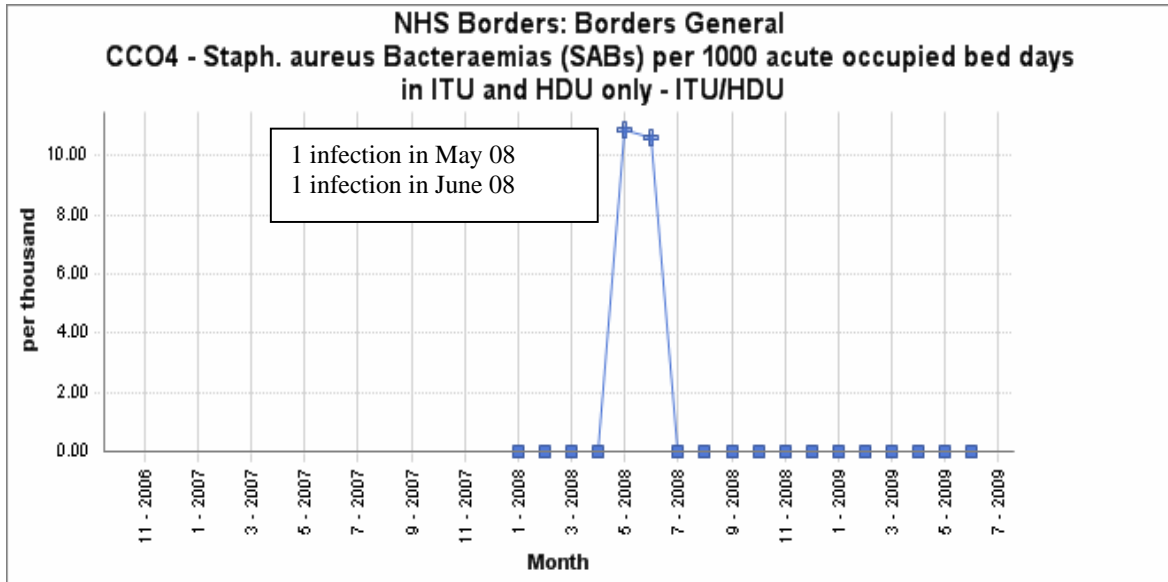


Figure 6

There has been continuous improvement in ITU/HDU with no SABs occurring over 12 months from July 2008 to June 2009

Days between Staph. aureus Bacteraemias

This measure is a cumulative count of the number of days that have gone by with no SABs being reported. Every time an SAB occurs the count is started over again. The longer the run of cumulative successes (days with no SABs occurring) the better the outcome.

