

Greater Glasgow and Clyde NHS Board

BOARD

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Board Nurse Director

Scottish Patient Safety Programme Update

1. Background

The Scottish Patient Safety Programme (SPSP) is one of the family of national improvement programmes, developed over recent years in relation to the national Healthcare Quality Strategy. These programmes draw on improvement methods advocated by the Institute for Healthcare Improvement. SPSP now contains a number of distinctly identified programmes as follows:

- Acute Adult Care
- Primary Care
- Mental Health
- MCQIC (incorporating Paediatrics, Maternal Care & Neonates)

2. Purpose of Paper

This is a high level overview report to update the Board on the Maternity and Children Quality Improvement Collaborative (MCQIC). MCQIC encompasses the clinical improvement activity of the Scottish Patient Safety Programme's maternity, neonatal and paediatric strands, whose overall aim is to improve outcomes and reduce inequalities in outcomes by providing a safe, high quality care experience for all women, babies and families in Scotland. MCQIC was launched formally as a collaborative in March 2013 (paediatric work stream had been active previous to this) and is a programme of quality improvement that will run until December 2015.

This report is presented to Board for information and approval. In particular the Board is asked to:

- Note the updates in each of the three work-streams, in terms of current activity, key areas of progress, or key issues to note.

3. MCQIC Key Events

Maternity Care Networking Event 10th June 2015

Maternity, Obstetric and Anaesthetic Champions from GGC, attended a joint Maternity Care Networking Event, at the Improvement Academy, Ninewells Hospital, Dundee, hosted by the SPSP Maternity Care Team on the 10th June 2015. The day covered a variety of topics including; VTE, Post-Partum Haemorrhage, Quality Improvement Opportunities, Data & Measurement, and the proposed next steps for MCQIC. The champions also had the opportunity to share key pieces of work and resources being used in their units, highlighting both the successes and challenges they had experienced. Champions presented on; PPH Bundles, CO Monitoring, Fetal Movement Awareness, Walkrounds, Sepsis 6 Tool and Women's Satisfaction.

10th Annual NHSScotland Event 23rd & 24th June 2015

The 10th annual NHSScotland Event was held at the SECC, Glasgow. Delegates from GGC who attended the two day event heard from keynote speakers including; Paul Gray, Director-General Health and Social Care and Chief Executive NHSScotland and John Swinney, Deputy First Minister and Cabinet Secretary for Finance, Constitution and the Economy. Over 200 posters were shortlisted for display during the event including work on Sepsis Six and Smoking Cessation from GGC.

Learning Session 6

The MCQIC team are currently progressing work for the collaborative's 6th Learning Session and it is hoped a date and venue will be confirmed in the near future.

Champions WebEx's

The Maternity and Obstetric/Anaesthetic Champions WebEx's will resume in July 2015, following a brief break in June.

4. Update on Maternity Workstream

4.1 Aim

The Maternity Care strand aims to support clinical teams in NHSGGC to improve the quality and safety of maternity healthcare. The overall aims of the Maternity Care strand are to:

- Increase the percentage of women satisfied with their experience of maternity care to > 95% by 2015, and
- Reduce the incidence of avoidable harm in women and babies by 30% by 2015.

Avoidable harm is defined by the further sub aims to:

- Reduce stillbirths and neonatal mortality by 15%
- Reduce severe post-partum haemorrhage (PPH) by 30%
- Reduce the incidence of non-medically indicated elective deliveries prior to 39 weeks gestation by 30%

- Offer all women carbon monoxide (CO) monitoring at the booking for antenatal care appointment
- Refer 90% of women who have raised CO levels or who are smokers to smoking cessation services,
- Provide a tailored package of antenatal care to all women who continue to smoke during pregnancy.

Scottish Government has now confirmed the extension of funding for **MCQIC** until **the end of March 2016** which includes funding for the midwifery champions. This extension allows the continuation of the excellent work carried out to date, and provides an opportunity to work further with HIS in progressing and implementing improvements locally. Discussions are also currently being held with Scottish Government, regarding proposals for the next phase of MCQIC.

4.2 Self Assessment of Progress

Self-assessment of progress is requested of boards every four months by the national team. Feedback for review period 4 (February 2015) was received in June 2015 and the tables below detail the assessment and feedback from the national team.

