

SPSP Maternity and Children

End of phase report
August 2016



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www.scottishpatientsafetyprogramme.scot.nhs.uk

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Introduction

The Scottish Patient Safety Programme (SPSP) is now part of Healthcare Improvement Scotland's Improvement Hub supporting improvement across health and social care. This is a unique national programme that aims to improve the safety of healthcare and reduce the level of harm experienced by people using healthcare services. SPSP aims to support National Health and Wellbeing Outcome 7: *People using health and social care services are safe from harm.*

The Maternity and Children Quality Improvement Collaborative (MCQIC), encompassing the activity of the maternity, neonatal and paediatric programmes, was launched in March 2013 to run until March 2016. These distinct clinical settings were at different stages in their improvement journey with different resources attached, but all were committed to ensuring safe, person-centred and effective care. MCQIC was the vehicle and unique opportunity to bring together these three strands, share learning and help improve care delivery.

MCQIC overall aim

To improve outcomes and reduce inequalities in outcomes by providing a safe, high-quality care experience for all women, children, babies and families in healthcare settings in Scotland.

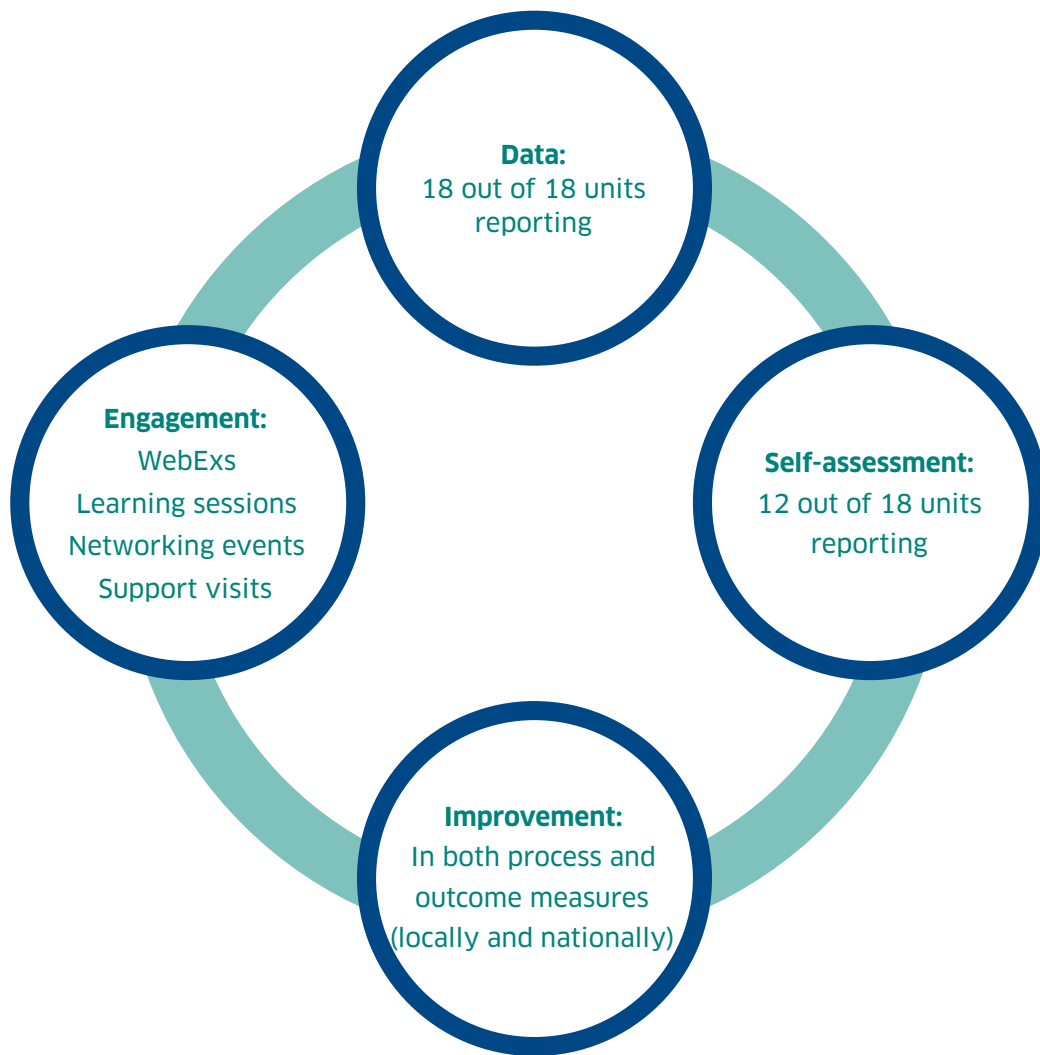
Maternity care

What were we aiming for?

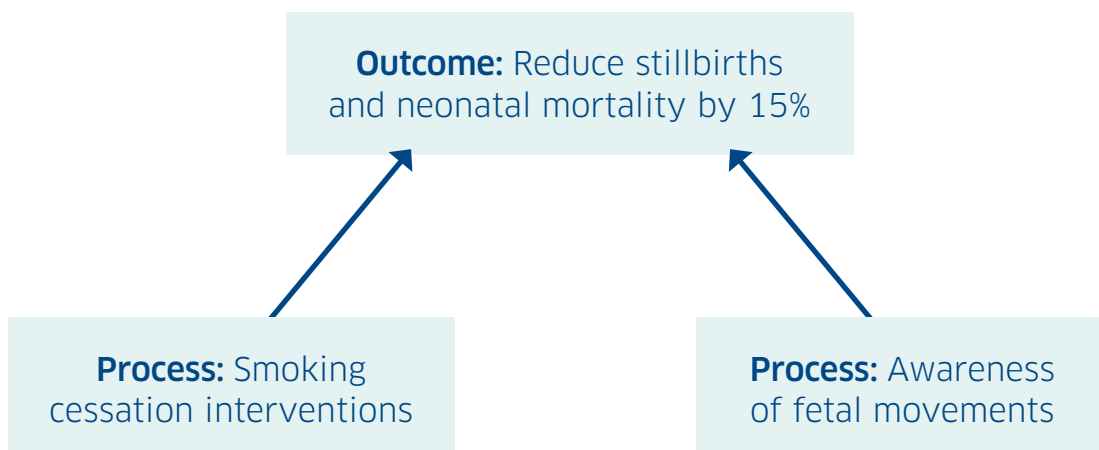
- Reduce avoidable harm in women and babies by 30% by 2016 through:
 - ◇ reducing stillbirths and neonatal mortality by 15%
 - ◇ reducing severe postpartum haemorrhage by 30%
 - ◇ reducing the incidence of non-medically indicated elective deliveries prior to 39 weeks' gestation by 30%
 - ◇ offering all women carbon monoxide monitoring when booking their antenatal care appointment
 - ◇ referring 90% of women who have raised carbon monoxide levels or who are smokers to smoking cessation services, and
 - ◇ providing a tailored package of care to all women who continue to smoke.
- Increase the percentage of women satisfied with their experience of maternity care to > 95% by 2016.

