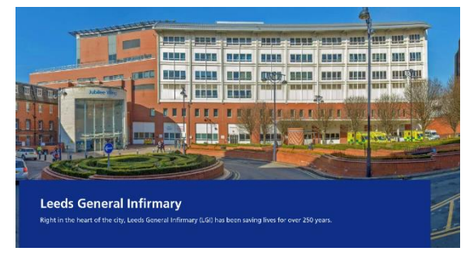
Checked Or Not Checked? – that is the question....

Abbas, Natasha[1], Shearer, Heather[2]
LGI Hospital , NICU department 2QICLearn

The Leeds Teaching Hospitals NHS Trust

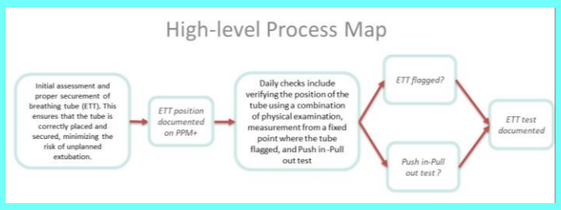


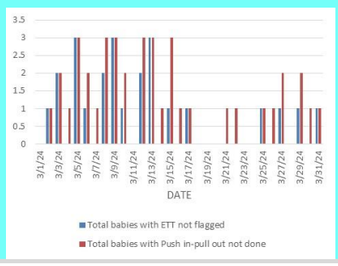
BACKGROUND

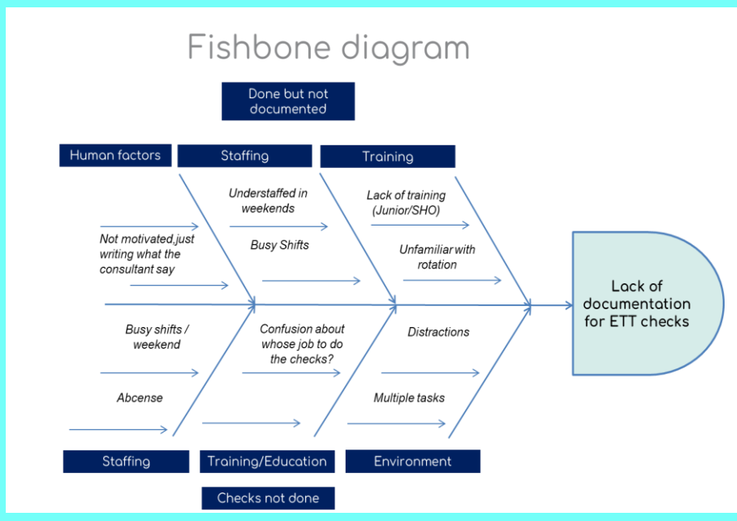
PROBLEM

Accidental extubation is a serious problem in neonatal units - it contributed to the deaths of two babies. Parents and staff felt terribly about it.

DIAGNOSTICS







AIM & MEASUREMENT DEFINITION

Aim: Improve endotracheal checks documentation on the daily NICU summary sheet in our NICU at LGI to be 100% by August 2024 (those include ETT flag/Push in-pull out test)

Measure:

Weekly review of the NICU summaries for ventilated babies to check if the ETT flag test and the push in-pull out test also are documented.

Spot check every 2 weekly round to see if the ETT flag is there physically

Inclusions: All ventilated babies in LGI NICU.

Exclusions: Admitted less than 24 hours

Our overarching improvement goal is to reduce the frequency of accidental extubations in our NICU. Checking the endotracheal tube (ETT) is important to this and my aim is to improve how we document these checks.

CHANGE IDEAS

- The QI lead (senior consultant) emails all consultants regarding the recent audit which shows approximately half of the "Push in – Pull out" tests are not being documented. Consultants asked to remind the junior doctors to record this test.
- Project Lead to send a WhatsApp message to junior doctors and ANPs, sharing the audit and reminding them of the importance of documenting endotracheal tube (ETT) checks for ventilated babies.
- Conducting spot checks and sharing findings with team by the end of the day the check done.
- An unplanned extubation tracker board will be placed in the MDT/Handover room, along with a poster showing the number of UEs per month and the date of the last occurrence.
- The poster will be placed on the wall above the blood gas machine in the NICU, where many staff frequently go to run blood gases, ensuring visibility of this critical information.
- Keep awareness high by talking and messaging about this issue.