Princess Royal Maternity

N o.	Measures	MCQIC Programme milestones for Period 4	HIS assessment of NHSGGC – PRM progress against milestones
1	Key measures	Reporting on 100% (4/4) measures	Reporting on 100% (4/4) measures
2	Key measures (pilot)	Reporting on 100% (4/4) measures. Demonstrating improvement in 50% of measures	Reporting on 100% (4/4) measures. Demonstrating sustained improvement in 50% of measures
3	Person centred care	Reporting on 100% (1/1) measure. Demonstrating improvement in 100% of measures	Reporting on 100% (1/1) measure
4	Leadership and culture	Reporting 66% (2/3) of measures MP05 - > 1 walkrounds per month achieved. MP06 - demonstrating improvement	Reporting 66% (2/3) of measures
5	Teamwork, communication and collaboration	Reporting 100% (5/5) of measures. Demonstrating improvement in 40% of measures	Reporting 100% (5/5) of measures. Demonstrating improvement in 60% of measures – well done!
6	Safe effective and reliable care	Reporting on 100% (8/8) measures. Demonstrating improvement in 33% of measures.	Reporting on 100% (8/8) measures. Demonstrating improvement in 63% of measures- great progress and well done!

Key Strengths

PRM reported on 24 of the 25 measures and previously (period 3) had 6 with sustained improvement and 1 with improvement.

HIS recognise the extremely strong work that is taking place within NHSGGC PRM to achieve the stretch aims of the maternity care strand. In particular they would call out that since period 3:

- 5 measures have moved to reporting data

- 2 measures have moved to sustained improvement – CO monitoring and referral to smoking cessation
- 3 measures have moved from reporting data to improvement – surgical brief, ward huddles and sepsis six bundle

Key Challenges

% of women who continue to smoke who are provided with a tailored package of antenatal care:

There is limited capacity for further two ultrasounds for those women who continue to smoke.

Safety Culture Survey:

No measurement is being done around the nationally developed safety culture survey due to the resources required to gather and analyse the data. NHSGGC are no different here than any other boards, no boards are reporting data against this measurement for the same reasons.

Queen Elizabeth University Hospital (previously Southern General Hospital)

N o.	Measures	MCQIC Programme milestones for Period 4	HIS assessment of NHSGGC – PRM progress against milestones
1	Key measures	Reporting on 100% (4/4) measures	Reporting on 100% (4/4) measures
2	Key measures (pilot)	Reporting on 100% (4/4) measures. Demonstrating improvement in 50% of measures	Reporting on 75% (3/4) measures. Demonstrating improvement in 50% of measures
3	Person centred care	Reporting on 100% (1/1) measure. Demonstrating improvement in 100% of measures	Reporting on 100% (1/1) measure
4	Leadership and culture	Reporting 66% (2/3) of measures MP05 - > 1 walkrounds per month achieved. MP06 - demonstrating improvement	Reporting 33% (1/3) of measures
5	Teamwork, communication and collaboration	Reporting 100% (5/5) of measures. Demonstrating improvement in 40% of measures	Reporting 80% (4/5) of measures.
6	Safe effective and reliable care	Reporting on 100% (8/8) measures. Demonstrating improvement in 33% of measures.	Reporting on 75% (6/8) measures. Demonstrating improvement in 38% of measures.

Key Strengths

QEUH reported on 19 of the 25 measures and previously (period 3) had 1 measure with sustained improvement and 3 with improvement

HIS appreciate that there have been changes to key personnel locally and recognise the challenges that this has brought for the local team. They very much appreciate the update contained within the assessment and the range of work that is occurring or is planned. In particular they would call out that since period 3:

- 14 further measures have moved to reporting data

- 4 further measures show sustained improvement - CO monitoring, referral to smoking cessation, compliance with MEWS and appropriate management on MEWS triggers
- 1 further measure shows improvement – documentation of discussion about reduced fetal movement with women

Key Challenges

One of the main challenges for the QEUH has been the loss of the midwifery and obstetric champions due to maternity leave and resignation. We are now pleased to note that a new midwifery and obstetric champion have been identified and they should be commended for the work they undertook to ensure completion of the period 3 self assessment.

