

Introduction of Respiratory Care Bundle on the Neonatal Unit at St George's Hospital - A Quality Improvement Project

Neonatal Ventilation Team

AIM

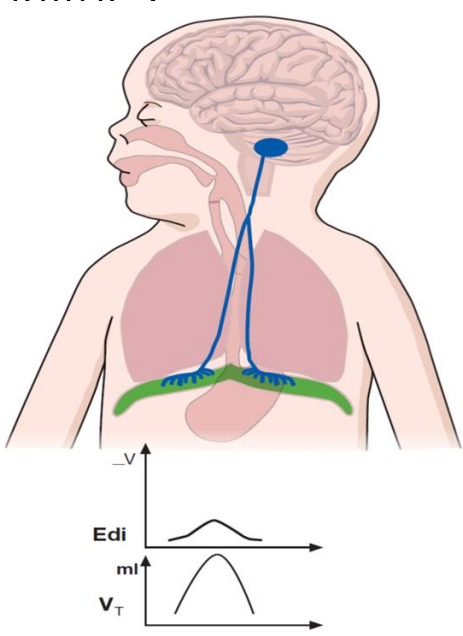
Improving respiratory care offered to infants on the neonatal unit at St Georges Hospital NHS Foundation Trust

METHODOLOGY

Five – phased quality improvement project

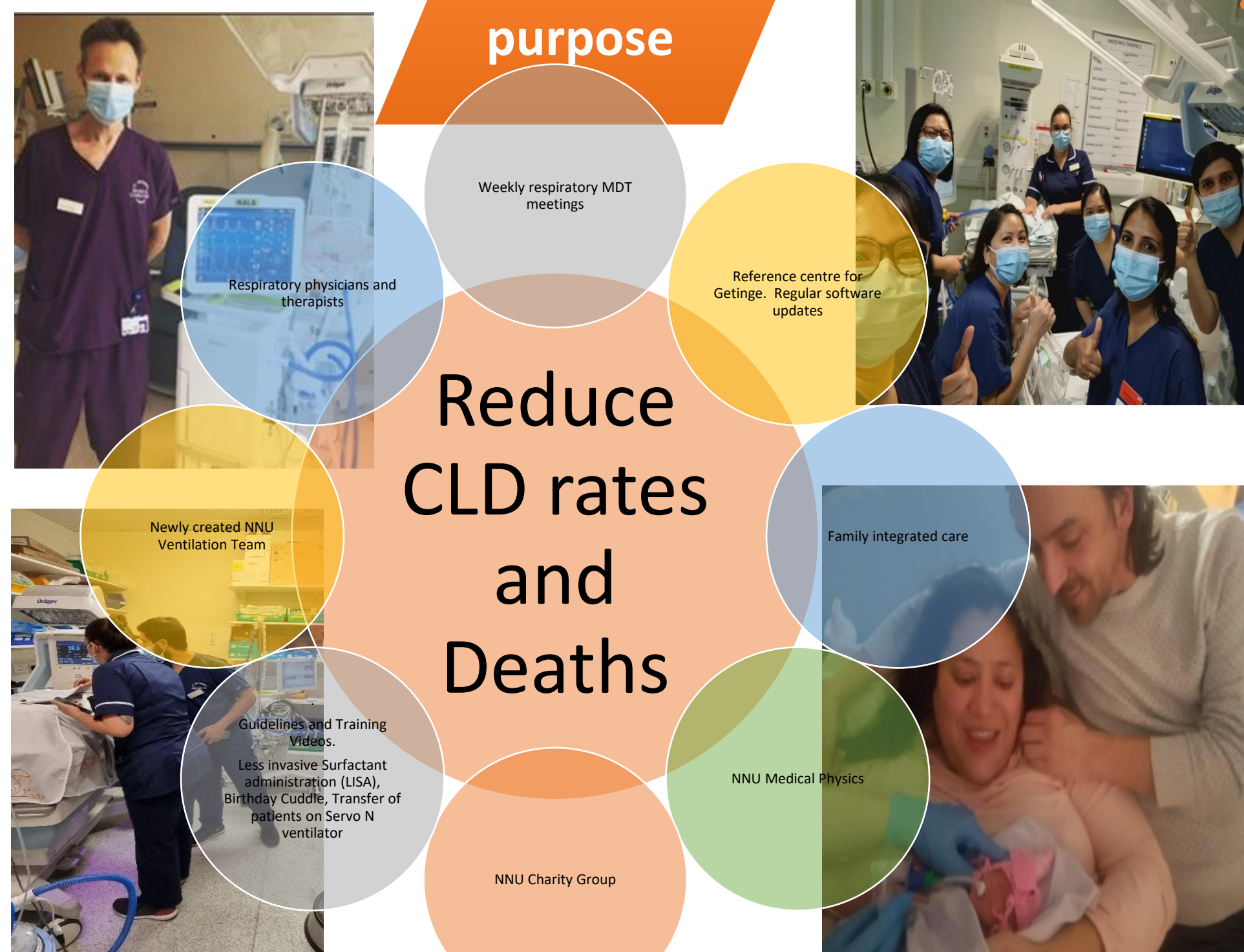
Identify Problem

- STGH NNU recorded higher cases of Chronic Lung Disease (CLD) than like units within the network and nationally.
