

'Stop, don't chop the cord! Optimal Cord Management in Premature Babies'.

E Stockley, D Aguirre, G Sunsoay, S Busby, A Causer, P Surana

Birmingham Heartlands Hospital Neonatal Unit
University Hospitals Birmingham, UK

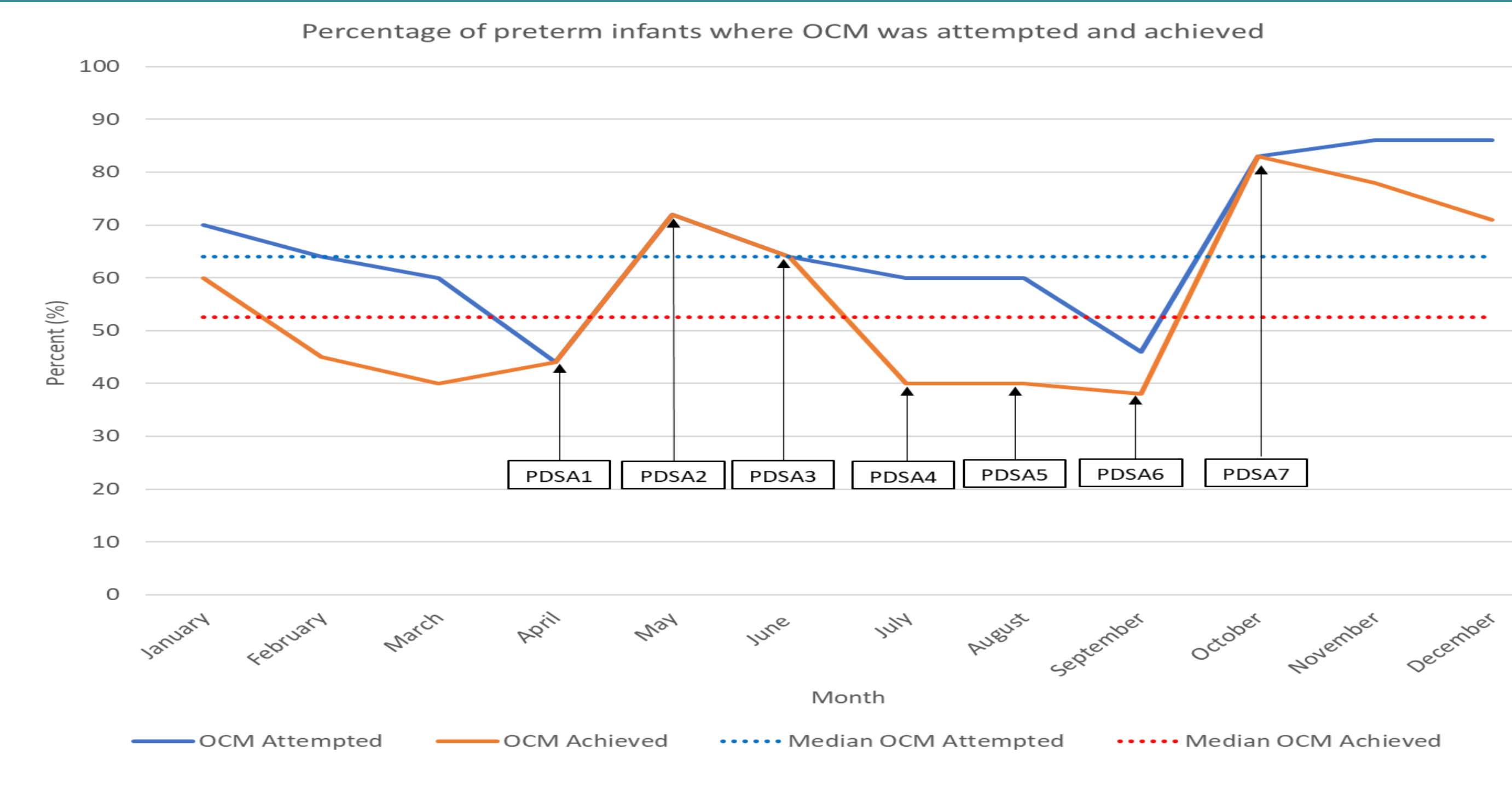


Figure1: Run chart of PDSA cycles

Objective

- Optimal Cord Management (OCM), (delayed cord clamping >1 minute), is recommended for all preterm births.
- Retrospective data collected over a three-month period (January-March 2021) from our tertiary maternity centre showed that OCM was achieved in only 13(50%) babies born <32 weeks gestation.

Design

- A quality improvement (QI) project to improve the rates of OCM in babies born <32 weeks gestation

Methods

- A multidisciplinary (MDT) QI project was launched April-December 2021 with several Plan-Do-Study-Act (PDSA) cycles.

PDSA 1: A working group of midwifery and neonatal educators used diagnostic tools to identify areas of improvement.

PDSA 2: A questionnaire was distributed to all perinatal staff to gain insight of current knowledge and local barriers to OCM; and in-situ MDT simulation occurred.

PDSA 3: Small-group teaching on OCM was arranged with regular reinforcement during neonatal handovers.

PDSA 4: A training video and posters were distributed via e-mail, WhatsApp and on closed social media pages to perinatal staff.

PDSA 5: A standard operating procedure on OCM was uploaded on trust intranet based on BAPM toolkit.

PDSA 6: OCM was included in regular weekly obstetric simulations.

PDSA 7: Post-implementation questionnaire was distributed to all perinatal staff and in-situ MDT simulation occurred.

Results

- Questionnaire responses identified neonatal hypothermia, need for resuscitation and poor communication as barriers to OCM.
- These concerns along with risks and ergonomics through diagnostic QI tools led to changes in practice.
- These included:-
 - Introduction of a sterile thermal suit
 - Supporting the obstetric team with the initial respiratory support
 - Improving communication between the MDT and parents.

Outcome

- Of the 98 babies born <32 weeks gestation between April-December 2021, 4 had contra-indications for OCM (abruption).
- Following PDSA 1 and 2 the rates of OCM improved, likely secondary to the questionnaire. However, rates decreased after PDSA 3.
- Improvements were only consistent after OCM was included in regular simulations, through PDSA 6 .
- Between September-December 2021, OCM was attempted in 23 of the 27(85%) babies, with 21(78%) receiving OCM, demonstrating a significant improvement.

Conclusion

- Through our PDSA cycles, significant improvements were demonstrated in OCM in preterm babies.
- Increased awareness and education of the MDT stakeholders is effective in improving OCM but needs to be implemented on a continual basis to gain sustained benefits

References

- Optimal Cord Management in Preterm Babies. A Quality Improvement Toolkit. Aims, Evidence, Rationale and Best Practice. British Association of Perinatal Medicine; 2020.
- Fawke J, Wyllie J, Madar J, et al. Newborn resuscitation and support of transition of infants at birth Guidelines. 2021 Resuscitation Guidelines.