QEUH have the same challenges around the % of women who continue to smoke who are provided with a tailored package of antenatal care and Safety Culture Survey.

Clyde

Measures	MCQIC Programme milestones for Period 4	HIS assessment of NHSGGC RAH progress against milestones
Key measures	Reporting on 100% (4/4) measures	Reporting on 100% (4/4) measures
Key measures (pilot)	Reporting on 100% (4/4) measures. Demonstrating improvement in 50% of measures	Reporting on 75% (3/4) measures. Demonstrating improvement in 50% of measures
Person centred care	Reporting on 100% (1/1) measure. Demonstrating improvement in 100% of measures	Reporting on 100% (1/1) measure. MP04 not demonstrating improvement
Leadership and culture	Reporting 66% (2/3) of measures MP05 - > 1 walkrounds per month achieved. MP06 - demonstrating improvement	Reporting 66% (2/3) of measures MP05 - > 1 walkrounds per month but not reliable monthly occurrence MP06 – not showing improvement
Teamwork, communication and collaboration	Reporting 100% (5/5) of measures. Demonstrating improvement in 40% of measures	Reporting on 80% (4/5) of measures. Exceeding expectation in relation to demonstrating improvement in 80% of measures
Safe effective and reliable care	Reporting on 100% (8/8) measures. Demonstrating improvement in 33% of measures.	Reporting on 100% (8/8) measures. Demonstrating improvement in 13% of measures

Key Strengths

Clyde reported on 22 of the 25 measures and previously (period 3) had 2 measures universally implemented, 1 with sustained improvement and 4 with improvement

HIS found the report to be extremely informative and provided a detailed story behind the progress being made locally to improve a range of processes within Clyde. In particular they would call out that since period 3:

- 1 further measure has moved to sustained improvement - documentation of discussion about reduced fetal movement with women
- 1 further measure has moved to improvement – compliance with ward huddles

Key Challenges

% of women who continue to smoke who are provided with a tailored package of antenatal care:

Within Clyde the additional ultrasound had been implemented as part of GROW study so there has been minimal issues around scanning but there are challenges with the health promotion part of the bundle and will be discussed at Board wide Smoking in Pregnancy meeting in August.

Safety Culture Survey:

No measurement is being done around the nationally developed safety culture survey due to the resources required to gather and analyse the data. NHSGGC are no different here than any other boards, no boards are reporting data against this measurement for the same reasons.

Debriefs are held in all units following a significant event but the measurement of this brief taking place within 1-24hrs is a challenge of all 3 units. Criteria has been set for the debrief and a collection tool is being tested at the PRM.

Next Steps

NHS GGC submitted its quarterly assessment of progress on the 15th July 2015, feedback is still awaited from the national team and it is hoped it will be returned to allow reporting to the Board at their next meeting.

1. Paediatric and Neonatal elements of Maternity and Children Quality Improvement Collaborative.

The purpose of this section is to update the members of the Acute Services Division Clinical Governance Forum with progress in implementing the Paediatric and Neonatal element of the Maternity and Children Quality Improvement Collaborative.

2. Aim & Measures SPSP VTE Prevention Collaborative

2.1 Aim

The overall aim is to improve outcomes and reduce inequalities in outcomes by providing a safe, high quality care experience for all children and babies in Scotland. MCQIC was launched formally as a collaborative in March 2013 although the paediatric work stream had started previous to this in 2010. The intension is that the programme should be implemented by December 2015.

The specific aim for this work stream is to achieve a 30% reduction in adverse events that contribute to avoidable harm in Neonatal and Paediatric Services by December 2015.

2.2 Measures

All of the elements currently measured in the programme are listed in appendix 1.

3 Summary of current position

There are currently 18 teams supported across Paediatric and Neonatal services. Due to the significance of the hospital moving site there has been a recent drop in levels of data submission which under the circumstances is understandable. As teams are settling in to the new facility the good working practices of their previous unit has been encouraged and there is currently no concern that compliance will be less than previously recorded.

There are 4 distinct groups within these services.

3.1 Summary

Wards / Departments:

There are 13 clinical areas involved in implementing the general ward bundle which contains 7 elements. Not all of the elements are appropriate for every area but if it is appropriate it has been implemented. Before the move to the new hospital compliance was excellent with most teams only collecting data every 3 months. There was only a small issue that made one team look like poor compliance with PVC maintenance which was actually due to a misunderstanding of the assessment criteria.

