

Reducing Term Admissions to a Level 2 NNU

The Introduction of a Respiratory Pathway for the First Hour Following Birth

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Respiratory distress requiring non invasive respiratory support is the reason for the majority of term babies admitted to neonatal units. Many only require brief intervention. We aimed to introduce a respiratory pathway to reduce the number of term babies admitted for respiratory support, and to evaluate its effectiveness and any adverse consequences.

Methods

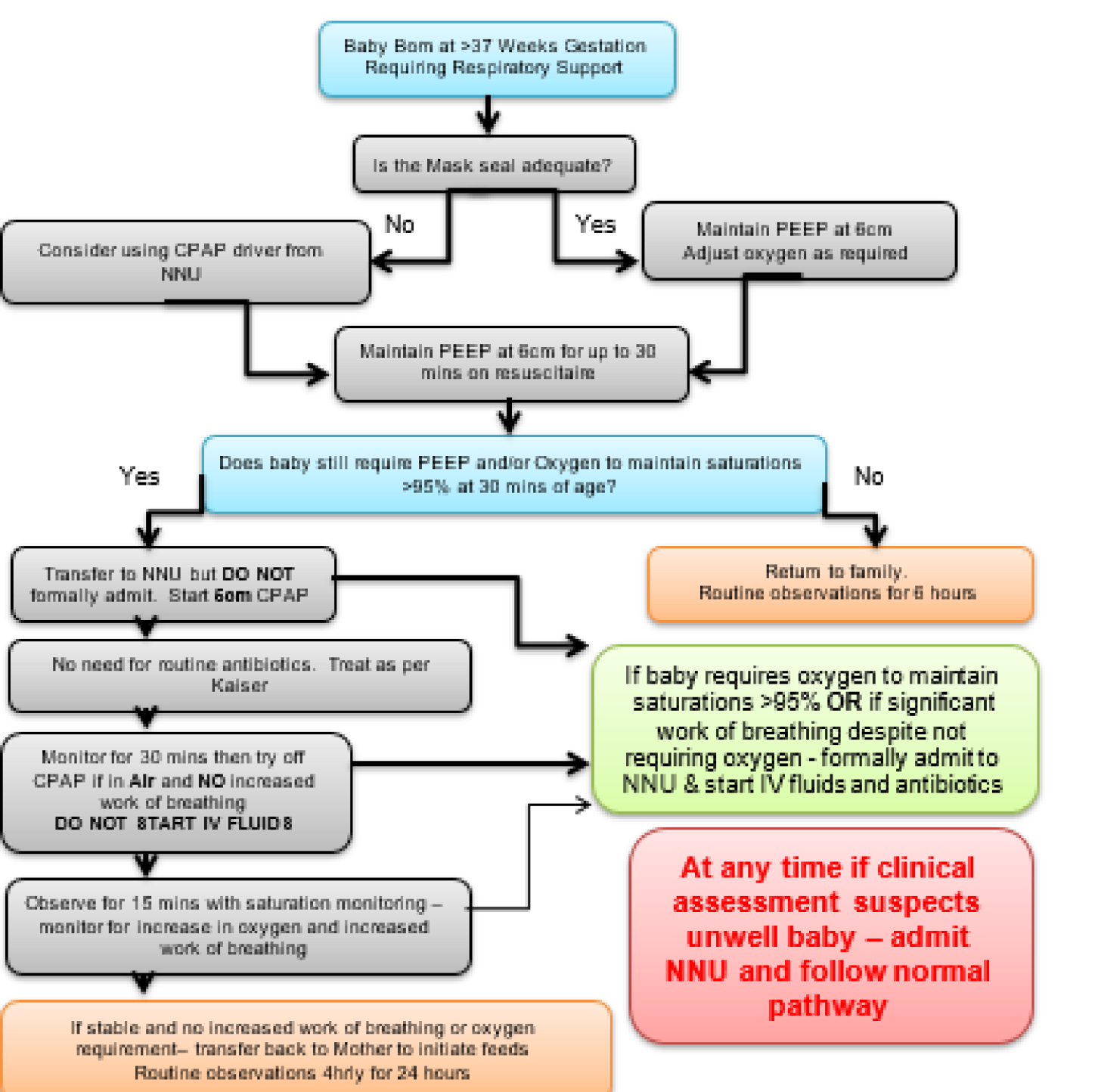


Figure 1. Respiratory management pathway for term infants in 1st hour of life.

Data for all term admissions was collected pre (February-April 2021) and post-implementation (June 2021-January 2022) by retrospective review of Badger data.

During the post-implementation period, further information was prospectively collected for neonates managed according to the pathway, including duration and location of CPAP, requirement for admission, requirement for, timing and outcome of a septic screen.