- Three different machines with different consumables were used to support breathing for neonates on NNU.
- Older ex-preterm babies with severe CLD who needed long term ventilation support (LTV) struggled with synchronisation with existing respiratory support modalities



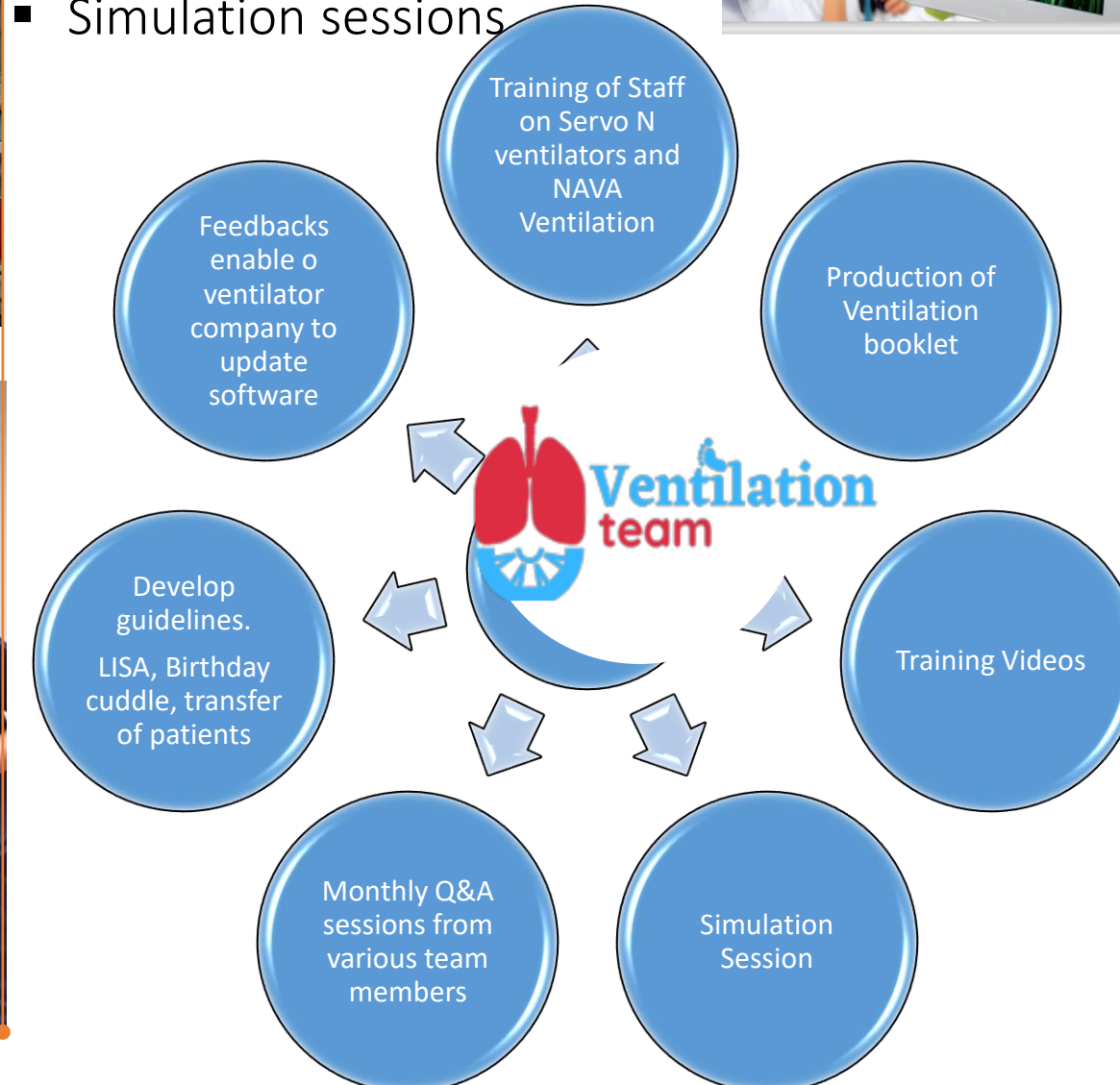
- NAVA is an emerging novel mode of respiratory support.
- NAVA adjust support levels precisely according to the baby's diaphragmatic movement (using Edi catheter). This offers babies greater comfort, with less sedation and higher extubation success rate.