Since moving to the new hospital some teams have merged and there are also 2 new wards which have been introduced to the bundle and will submit data soon. As the wards were previously demonstrating reliable compliance with these bundles if there is no reduction in results demonstrated from the new site then more teams will be due to be stepped down to 3 monthly monitoring.

Peri-op workstream:

The data for all the theatres is pooled in one submission. The results are excellent for Surgical Brief, Pause and timing of antibiotics as reliability is demonstrated. Issues remain for the insertion of PVC due in part to clinician choice using elastoplast to secure the device instead of a compliant sterile PVC dressing.

The de-brief has shown reliability in some theatres but spread to other specialties is proving difficult. De-brief really requires medical staff to believe in the benefits of this process and to be fully engaged for success to be possible.

Critical Care – PICU:

The PICU team have achieved reliability for the following measures:

- Hand hygiene
- CVC insertion bundle
- Multidisciplinary rounds
- Safety brief
- CVC maintenance bundle
- Daily goals

- PVC maintenance bundle

The VAP (ventilator associated pneumonia) bundle has been implemented apart from the 30° tilt for patients in cots as this was difficult to achieve with the cots the unit had. The new cots should be in place in the new Children's Hospital and therefore the unit should be able to implement all elements.

Neonates:

In this work stream not all the units are working on the same elements. For some elements the plan is for systems to be developed on one site and then spread to the other sites when tested as successful. Two units have merged as a result of the move to the new hospital which will help share practice and spread the elements. The elements all units are reliable for are hand hygiene and safety brief.

Although reliability has not been achieved across the units, there is progress with the measures of:

- CVC insertion bundle
- CVC maintenance bundle
- Gentamicin

Testing continues in the following measures which were introduced later in the programme:

- Infiltration injury
- Newborn screening
- Newborns with documented consultation
- Warm bundle
- Extubation pause

4. Results

The progress score definitions are in appendix 2.

4.1 Process measure results (July 2015)

General Ward Work stream

Team	Issue Code	HH	EWS	Safety Brief	SBAR Use	SBAR quality	PVC Maint	PVC Insert	CVC maint
RAH-15		5	5	5	5	5	5	n/a	n/a
RHSC-1A		3 Grn	3 Grn	3 Grn	3 Grn	3 Grn	2 Grn	n/a	n/a
RHSC-1C		5	4 Grn	4.5 Grn	4 Grn	4 Grn	n/a	4.5 Grn	n/a
RHSC- 1E	M	5	5	5	5	5	2 Red	n/a	n/a
RHSC- 2A		5	5	5	5	5	5	n/a	3 Grn
RHSC- 2B		5	4.5 Amb	5	5	5	n/a	4.5 Grn	4 Grn
RHSC- 2C		5	5	5	5	5	5	n/a	n/a
RHSC- 3A		5	5	4.5 Grn	4.5 Grn	4.5 Grn	5	n/a	n/a
RHSC- 3B		5	5	5	5	5	5	n/a	n/a
RHSC- 3C		5	5	5	5	5	5	n/a	4.5 Grn
RHSC- CDU									
RHSC-DSU		5	5	5	4.5 Amb	4.5 Amb	n/a	n/a	n/a
RHSC- Emergency Dept		5	5	5	4.5 Amb	4.5 Amb	n/a	4.5 Amb	n/a

Peri-op Work stream

Team	Issue Code	Pre-list Team Brief (all theatres)	Surgical Pause (all theatres)	Antibiotics (all theatres)	PVC Insert (all theatres)	Post-list De-Brief	Sign Out
RHSC-All Theatres	M	5	5	5	3 Red	3 Red	4.5 Amb