PDSA cycles

PDSA 1

- Share this information with the QI team and emphasize the importance of accurate documentation, as it is a reflection of good clinical practice.
- I plan to seek feedback from one of the senior trainees regarding our current ETT documentation. This could provide valuable insights into the problem and help identify the underlying issue.
- This is why I collected one month of data (March 2024). The results showed that the ETT flag was not documented in 23% of cases, and the "Push in – Pull out" test was not documented in 37% of cases. There was no significant difference across the days of the week, but these issues occurred more frequently on particularly busy days.
- On 15/05/2024, I spoke with a grid trainee who has been in the unit for three years. She agrees that there is an issue but believes we need more data, particularly to determine if this is occurring more frequently on weekends and bank holidays.

PDSA 2

- Emphasize the importance of accurate documentation, as it reflects good clinical practice.
- Share the information (March data) with the wider NICU team (JDs/ANPs/Consultant), remind the team about the importance of the correct documentation.
- I noticed the change followed that quickly, 2 of the consultant who I walked round with them, asked the team to document the checks after they have done them during their examination to the ventilated babies.
- UE QI lead in the department has discussed with the consultant team in a consultant meeting.

PDSA 3

- I don't think this approach was very effective. Although they may have read it, there wasn't enough reaction . As a result, I needed to speak directly with more individuals to emphasize that we are reviewing the ETT documentation to improve that.
- Share this information with junior doctors and ANPs responsible for documentation during rounds and remind them of the importance of accurate documentation.
- 3 people reacted to that on the WhatsApp group , that was disappointing as the group has more that 30 people in.
- I shared the information I collected with the JDs/ANPs via our WhatsApp group.

PDSA 4

- Some individuals are already documenting well. I believe it's important to highlight their good work to the entire group, as this may encourage those with less accurate documentation to improve.
- Plan to speak to my colleagues when I am at work about our documentation and the data I collected.
- Everyone agreed that our ETT checks are not consistently accurate.
- I spoke to 6 people about it. (During July) all are SHOs.

PDSA 5

- Share this information with the QI team: the ETT is likely flagged most of the time, while it seems that the "Push in – Pull out" test is sometimes not being performed and therefore not documented.
- During the UE QI meeting, we discussed the need for me to directly observe whether the ETTs are flagged, as we suspect they may be, but some are likely being missed in the documentation.
- The ETT flag is likely present most of the time, but it is not consistently documented.
- On the 15th of July, I conducted a round and observed five ventilated babies, all of whom had their ETTs flagged. However, some of these flags were not documented.

PDSA 6

- Continue to track ETT documentation and report it alongside the unplanned extubation (UE) rate in the unit to emphasize the importance of accurate documentation.
- Share the ETT documentation audit with the team covering the period from June 1st to July 15th. The documentation is still not perfect during this time.
- I believe not everyone is fully motivated or understands the connection between ETT documentation and unplanned extubation.
- I sent a WhatsApp message to our JDs and ANPs informing them about the data collected, highlighting that there has been no improvement in documentation.