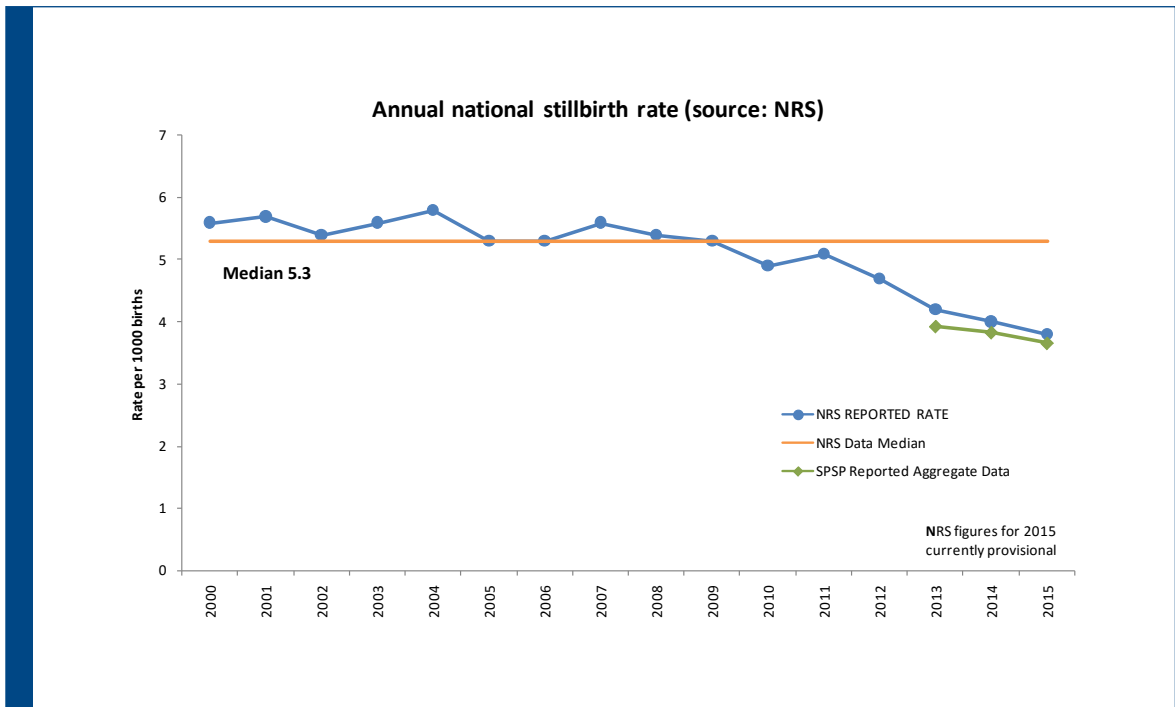


What progress have we made?



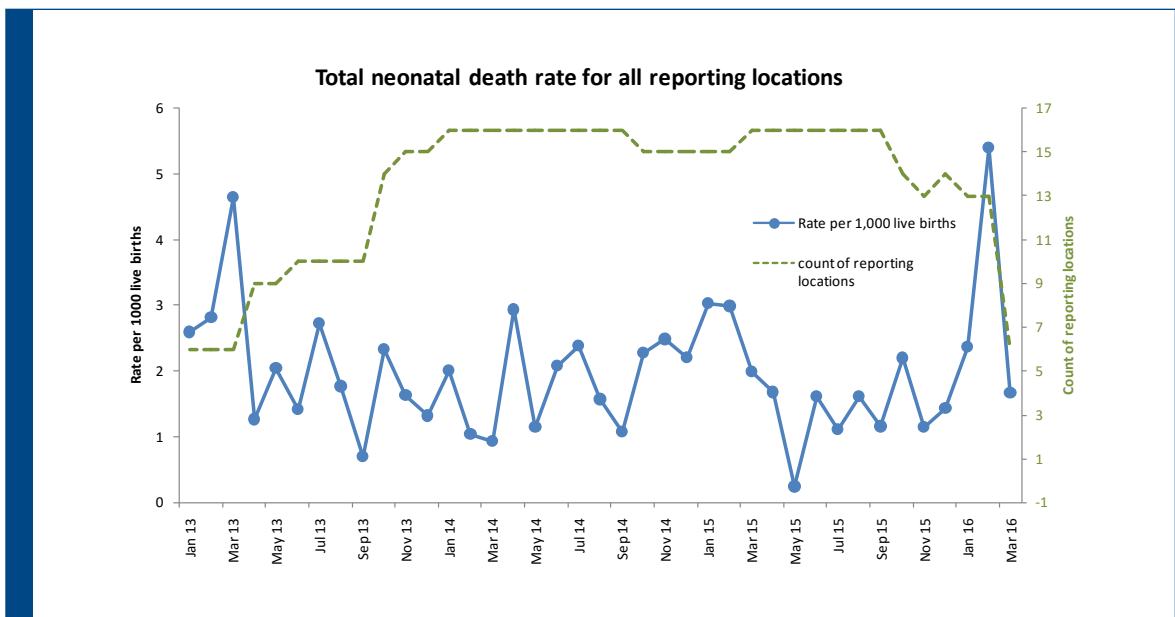
Reducing stillbirths and neonatal mortality by 15%