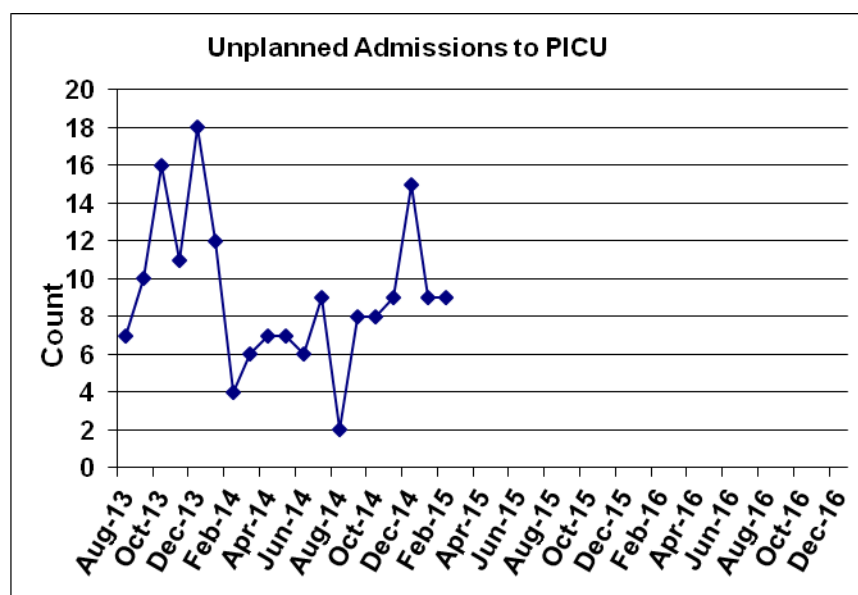
PICU

Team	Issue Code	HH	VAP bundle (excludes HOB)	Cent Line Insert	CVC maint	MDR	MDR & DG	PVC Maint	Safety Brief
RHSC-PICU/ITU	T	5	4.5 Amb	4.5 Amb	5	5	4.5 Amb	5	5

Neonates

Team	Issue Code	HH	Cent Line Insert	CVC maint	Gent	NB Screen	Safety Brief	NB with a doc consult	Warm Bundle	Ext Pause
PRMH-Neonatal		5	2.5 Red	3 Red	4.5 Grn	-	4.5 Amb	3 Red	-	3 Amb
RAH-Neonatal		5	-	4.5 Grn	3 Red	3 Amb	4.5 Grn	4 Grn	-	-
SGUH-Neonatal		5	4.5 Grn	3 Red	4.5 Grn	3 Grn	4.5 Grn	4.5 Amb	2.5 Red	-

4.2 Outcome measure results

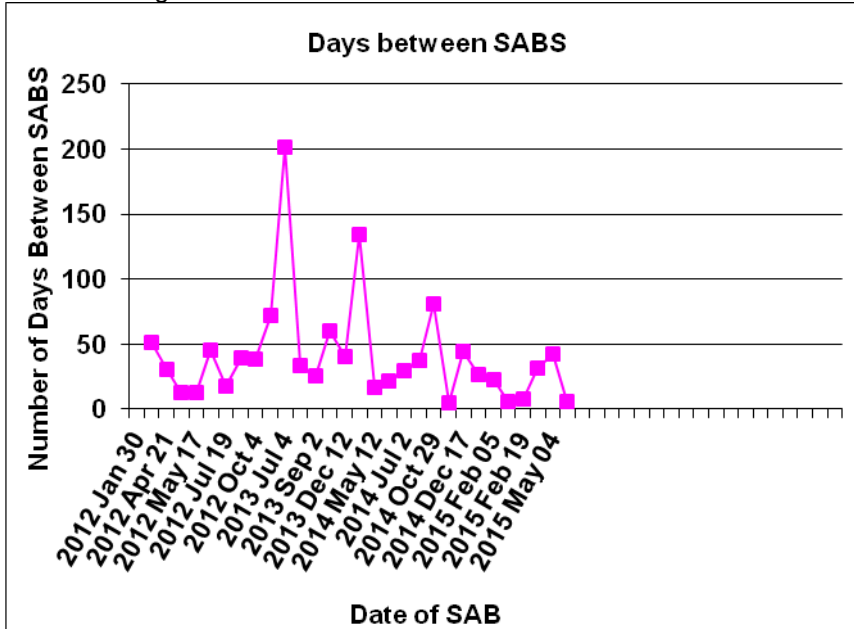


The chart opposite plots the occasions when the PICU have indicated an unplanned admission that could perhaps have been avoided. In theory if the early warning score is activated and used appropriately sudden deterioration should be avoided. Therefore if there is a reliable early warning score system the incidence of an unplanned admission should be reduced.