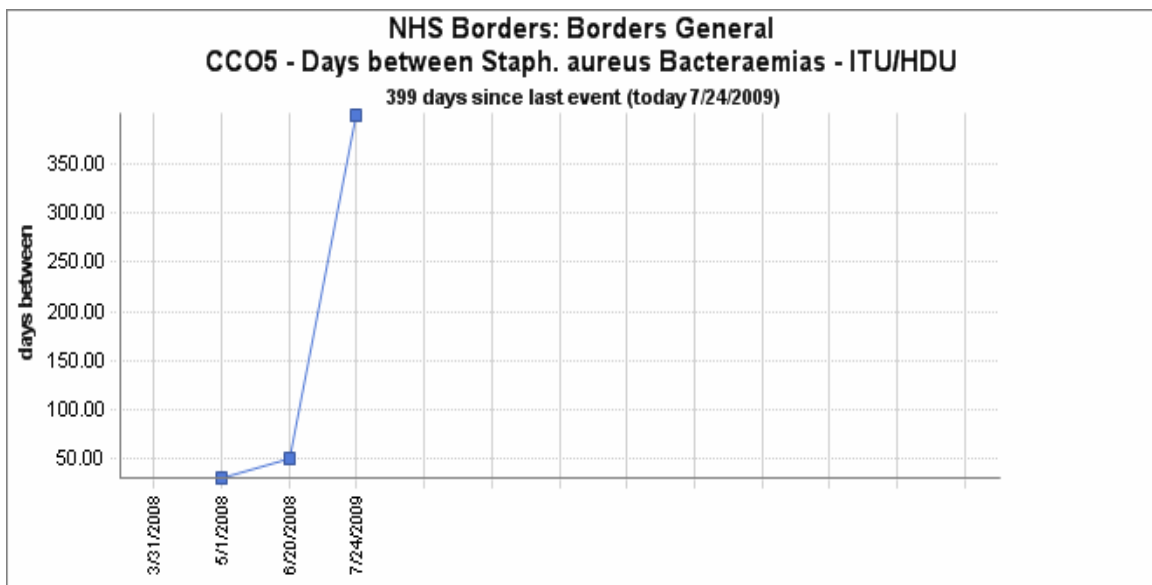


Figure 7

As at the 24th July 2009, there has been a period of 399 days since the last SAB in ITU/HDU the last one being in June 2008 this demonstrates sustained improvement.

Days between a central line bloodstream infection

This measure is a cumulative count of the number of days that have gone by with no central line bloodstream infections being reported. Every time a central line bloodstream infection occurs the count is started over again. In this case, we are plotting successes between failures. The longer the run of cumulative successes (days with no central line bloodstream infections occurring) the better the outcome.

