Don’t – Take my breath away

QIP to prevent unplanned extubations in the neonatal unit

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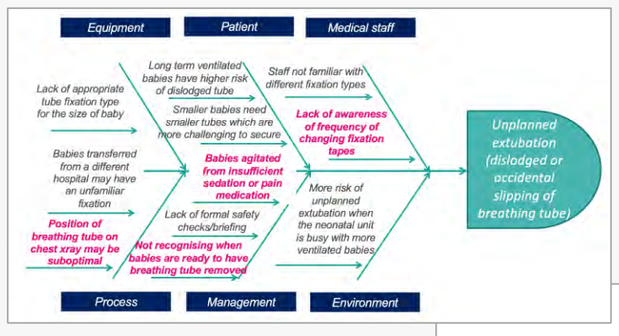
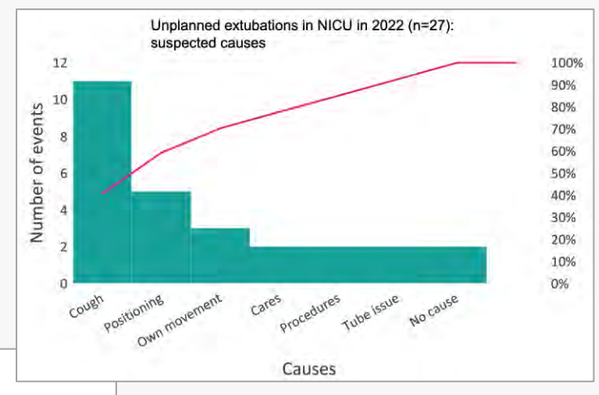
Dislodged breathing tubes in sick babies can cause harm, and trigger stress to parents and staff. Babies often need resuscitating and end up ventilated for longer.

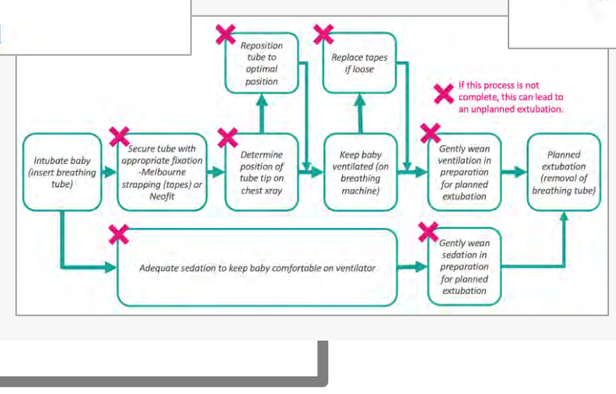
BACKGROUND

- Dislodged breathing tubes leading to unplanned extubations in the neonatal unit is a patient safety concern.
- Around half the babies on the unit have a breathing tube and are mechanically ventilated.
- The number of unplanned extubations has consistently risen over the past 2 years between 2020-2022.

DIAGNOSTICS







AIM:

Reduce the frequency of unplanned extubations in ventilated babies by Spring 2024

Chosen measure
Number of days since the last unplanned extubation event in a ventilated baby

Inclusions
All babies with an oral or nasal breathing tube and mechanically ventilated

Exclusions
Babies with a tracheostomy (breathing tube in the neck)