Outcome

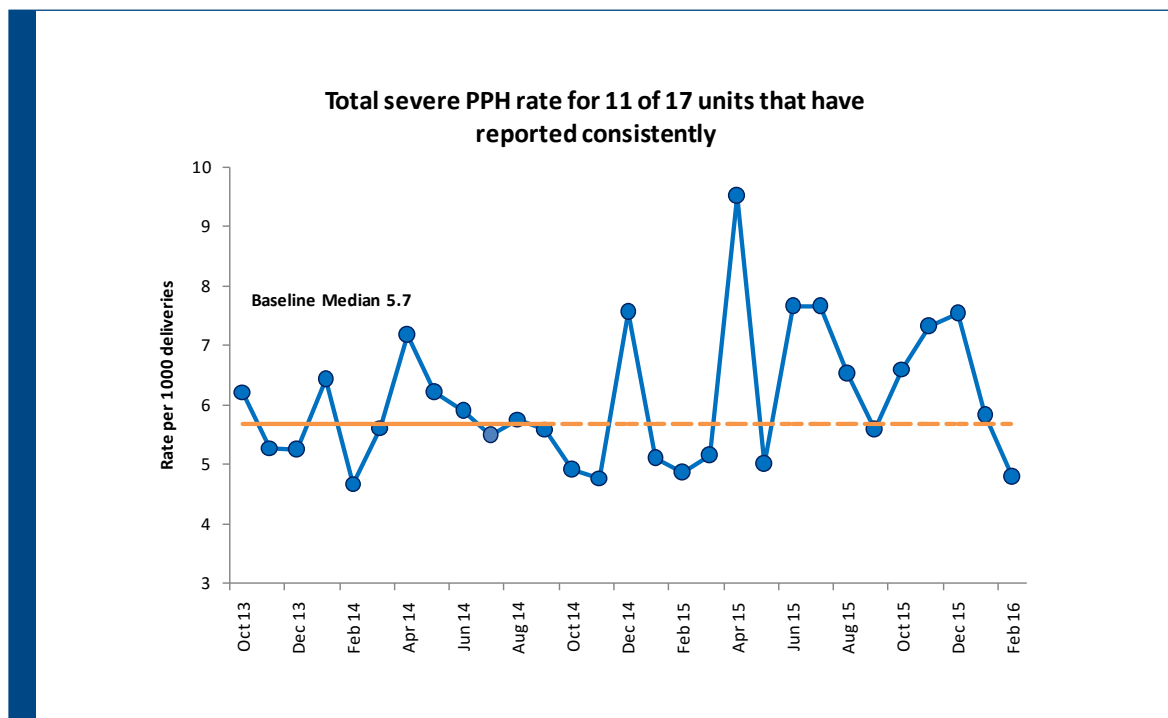
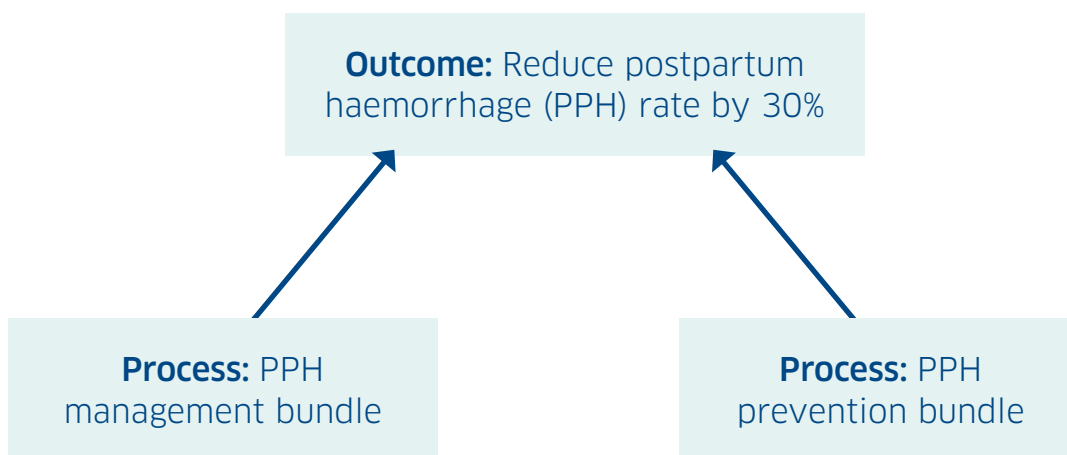
In 2015, provisional national outcome data showed that 211 babies were stillborn, a 19.15% reduction in the rate of stillbirth compared with 2012 (3.8 of 1000 births). Although no factor or programme can be attributed to this decline, it is encouraging that the rate of stillbirth is the lowest ever recorded in Scotland.



Outcome

The data indicate that more work needs to be done on this measure to demonstrate improvement.