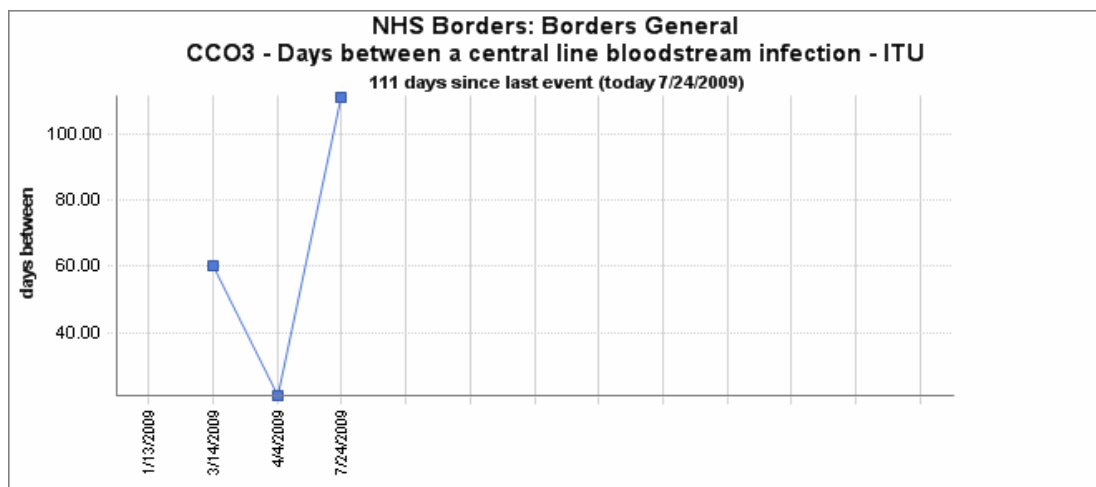


Figure 8

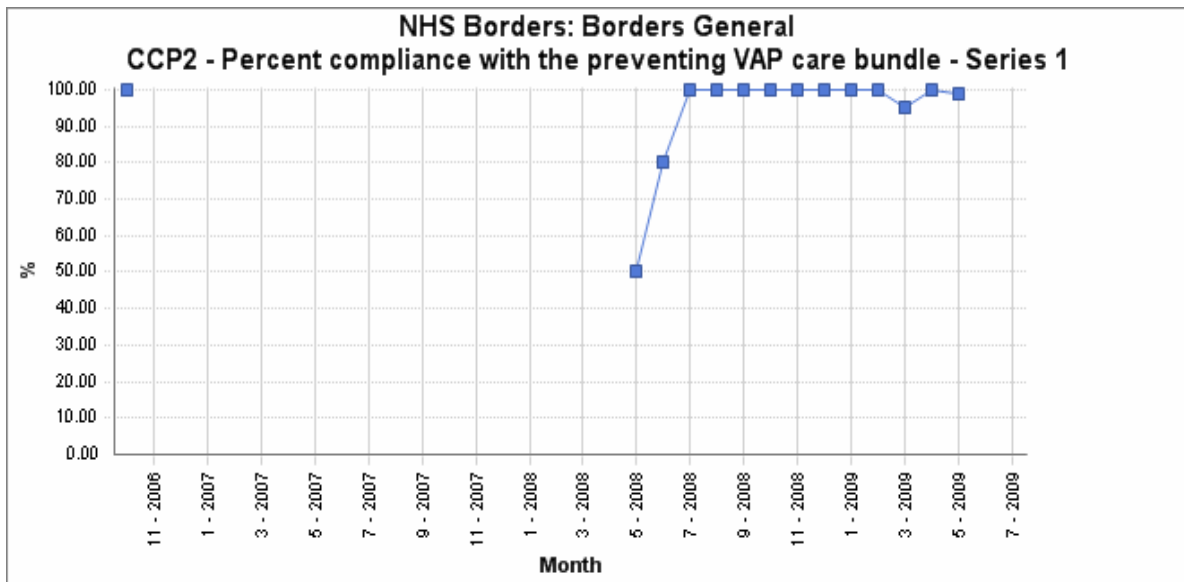


Figure 9

All of the elements of the Ventilated Associated Pneumonia (VAP) bundle for example, elevation of the bed to a 30 degree angle, making sure the patient is weaned off their sedation before being taken off the ventilator, ensuring good mouth

care and daily assessment for progress. Figure 7 shows that compliance has ranged between 95 to 100% from June 2008 to June 2009.

4.2.3 Medicines Management

Prevention of adverse drug events is the aim of the concept of 'Medication Reconciliation' which is at the beginning of the patient journey. At admission, the patients drugs are listed in the case notes. Any changes to the patient's drugs whether that be the dose, frequency or alternative drugs, should be checked or 'reconciled' against the prescription record to ensure that drugs are neither prescribed incorrectly or are omitted. At NHS Borders, patients are encouraged to bring their drugs into hospital with them when they are being admitted.

It is essential to have accurate records of the patient's drugs, as patients may move from one unit to another and it is often at the handovers or transfer points where mistakes are most likely to occur.

The implementation of the Medication Reconciliation at BGH continues. There is ongoing collaborative work between the team leader for medicines management and the Diabetic Specialist Nurse team around the medication chart and support for self administration/diabetic management during 'in patient stay'. Currently under consideration is a redesign of the diabetic chart to include any changes in regard to insulin therapy during the admission and discharge arrangements in relation to insulin dosing and follow up arrangements.

The redesign of the process and charts will be tested using the 'model for improvement'. The 'care bundle' concept for use in discharge of patients on insulin is another package being developed which will include all the components required for discharge including follow up arrangements and communication with primary care. These will be checked and recorded at point of discharge.

4.2.4 Peri-operative Surgical Site Infection Rates

'Clean' surgery is defined by the UK's National Research Council as non-traumatic, uninfected wounds with no inflammation, this surgery does not involve potentially contaminated cavities e.g. stomach, the intestine, bile duct or urinary tract, no break in aseptic technique.