Sampling method and frequency
Weekly from the NICU risk meetings

CHANGE IDEAS

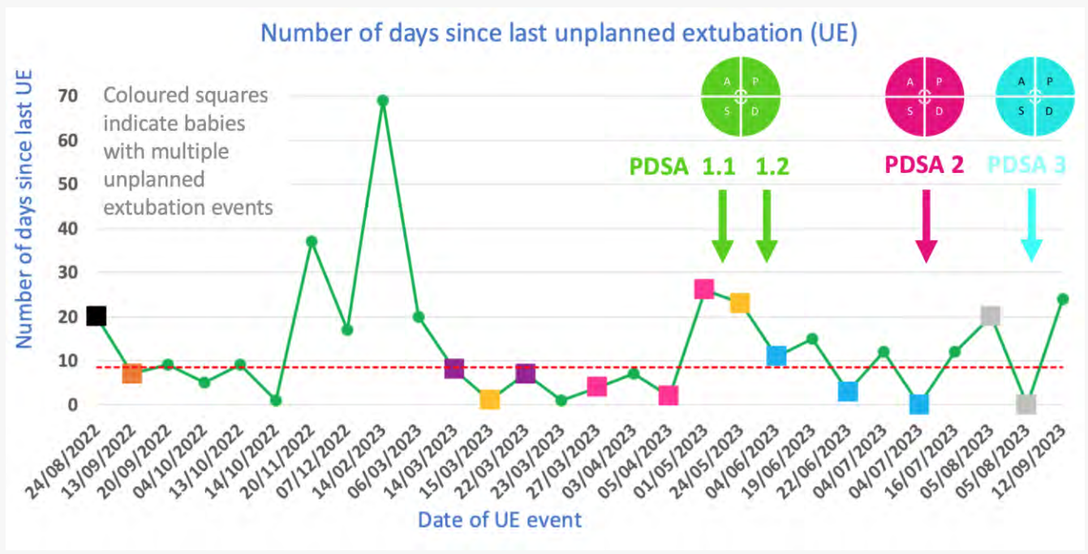
NURSING ’DEFAULT”: Add details about the breathing tube (last time tube secured with new tapes, position of tube on last Xray) to the nursing ‘default’ at the end of the ward round for the patient.
WARD ROUND NOTES: Add a section on the notes with details about the tube (size, length secured at, what type of fixation, last time secured, xray position), and date for planned extubation.
SEDATION: Nurses to report agitation/scoring during ward round and manage appropriately to keep baby comfortable.
TEACHING: On awareness of events, standard way of securing tubes, importance of minimising patient movement by- appropriate sedation, presence of at least 2 staff during procedures/cares.

PDSA CYCLES

PDSA Test #	PLAN	Do	STUDY	ACT
1.1	Discuss the issues around unplanned extubations with the risk lead for NICU	Presented QI storyboard to senior nurses and risk lead Established collaboration with risk lead to help with improvement project	Identified and discussed potential causes on the Fishbone diagram that can be addressed for the project	To come up with some ideas for change that can be presented to the NICU team to see which are feasible
1.2	Engage with NICU team about the problem and change ideas	Informal discussions with nursing and medical team on night shifts Change ideas put on education notice board in staff room for voting	A senior nurse pointed out a clinical trial the unit was previously enrolled in that provided sedation/analgesia guidance on ventilated babies	Apply the changes with the most popular votes by the team To adapt the sedation/analgesia guidance to keep babies comfortable on the ventilator

PDSA Test #	PLAN	Do	STUDY	ACT
2	Increase awareness of breathing tube position and secureness	Email sent out to NICU team to prompt discussion on ward rounds of breathing tube position on latest xray, and last time tube secured with new tapes	Engagement made during ward round Reminder during ward round on NICU	Nursing DEFAULT sheet updated to include these points on ward round ETT Safety highlighted on DEFAULT sheet
3	Keep babies comfortable and reduce agitation while ventilated	Presented to NICU in MnM meeting about using sedation/analgesia titration guidance from the SANDWICH trial to titrate COMFORT and PAT scores (measures of sedation and pain in baby)	Feedback from the team was positive, and that this would be straightforward to carry out	Will need posters on NICU to remind the team of the guidance NICU has been moved temporarily to another ward, and risk lead nurse recommended posters to be done once the unit moves back (by mid-Sept 2023)

RUN CHART

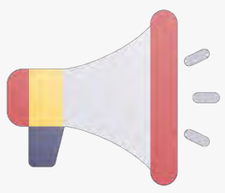


RESULTS: The frequency of unplanned extubations has reduced (increased time between events) compared to the two months preceding our interventions. However, it is still occurring with greater frequency than we would like. Unplanned extubations for the same babies on multiple occasions requires further study.

REFLECTIONS & LEARNING

- **Engagement** with the team early on can help to identify the key stakeholders to help generate ideas and put changes into practice.
- **Timing is important**. Temporary relocation of the neonatal unit led to some delay in implementing change ideas!
- **Sustaining change** is going to be a challenge. Finding the right people to collaborate with can help to achieve the aim and sustain everlasting change.

WHAT NEXT…



Tube Awareness October
Teaching and simulation on the neonatal unit from practice facilitators and educators, including tube awareness, nursing ‘default’, and comfort and PAT scores.

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