Reducing severe postpartum haemorrhage by 30%



Outcome

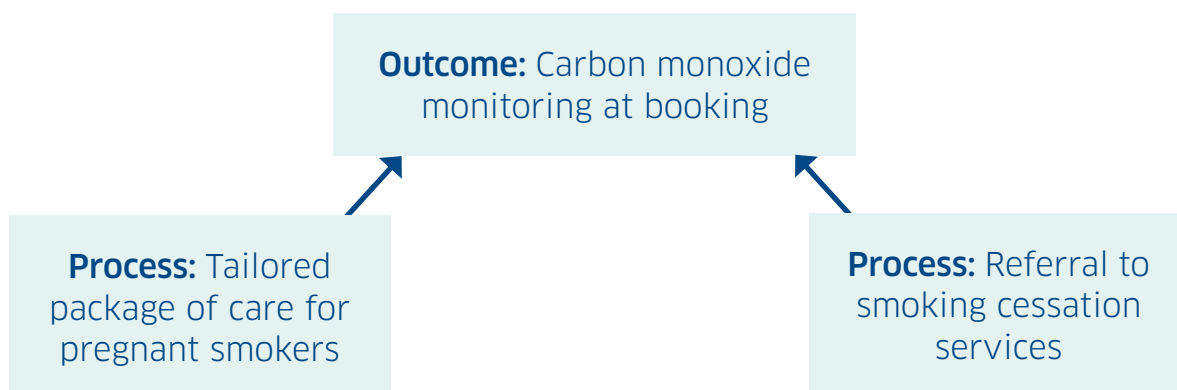
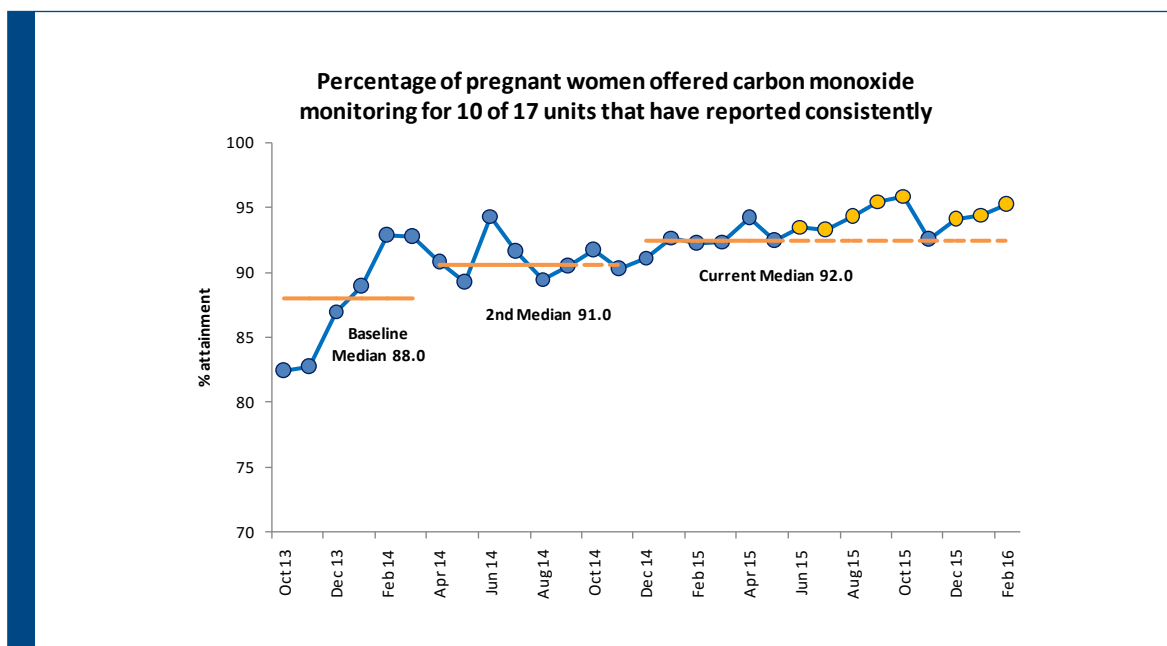
It is clear from national data that we have not achieved significant change in the rate of postpartum haemorrhage. However, emerging data at NHS board level is identifying improvements and postpartum haemorrhage remains a key focus of the future programme.

Smoking in pregnancy

A key focus of the maternity care strand has been the recognition, referral and management of pregnant women who smoke. There has been an improvement in the reliability of carbon monoxide monitoring offered at booking - to over 95% of all pregnant women - and this is now routine care in most maternity units.

Whilst this is impressive, it is important to note that this has not translated into any decrease in smoking cessation rates amongst pregnant women. Forthcoming work will:

- include a focus on improving attendance of smokers at smoking cessation services
- improve consistency between services, especially increasing reach and success with women living in SIMD1 (most deprived) communities
- look at change ideas to improve processes within services.



Increase the percentage of women satisfied with their experience of maternity care to >95% by 2016

The 'Having a baby in Scotland 2015: listening to mothers'¹ national survey, sponsored by Scottish Government, was completed in 2013 and repeated in 2015.

Continued efforts by the MCQIC team to focus on this resulted in duplication of effort at NHS board level and it has been agreed that this measure will not be used in the next phase of MCQIC, as there is sufficient data available from other sources, such as Patient Opinion² and the Universal feedback friends and family test³.

We are, however, keen to ensure that we maintain a person-centred approach to the delivery of care across Scotland. As such, we are testing the 'Experience based Co-Design'⁴ method at NHS Ayrshire & Arran, and aim to inform this approach on a wider scale in the future.



¹ Scottish Government, 2015. Having a baby in Scotland 2015: Listening to mothers. www.gov.scot/resource/0049/00490953.pdf

² www.patientopinion.org.uk

³ www.nhsggc.org.uk/our-performance/nurses-midwives/universal-feedback-friends-and-family-test

⁴ www.kingsfund.org.uk/projects/ebcd

Neonatal care

What were we aiming for?

- Reduce adverse events that contribute to avoidable harm in neonatal care by 30% by 2016 by seeking to reduce harm from:
 - ◇ mechanical ventilation
 - ◇ invasive lines
 - ◇ high-risk medicines
 - ◇ transitions of care, and
 - ◇ undetected deterioration.
- Increase natural feeding.
- Improve service user engagement.

What progress have we made?

At present, there is insufficient data to allow aggregation of national data; however, there are indications of improvement at local level as detailed later.