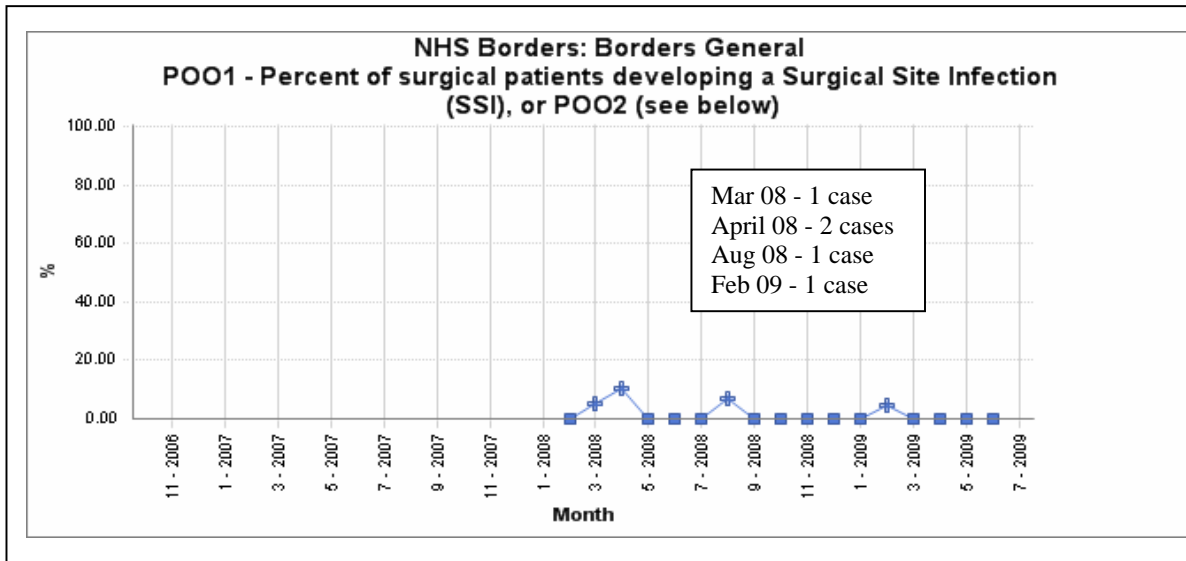


Figure 10

This data is collected by the Hospital Acquired Infection (HAI) Surveillance Coordinator through case note review and laboratory results. The sample is clean cases only, collected on a monthly basis and the numbers have ranged between 23 and 18 cases. The longest run was from Sept 08 to Jan 09, 5 months with no infections recorded (Figure 8).

Prophylactic Antibiotic Administration

The target for prophylactic antibiotic administration is that the patient should have had complete infusion of the antibiotic 30 to 60 minutes prior to incision.

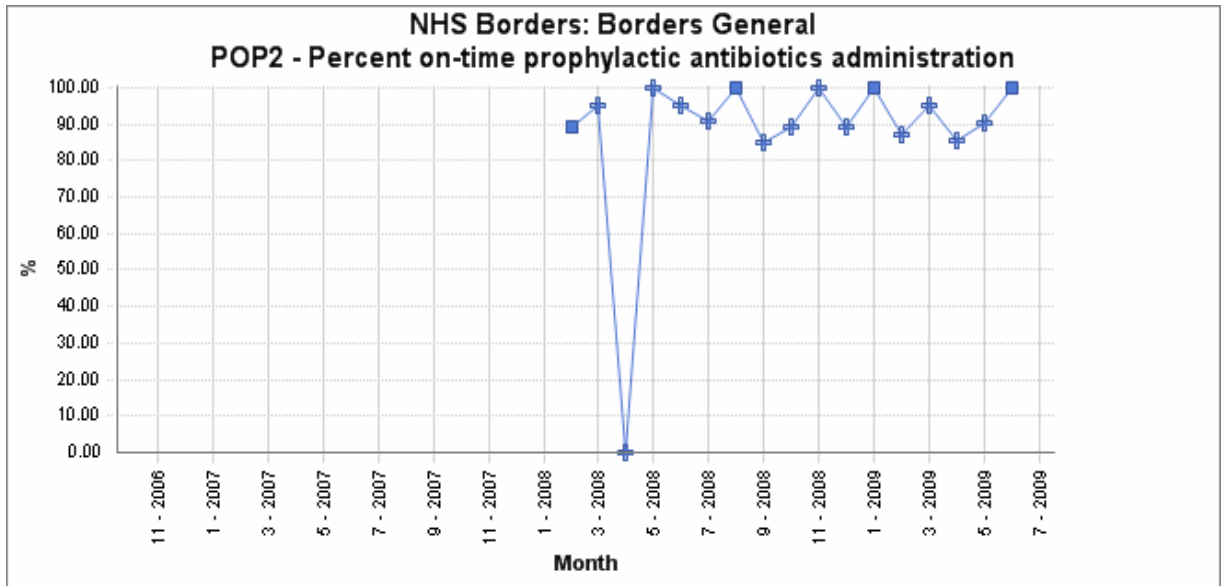


Figure 11

(data was not recorded in April 2008 due to staff annual leave and staff shortage). The range is between 85 to 100%, the lowest rate (85%) was in September 2008 when two patients did not receive prophylactic antibiotics and one patient had their antibiotics after surgery.