It is also recognised that the early warning score is not the only factor that would influence this measure. For example the score may be perfectly performed and treatment effected from escalation but the treatment could be inappropriate. It is difficult to determine by just looking at the chart if an improvement has been made however it is helpful look at the data over 6 month periods. In the first 6 month period (Aug 13 – Jan 14) there were 74 cases recorded. This reduced significantly to 39 cases in the next period (Feb14 – Jun 14) but has risen again to 51 in the most recent period (Aug 14 – Jan 15). This data is not counterbalanced with the level of activity so it could be there was an increase in activity

during the times when these results are high such as Dec 14. It will be interesting when the next set of data is submitted to see if the level continues to be below 10, though further work is required to pinpoint the aspect that could have prevented these unplanned admissions.

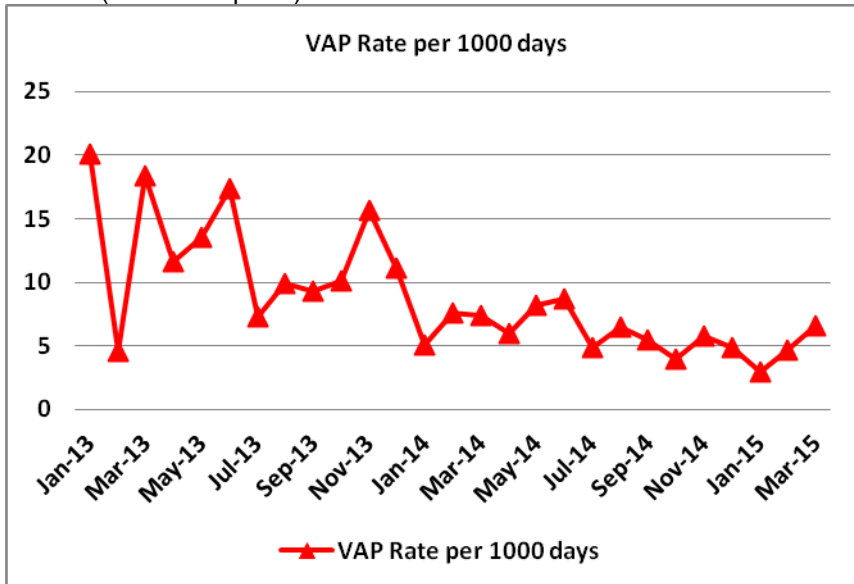
The chart below demonstrates the number of days between the *Staphylococcus Aureus* Bacteraemia intra venous central catheter (CVC) infections recorded for PICU. This is an outcome measure for the CVC inserting and maintenance bundle.



Although the unit is demonstrating reliability for both CVC insertion and maintenance it may be the case that the CVC was not actually inserted within the unit and the patient arrived with the CVC already in place from ED, theatres or another hospital. To help distinguish this factor so the unit can be sure which cases they have complete control of the CVC from start to finish, the unit has been asked to annotate

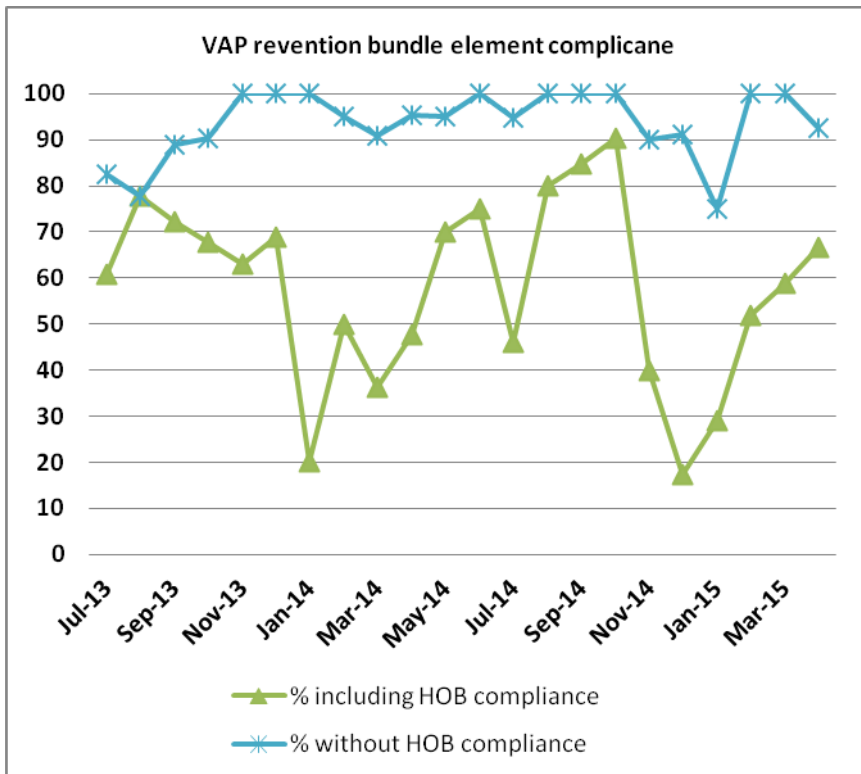
the location the CVC was inserted for this data. It would also be helpful if the theatres and ED department implemented the CVC insertion bundle.