Develop shared purpose



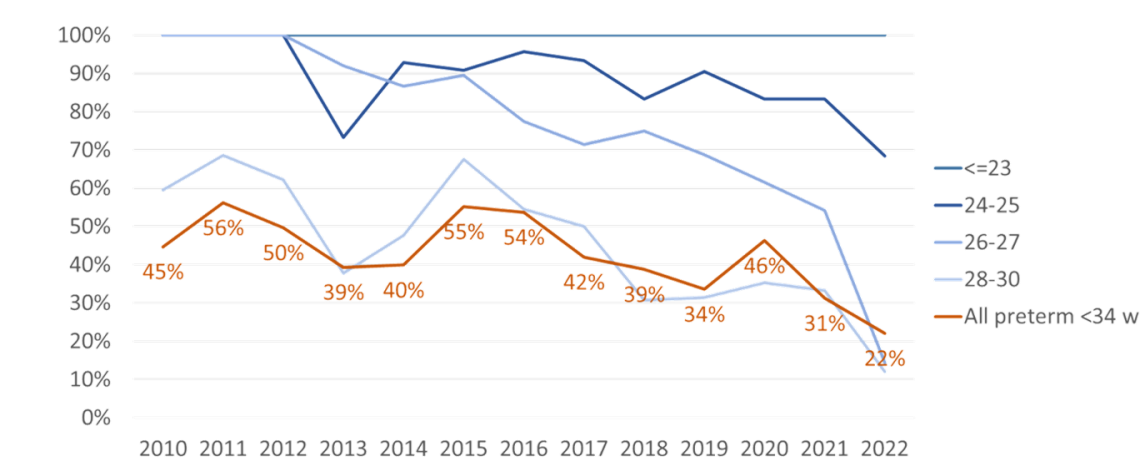
Plan & implement change

- Creation of a neonatal multidisciplinary ventilation team led by a Neonatal Consultant with special interest in optimising neonatal ventilation.
- Acquisition of new Servo-N ventilators that deliver standard newborn ventilation modes (invasive and non-invasive) as well as the new NAVA ventilation mode.
- The Servo-N is portable and can be used for patient transfers to theatre and radiology
- Training of medical and nursing staff on the new ventilators.
- Production of "Ventilation Booklet", training videos, and guidelines
- Introduction and training in the use of NAVA ventilation mode
- Simulation sessions