Successes:

Local-level improvement
11 out of 17 units reporting
data regularly

Challenges:

Specialty shortage
Commitment to QI
methodology

Reducing harm from mechanical ventilation

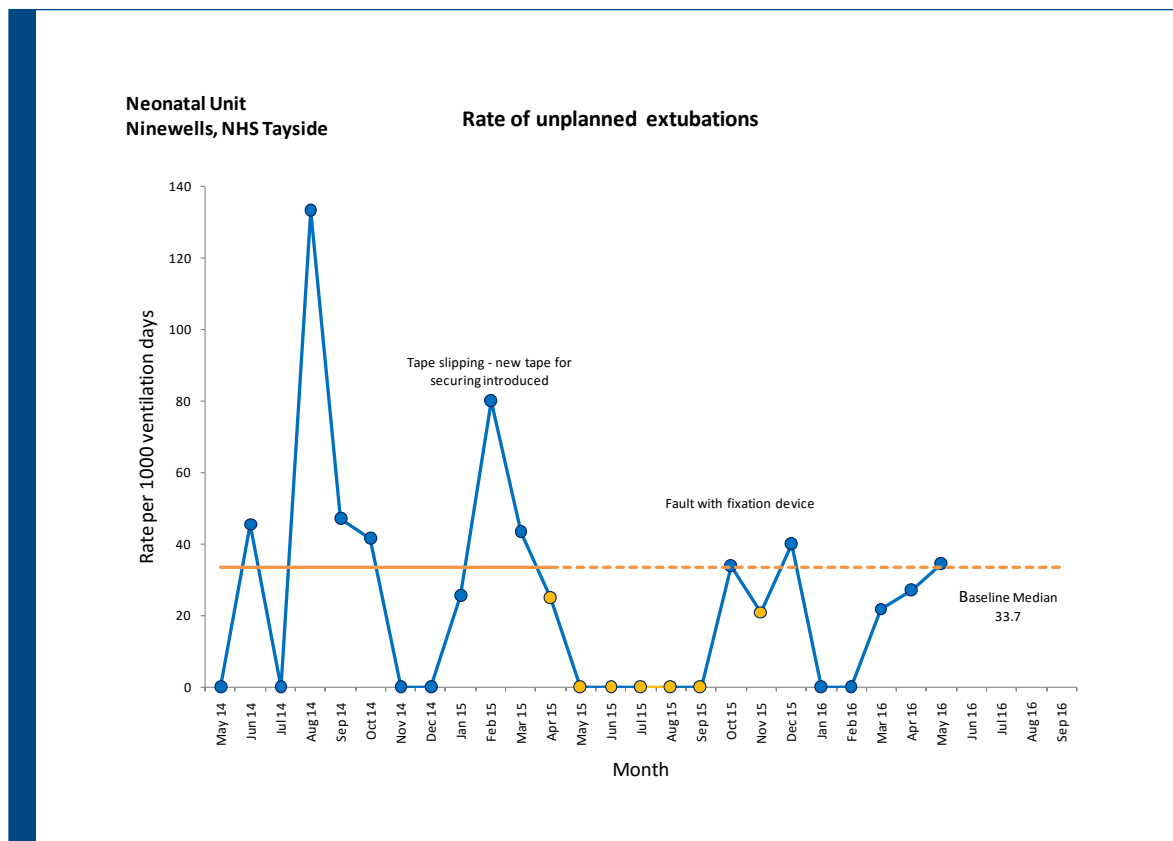
Process: Respiratory support bundle

Outcome: Reduce harm from mechanical ventilation

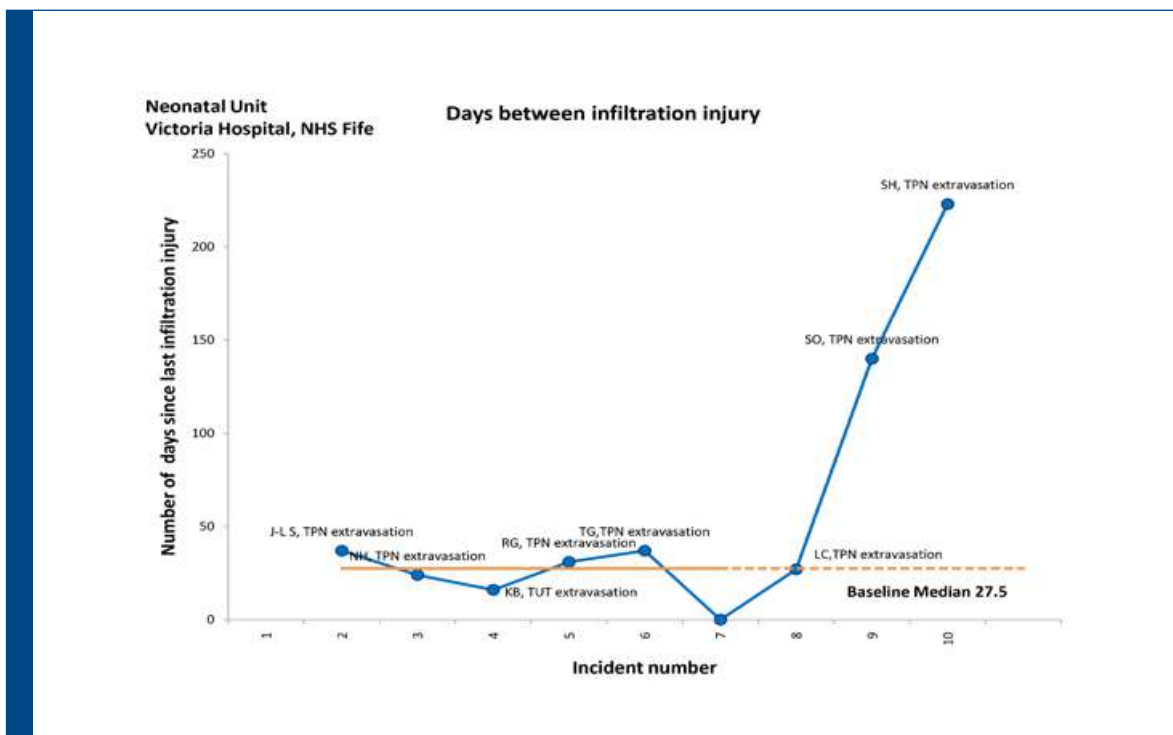
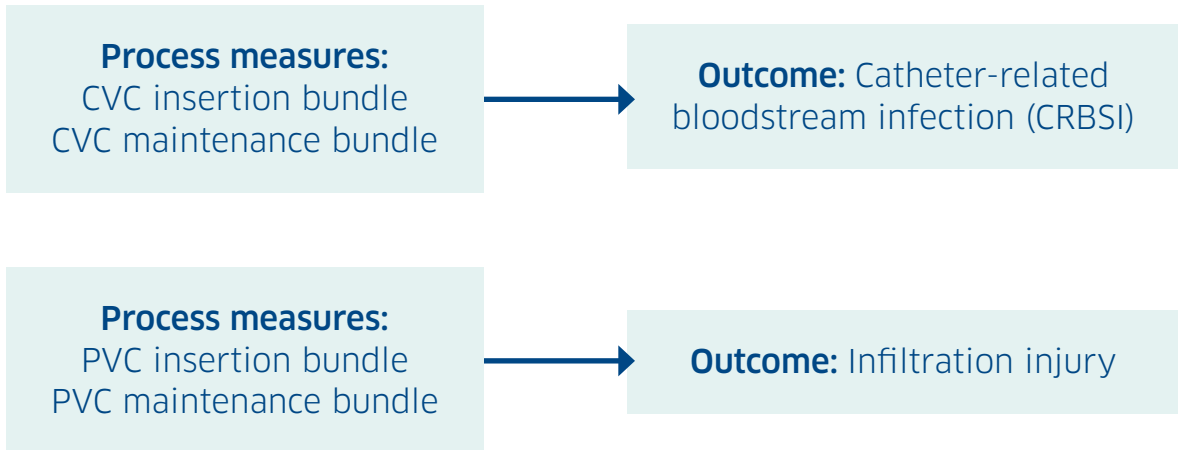
Outcome