Since Jan 12 to Dec 14 there have been 1, 2 or no infections per month. However in 2015 there were 4 reported in Jan and Feb and 3 reported in Mar and April. The longest period without an infection was 5 months (Dec13 – Apr 14).



The chart opposite shows the rate of ventilator associated pneumonia in the PICU per 1000 days. The chart demonstrates that there is a reduction in the VAP rate since introduction of the bundle elements in early 2013.

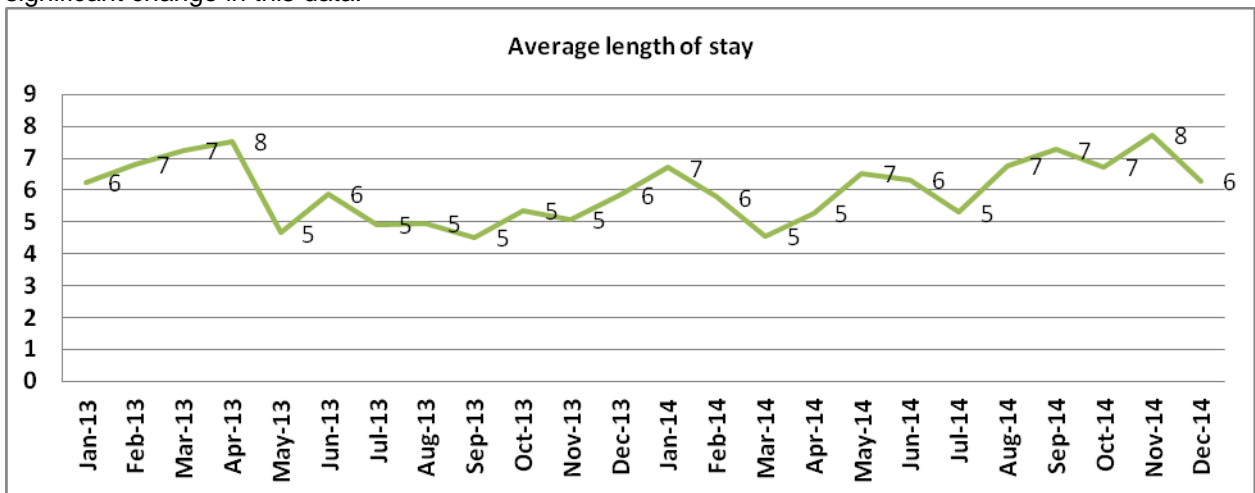
The chart below explains the progress in relation to the process measures of the VAP bundle. One of the elements of the VAP bundle is that the patient should be nursed at a head of the bed (HOB) 30° tilt however the cots that were in the PITU did not easily facilitate this. Therefore the tilt could be performed for children in beds but not for those in the cots. The blue line below (higher line) shows the compliance of all the other elements of the bundle apart from the 30° tilt.



The compliance has been very good with 100% demonstrated on several occasions and only one dip below 90% in the past 19 months. The green line shows compliance if the 30° tilt was included and it can be seen how this element lowers the compliance significantly. Now the PITU has moved and the new cots should have this facility it will be interesting to note if not only the process compliance with the

Whole bundle improves but also the impact on the outcome measure of VAP rate.