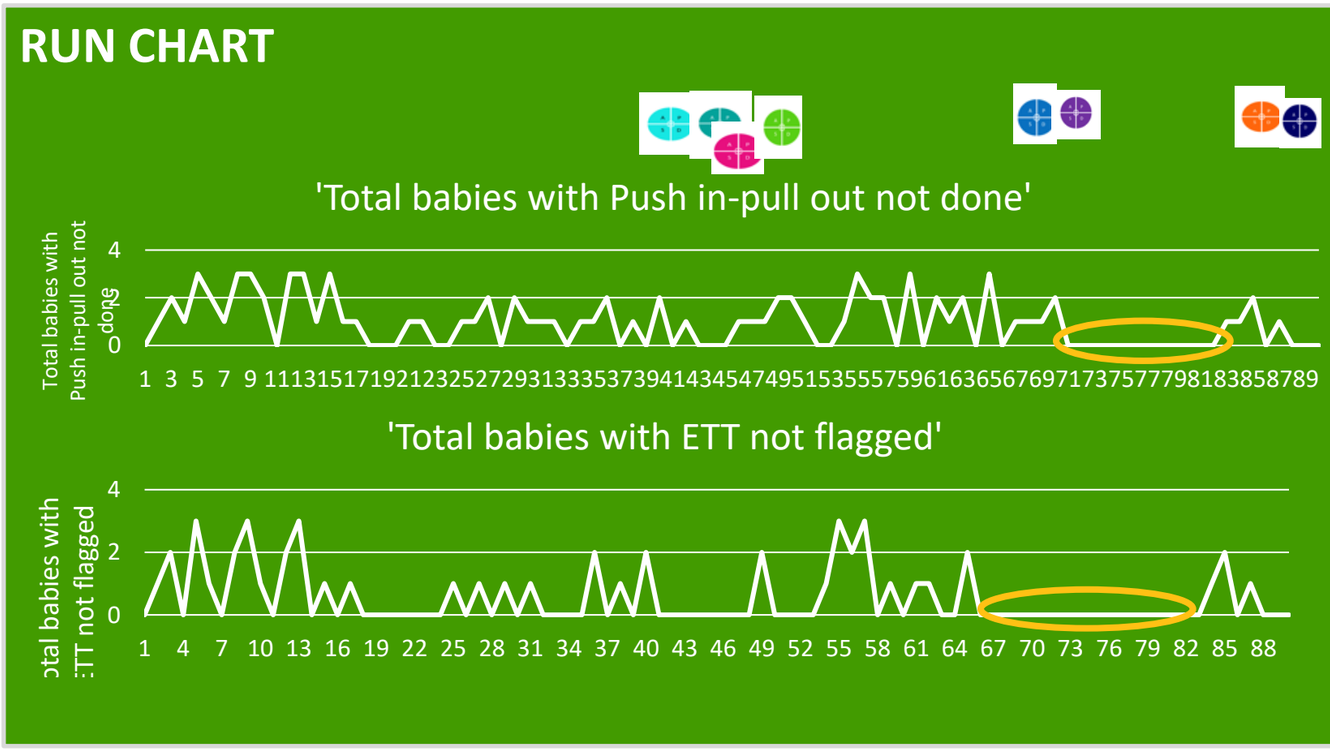
PDSA 7

- Continue educating nurses on handling ventilated babies during daily cares and encourage them to report unplanned extubations using the barcode designed by the QI team (as part of the main UE QI themes).
  Send a reminder to the medical team: please perform and document ETT checks.
- We still have a high number of unplanned extubations (UE) in July, but the positive aspect is that more incidents are being reported. One of the key improvements in the UE QI project was to ensure all UEs are reported, and while reporting has improved, the high rate of UEs in July remains a concern.
- 6 unplanned extubation in total : 3.5 in 100 ventilated days.
- Share the information during the morning huddles in the NICU and on the poster in the gas machine room: a spike in unplanned extubations occurred in July, along with no improvement in documentation during the first half of the month.

PDSA 8

- At the final departmental QI meeting on September 2, 2024, I presented our QI outcomes: we successfully improved documentation (though not yet at 100%) and reduced the unplanned extubation (UE) rate from 3.5 per 100 ventilator days in July to 1.3 per 100 ventilator days in August. Our goal remains to make it a never event. The QI work will continue in the next rotation to ensure sustained improvements. I suggested celebrating 30 days without a UE by providing cake and issuing a Greatix letter to encourage a positive attitude.
- Final cycle: continue tracking ETT documentation alongside the rate of unplanned extubations.
- The run chart shows improvement in documentation during the last two weeks of July and into August, which is associated with a reduction in the unplanned extubation (UE) rate. Share this data via WhatsApp and at the QI closing meeting.
- The data for August shows improvement. Documentation also improved during the last two weeks of July and throughout August. The unplanned extubation (UE) rate has decreased, with only 2 cases (1.3 per 100 ventilator days).

RUN CHART



REFLECTIONS & LEARNING

In August, we saw an improvement in recording push in pull out tests AND ETT flags, however this wasn't sustained. A wider piece of work to improve the accuracy of reporting accidental extubations is also happening and showing early signs of success. In August there were no accidental extubations until the very last day. It is possible the run of good check recording contributed to the lower extubations.

From my perspective, what proved effective was direct communication with junior staff and input from the consultant team, who typically examine the baby during morning rounds and guide the juniors to properly document their checks. Additionally, the daily reminder of how many days have passed since the last unplanned extubation seemed to heighten awareness and concern among staff. However, the WhatsApp reminders had limited impact, as they were not widely read by the team.

We have learned that change ideas relating to awareness can improve documentation and reduce unplanned extubations. To maintain momentum, I recommended celebrating milestones such as 30 days without an unplanned extubation, issuing Greatix cards to recognize positive behaviours, and highlighting the team's proactive attitude, which will help make unplanned extubations a 'never event.'

However, to make this sustained and further reduce unplanned extubations may need additional types of change idea. Learning from other sorts of safety programmes, e.g. central line is an idea.

Acknowledgements: Unplanned QI team, LGI, NICU, Dr L.MIALL.
QIC team: Heather Shearer, Nikki Davey.