Deep Vein Thrombosis (DVT) Prophylaxis Administration

This measure identifies the percentage of patients receiving DVT prophylaxis.

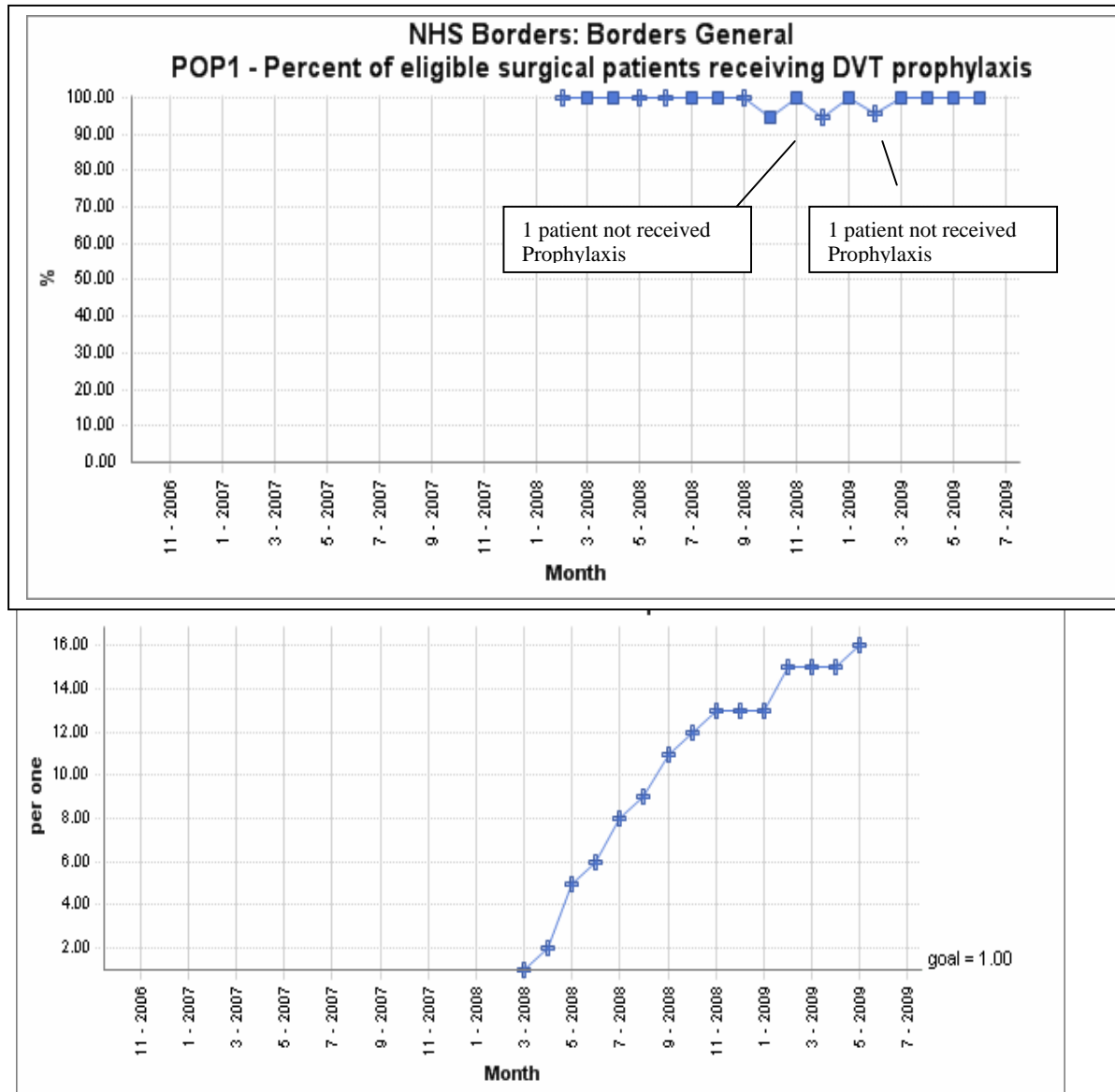


Figure 13

Total Number of WalkRounds (defined by the IHI WalkRounds methodology) conducted each month by the Board's senior leaders should be recorded and a cumulated total should be posted on the run chart each month.

No Walkround was done in June due to unforeseen circumstances but three further Walkrounds have been completed in July 2009.

Feedback from staff during the Walkrounds has been encouraging in that the majority feels there is good team working in their areas; there is no hesitation in recording adverse events. Some of the questions asked during the WalkRound help to give an

indication of staff's perception of the patient safety culture. Whilst staff do feel upset if they have been involved in an error, they state that they are not concerned about personal consequences if they report an event. This awareness of the organisation's approach which is to support and learn as opposed to blame and punish suggests that staff's perception is one of a just culture.

5. Summary

Patient Safety does not stand alone, simplifying the way that care is delivered involves improving workflow, open engagement with all disciplines, close working with Clinical Governance, in particular management of significant adverse events. Improved communications such as the use of the Situation Background Assessment Recommendation(SBAR) communication tool.

Making small shifts of change leads to longer term gains. The pilot teams are now assisting and supporting staff in other locations to spread the changes. Staff will continue to implement these proactive efforts on patient safety through design of tools to suit each area, measure, assess and improve the way they work.

As other improvement projects come into being, such as the Productive Ward, Releasing Time to Care using the LEAN tools and methodology can only improve on work already completed. Working collaboratively with these other projects provides even greater opportunities to achieve the goals of the programme.