Looking at the average length of stay in the PITU demonstrated below it would appear that there is no significant change in this data.



Appendix 1 – Current elements measured

General Ward Bundle

- % of compliance Hand hygiene
- % compliance with PEWS bundle
- % compliance with the daily safety brief bundle
- % of exchanges that use a high quality SBAR
- [% compliance with the paediatric Peripheral Vascular Catheter \(PVC\) insertion bundle](#)
- [% compliance with the paediatric Peripheral Vascular Catheter \(PVC\) maintenance bundle](#)
- [% compliance with paediatric central venous catheter \(CVC\) maintenance bundle](#)

Peri-operative bundle

- Pre-list team brief
- Pre case surgical pause
- On-time prophylactic antibiotics administration
- [% compliance with the paediatric Peripheral Vascular Catheter \(PVC\) insertion bundle](#)
- Post list de-brief

Critical Care PICU

- % of compliance Hand hygiene
- [% compliance with the paediatric VAP prevention care bundle](#)
- [% compliance with paediatric central venous catheter \(CVC\) insertion bundle](#)
- [% compliance with paediatric central venous catheter \(CVC\) maintenance bundle](#)
- [% compliance with the paediatric Peripheral Vascular Catheter \(PVC\) maintenance bundle](#)
- % achievement of patients being reviewed by the correct "people" and daily goals (DG) including child, young person and family / carer
- % compliance with the daily safety brief bundle

Neonatal

- % of compliance Hand hygiene
- [% compliance with paediatric central venous catheter \(CVC\) insertion bundle](#)
- [% compliance with paediatric central venous catheter \(CVC\) maintenance bundle](#)
- % compliance with the daily safety brief bundle
- % compliance with gentamicin bundle
- % of newborn infants with screening bundle
- % of newborn infants with a documented consultation with parents by an experienced clinician of the neonatal team within 24 hours of admission
- % compliance with warm bundle
- % of planned extubation using extubation pause

Outcome measures

- Serious Safety Events
- Ventilator associated pneumonia
- Central venous catheter related blood stream infections
- Unplanned admission to Paediatric Intensive Care Unit (PICU)
- Medicines Harm

Leadership and Culture

- Number of safety walk rounds including hospital & senior leaders
- % of actionable items being completed each month

Appendix 2 – Progress score definitions

Progress score (based on the <u>current</u> data picture, looking backwards)	Time since team became active in work (the point from when there is an intent to participate/ 1 st meeting with team has taken place)*					
	At 1 month	At 3 months	At 6 months	At 9 months	At 12 months	At 18 months
0.5 There is an intention to participate. Team is still being established, and work is at a planning stage	Green	Amber	Red	Red	Red	Red
1 Team is established and work has started but measurement is not yet in place	Green	Amber	Amber	Red	Red	Red
2 Team is actively testing changes and measuring the bundle, but has not yet seen any improvement (*defined as 3 or more consecutive data points going in the desired direction)	Green	Green	Amber	Red	Red	Red
2.5 Team is actively testing changes and measuring the bundle. The team has started to show improvement (*defined as 3 or more consecutive data points going in the desired direction)	Green	Green	Amber	Red	Red	Red
3 Team is actively testing changes and measuring the bundle. The team has demonstrated a process that is at times capable of showing 95% compliance	Green	Green	Amber	Red	Red	Red
4 Team is actively testing changes and measuring the bundle. The team has demonstrated reliability (6 consecutive data points with a median of 95%)	Green	Green	Green	Green	Amber	Red
4.5 Team has demonstrated sustained reliability (9 consecutive data points with a median of 95%)	Green	Green	Green	Green	Green	Amber
5 The team have met the criteria for score 4.5 and there is a strong degree of belief that all goals and expected results have been accomplished in the bundle, and this is reflected in the outcome data	N/A	N/A	N/A	N/A	N/A	N/A

Issue codes	
T	Issue within team itself (sickness and absence, change of improvement team personnel, clinical leadership issues etc)
M	Team is still active, and are actively testing changes, but measurement of the identified care element(s) is problematic
S	Team is active, but there have been problems in engaging/supporting the team from the programme support staff