Units are able to demonstrate:

- reduction in unplanned extubations
- reduction in tissue damage, and
- the development of intubation and extubation 'pauses' and check sheets.



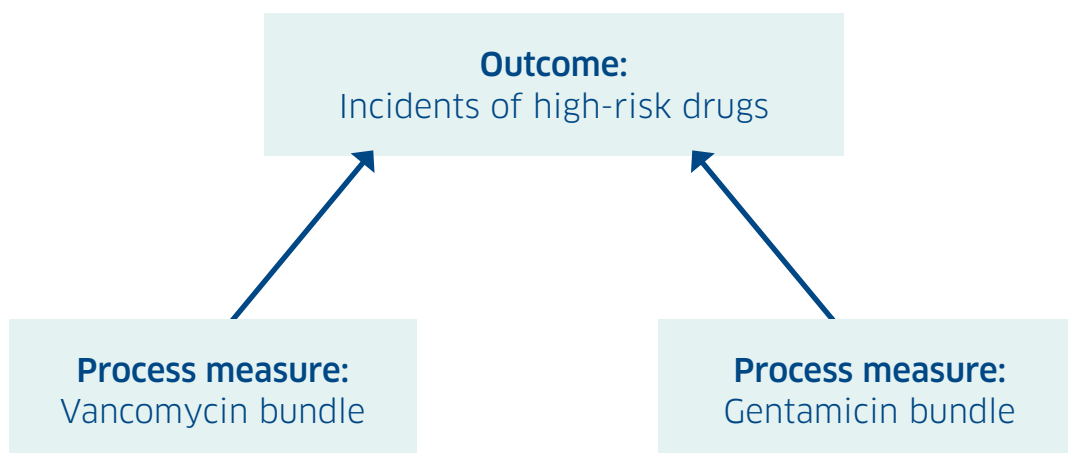
Reducing harm from invasive lines



Outcome

NHS Fife has now achieved in excess of 250 days since its last infiltration injury through application of the peripheral vascular catheter (PVC) bundles and a review of its current feeding practices, minimising the need for peripheral total parenteral nutrition.

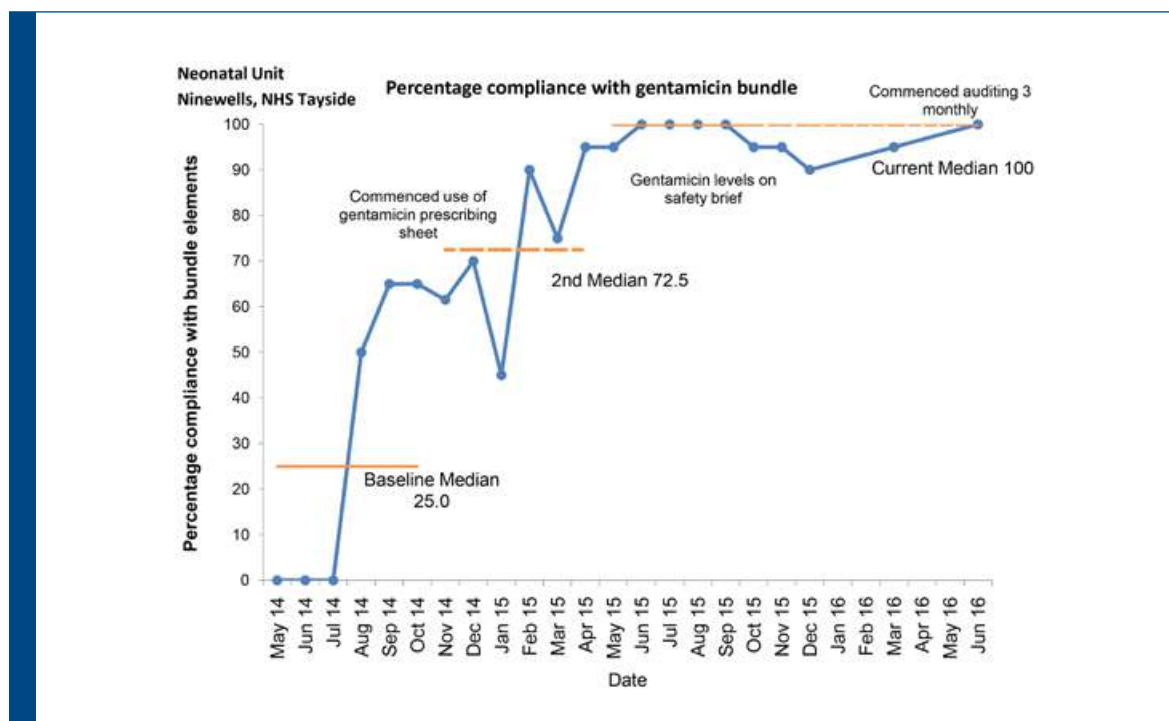
Reducing harm from high-risk medicines



Outcome

Progress and improvements are being made at local level within NHS boards.