Excellent progress has been made by all of the work streams over the past 18 months in the adoption and implementation of the programme. The important ongoing input of the staff and the Executive team in achieving our success to date is to be commended. These efforts have also been acknowledged at the Learning Sessions which has been beneficial for both patients and staff as well as being positive in raising the profile of NHS Borders within this National Improvement initiative.

SCOTTISH PATIENT SAFETY PROGRAMME – KEY CHANGES DASHBOARD

Appendix 1

Goals	Work Streams	Change Elements	Target	Current Status
<ul style="list-style-type: none"> 15% reduction in mortality 30% reduction in adverse events Reduce healthcare associated infections 	Management of General Ward Patients Global Trigger Tool	<ul style="list-style-type: none"> Identify and respond to deteriorating patients Prevent infections (MRSA, MSSA) Enhance communication and teamwork 	Jan 2010	☺
<ul style="list-style-type: none"> Reduce adverse drug events 	Medicines Management	<ul style="list-style-type: none"> Co-ordinate medicines across the continuum Prevent harm from high alert medicines 	Dec 2010	☹
<ul style="list-style-type: none"> Reduce adverse surgical incidents 	Management of patients Receiving Perioperative Services	<ul style="list-style-type: none"> Prevent adverse cardiovascular events Prevent surgical site infection 	Sep 2009	☹
<ul style="list-style-type: none"> Improve organisational and leadership culture on safety 	Building a culture of safety	<ul style="list-style-type: none"> Create a team culture Conduct leadership Walkrounds 	Dec 2009	☺
<ul style="list-style-type: none"> Improve Critical Care outcomes and reduce infections 	Management of Critically Ill Patients	<ul style="list-style-type: none"> Establish an infrastructure Prevent Infections (MRSA, MSSA, VAP) 	Dec 2009	☺

KEY

☹	Under performing	Current performance is significantly below the trajectory set
☹	Below trajectory	Current performance is moderately below the trajectory set
☺	Meeting trajectory	Current performance matches the trajectory set
★	Over performing	Current performance exceeds the trajectory set