Results

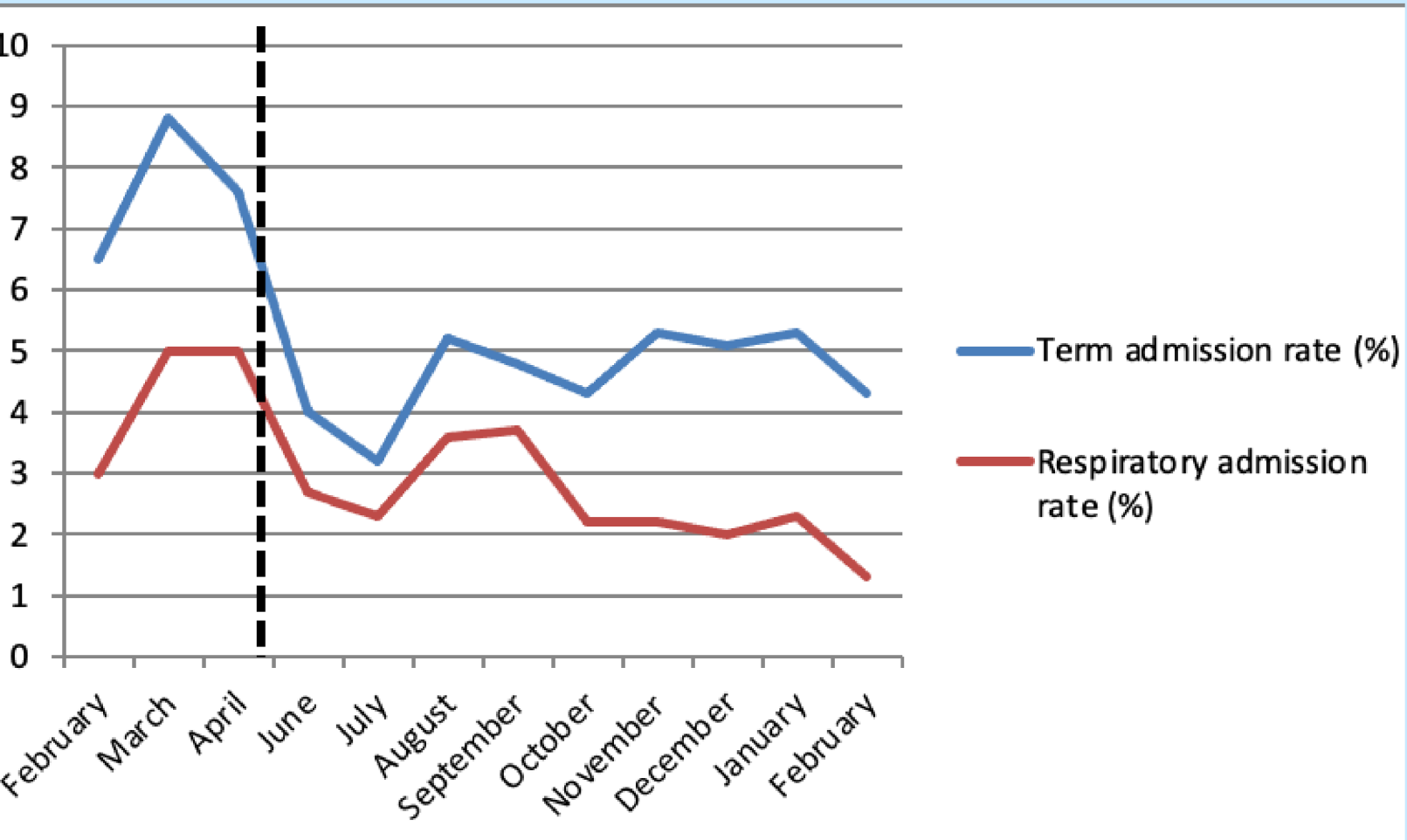


Figure 2. Admission rates in the pre and post-implementation period. The black line denotes the point of pathway introduction. .

The mean total term admission rate during pre-implementation period was 7.6%, with 4.3% of all term babies being admitted for respiratory reasons. Post-implementation, these fell to 4.6% and 2.5% respectively.

64% of neonates managed according to the pathway were able to stop CPAP by 1 hour and return to routine post-natal care. None of this group required re-admission to NNU after stopping their intervention.

Early Onset Sepsis

- Of those admitted at the end of 1 hour of CPAP
 - All underwent septic screens
 - 16% had a CRP rise
 - No positive microbiology
- Of those returned to routine postnatal care at the end of 1 hour of CPAP
 - Only 38% underwent septic screens of which 37% had a CRP rise
 - No positive microbiology nor comparative delay in screening

Conclusion

Pathway introduction was accompanied by falling total term and respiratory admission rates. The term admission rate for the pre-implementation period was higher than our historical average, however, post-implementation rates remain lower than this historical figure.

This appears to be a safe pathway, with no later admissions for neonates who were able to stop CPAP at 1 hour or any delay in recognition and treatment of early onset sepsis.