Very few units have started using the vancomycin bundle. The gentamicin bundle has been taken and adapted for use in paediatric units.



NHS Tayside has seen an improvement in its compliance with the gentamicin bundle from a median of 25% to 100%. It has also demonstrated an improvement in outcome with an increase in infants receiving gentamicin within therapeutic range.

Transitions of care

There has been extensive discussion regarding the delayed repatriation of infants. This is not a key measure for the MCQIC programme in the next phase as cot management is an activity that sits with the managed clinical networks.

Undetected deterioration

The British Association for Perinatal Medicine launched the Newborn Early Warning Trigger and Track Tool (NEWTT), which includes a risk assessment to be completed at birth. This tool has already been adopted by some units and the use of similar risk assessment tools and early warning scores will be promoted in the next steps of the programme as one of the initial national priorities is care of the deteriorating patient.

The neonatal care programme also has the following aims.

Increase natural feeding

The measure in the programme is percentage of babies discharged on breast milk. Feedback from the community is that, while families are eager to provide breast milk when their child is unwell, despite education and support there is a large percentage of families that transition to formula once the baby's condition improves. This measure has been challenging and is likely to sit more comfortably within health promotion.

Improve service user engagement

A variety of work is under way at NHS board level to provide person-centred care, including:

- mother and baby bonding sessions
- the provision of overnight accommodation for parents
- parent surveys and questionnaires, and
- use of improvement trees and ‘You said, we did’ feedback, with varying degrees of success.

It is evident that the neonatal community is engaged with the programme and striving to make improvements within their areas of work. However, owing to different NHS boards working on different measures, we are unable at this time to report national-level data. In the next phase of the programme, we are phasing focus on key outcome measures for all NHS boards to work on at the same time, with the aim of being able to demonstrate improvements nationally.



Paediatric care

What were we aiming for?

Reduce avoidable harm in paediatric care by 30% by 2016 by addressing:

- serious safety events
- ventilator associated pneumonia
- central venous catheter bloodstream infection
- unplanned admission to intensive care
- medicines harm, and
- child protection harm.

These six elements make up the Paediatric Serious Harm Key Indicators (PSHKI).

What progress have we made?

One of the main challenges encountered in the paediatric programme has been reliable submission of data. Consequently, we do not have a complete data picture to reliably demonstrate impact or improvement. This report contains a blend of both national and local data where achievements have been noted.

Successes:

National system-wide PEWS
(across five age ranges)
Paediatric Sepsis 6

Challenges:

Engagement
Reliable data submission

Serious safety events

Definition: Any event which is categorised as ≥ 4 on Datix or local risk management system

Outcome

There is insufficient data to show a national picture because of the limited number of NHS boards reporting and the low number of incidents reported.



Unplanned admissions to paediatric intensive care unit

A reduction in unplanned admissions to intensive care can be an indicator of better recognition of deteriorating patients. Processes have been put in place to achieve better recognition, response and intervention for patients who were unwell, such as PEWS, huddles, structured communication and 'watchers' bundles.

One of the biggest achievements is that Scotland is now the first nation in the world (2015) with a whole-system approach for PEWS. The plans in the next phase are for implementation of this by Scottish Ambulance Service and primary care, ensuring that all practitioners across the country are discussing and using this standardised approach - thereby making care safer.

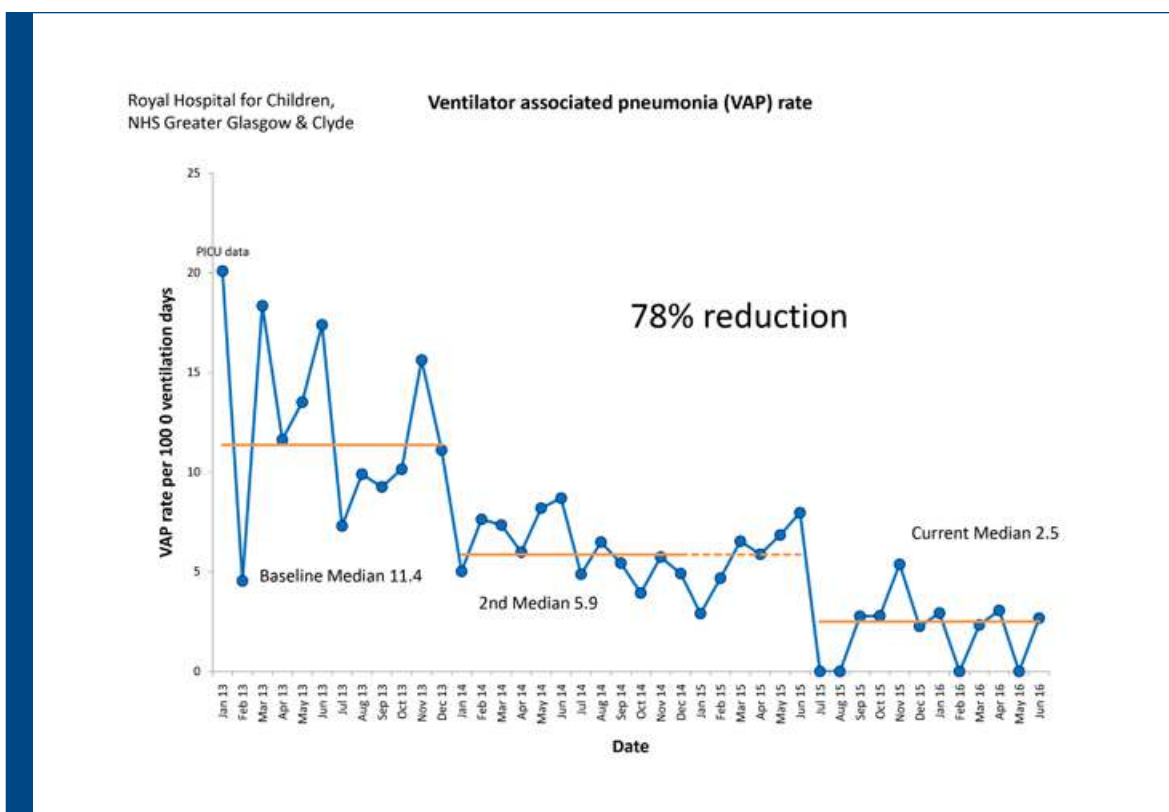
Alongside this is the development of the Paediatric Sepsis 6 bundle, which has gained momentum within four NHS boards and will be an ongoing focus of the programme moving forward.