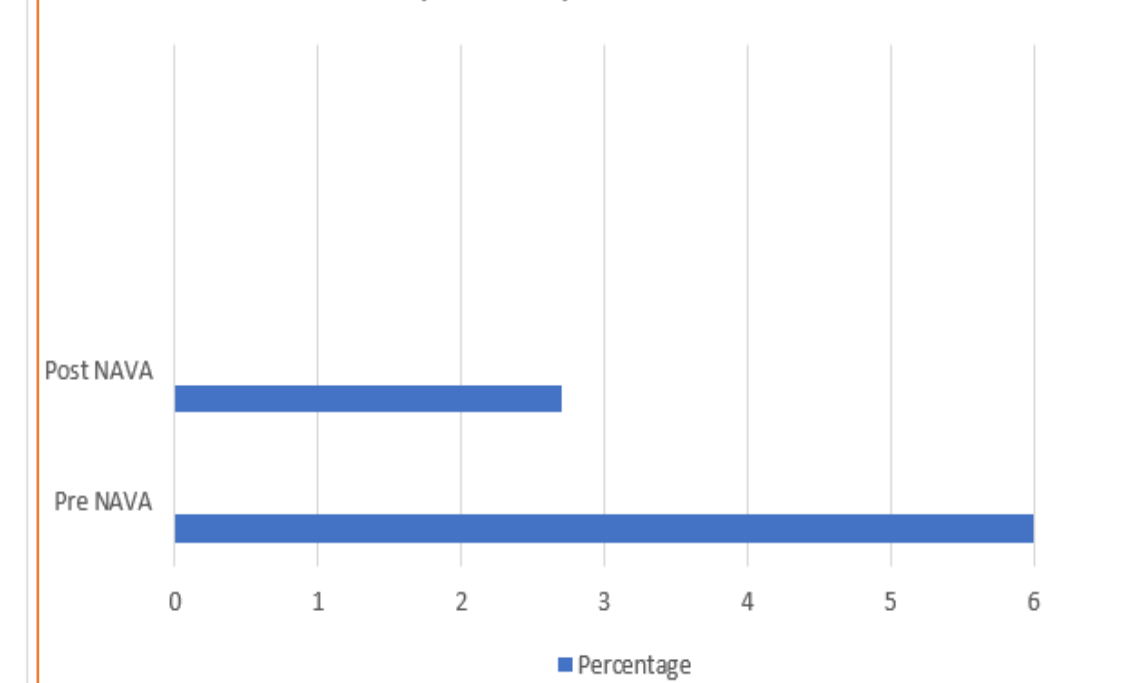


Test & measure improvement

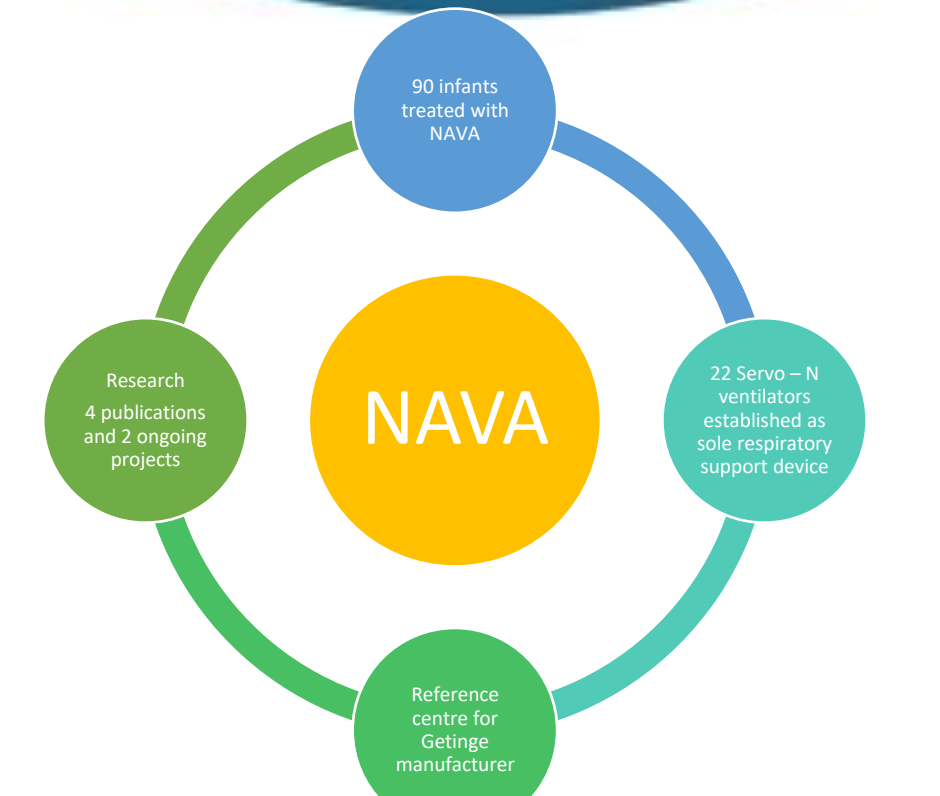
Percentage of Preterm Babies Intubated on Delivery Suite <34 w



Mortality Rate in preterm infants with CLD



Implement, embed & sustain



CONCLUSION

- SGH-NNU is the only UK neonatal unit that offers NAVA ventilation and non-invasive ventilation (NIV-NAVA) as routine clinical care.
- Reduced intubation of preterm babies in delivery suite.
- Improved extubation failure rates
- Improved nutritional outcomes
- SGH NNU is now a LTV centre of excellence and a referral centre.
- Reduced mortality in infants with severe CLD.
- SGH-NNU is reference centre for Getinge Ventilator Manufacturer.

References:

- <https://www.researchgate.net/profile/Sandeep-Shetty-3>
- <https://youtu.be/g9bngA5wjuo>
- <https://youtu.be/ahmrqcQjrVQ>
- [NAVA implementation and challenges - YouTube](#)