Ventilator associated pneumonia

There are two paediatric intensive care units (PICUs) in Scotland where ventilated patients are cared for.

Outcome

NHS Greater Glasgow and Clyde has achieved a 78% reduction in its ventilator associated pneumonia (VAP) rate and for the first time has achieved 2 months with no episodes of VAP. The MCQIC team is working with the remaining PICU to understand progress with this key aim.



Central line bloodstream infections

The central line measures were tested first in the two PICUs, with spread to other wards within the children's hospitals and to the district general hospitals.

Data reporting within the paediatric community has proven to be inconsistent and no national improvement can currently be described.

Medicines harm

Definition: Any event which is categorised as ≥ 4 on Datix or local risk management system

Teams are working to address reduction in harm at transitions, for example through medicines reconciliation, reduction in interruptions during both prescribing and administration and reducing harm from high-risk medicines. Collection of medicines events categorised as level ≥ 4 or greater within Datix or equivalent has been revised to support collection of broader medicines events. This work links directly with the SPSP Medicines programme.

Outcome

In order to support NHS boards to improve medicines safety, we have agreed with the community to broaden the scope of reporting to reflect the challenges facing NHS boards. Reporting will include number of near misses, number of medicines errors without harm and number of medicines errors with harm.

Child protection harm

This is a key component of the PSHKI and a driver diagram and change package are currently being designed with key stakeholders for testing at NHS board level. This is a very complex area and we are keen to ensure that any improvement work by NHS boards as part of the paediatric care programme is focused on improving delivery of care in the acute healthcare setting (such as ensuring compliance with existing child protection guidelines) with a focus on what is within the NHS board staff remit and sphere of influence to deliver. As this measure is under development, NHS boards are not required to report on this at present.

Key learning for the programme

It should be noted that these details are only an excerpt of the volume of data, activity and information that exists in the MCQIC programme. All three strands of the programme are working on measures and processes that are not included in this report.

The emphasis is placed on both qualitative and quantitative data. MCQIC has brought about many achievements, both nationally and at NHS board level. Some of these achievements cannot be quantified. These include:

- raising awareness among staff of how improvement methodology can be used to improve patient safety
- engaging and empowering staff, and
- creating a strong network and community that shares information, resources and learning.

‘Staff engagement has mushroomed as the programme has developed. MCQIC has brought together groups of staff who might not normally meet but have a common aim in supporting women and families in hospital and community. This brings a better understanding of each other’s role and how we can work together better.’

NHS Dumfries & Galloway

Lessons have been learned, both nationally and at NHS board level, to inform improvements to programme delivery. A more cohesive approach is needed for better integrated working with other national quality improvement initiatives, such as the Early Years Collaborative (EYC) and Raising Attainment for All (RAfA) programme.

Engagement is key

Some communities have been more engaged than others, and we have learned, particularly from the neonatal community, that when starting up a programme pre-engagement work is necessary. It is important to ensure that 'readiness for change' exists and, consequently, adequate communication, co-design and relationship building are essential prerequisites at the outset of any change initiative to ensure buy-in and commitment.

'The use of improvement methodology has, during this programme, given staff more confidence in managing change by using the Model for Improvement. As a group of health professionals we are able to discuss improvement and accept the responsibility of our roles within that. Small tests of change are now a normal part of our working environment.'

NHS Greater Glasgow and Clyde

Data strategy

The 2013–2016 programme had a range of ambitious aims underpinned by a large measurement plan. On reflection, the level of activity required relative to the size of some units has been considered challenging and inhibiting to spread and sustainability.

‘Having the autonomy to work on projects the unit feels are a priority rather than having to focus on producing data for the entire measurement package might mean there is a clearer focus. A number of projects running together can be challenging for staff and can mean a lack of engagement as busy staff can feel overwhelmed.’

NHS Lothian

This resulted in different units working on different things, with the consequence of insufficient data to determine the impact at national scale, although it was possible to see improvements at a local level.

This has certainly informed the design of the next stage of MCQIC; in response, the future programme will take on a phased approach, with a focus on fewer national outcomes and with local board-level flexibility to work on their choice of processes that contribute to those outcomes.

Data management

The current requirement for national monthly data submission and quarterly self-assessment reports from NHS boards is proving onerous. Currently, there is a total of 49 monthly data submissions (18 maternity, 17 neonatal, 14 paediatric) and approximately 18 self-assessments every month.

In an effort to reduce the data burden, the current measurement plans are being revised with an accompanying proposal to reduce monthly data submissions to every 2 months and change the self-assessment schedule from every 3 months to every 6 months.

Resource at local level

At NHS board level, the degree of resource and support allocated to each strand of the MCQIC programme varies, but it is important to ensure that MCQIC remains a priority for NHS boards, as these specialties will touch everyone's lives. The lack of dedicated resource at local level has made engagement and participation difficult.

The maternity champion role is considered successful because it:

- helps to build will by securing staff engagement through communication and local and national networking
- contributes to the building of a local improvement infrastructure, and
- contributes to spread, sustainability and integration with other relevant programmes or functions.

It does, however, carry the risk of creating person-dependent systems and has highlighted the difference in engagement and programme delivery across the three strands.

In some areas, there is a need for greater adoption of improvement science methodology, and this is being addressed in the next phase with the provision of a series of quality improvement WebExs for the MCQIC communities. Topic and strand-specific networking events will replace the larger learning sessions.

Next steps

The next steps of the programme have been designed as a result of these lessons learned and continuing successful aspects.

It is worth noting that the MCQIC programme would not be successful without the engagement of our stakeholders. We look forward to continued working with all our stakeholders in improving maternity, neonatal and paediatric care across Scotland.



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