Thermoregulation

Preterm babies have unique vulnerabilities after delivery and require help to stabilise and transition to extra-uterine life. The quality of care during this period is extremely important and can have a significant long term impact. Our Aim is to improve the quality of care provided prior to admission to the neonatal unit with particular reference to thermoregulation, non-invasive respiratory support and deferred cord clamping.

Aim 1: To improve the quality of delivery room care for preterm infants.

**Background:** Premature babies have been traditionally managed after birth with or without a delay in cord clamping, allowing early transfer to the neonatal unit for resuscitation, stabilisation, and to keep them warm. However, there is increasing evidence that different cord clamping practices, in particular deferred or “placental” cord clamping, allow enhanced placental transfusion, enhance the stability of premature infants and reduce complications later. Premature babies have also been routinely intubated and ventilated in the past based on their gestation and irrespective of their clinical condition. Again there is evidence that most infants born in good condition can be managed with non-invasive respiratory support, avoiding the complications associated with mechanical ventilation. This project aimed to implement current practice guidelines for delivery room care for preterm babies.

**Approach:** We had many change ideas which could be implemented in different ways. We elected to focus on using an existing and simple change in current practice, namely delayed clamping of the cord at delivery (Deferrred Cord Clamping), as an opportunity to improve the delivery room care for preterm babies. Using a systematic approach, we identified areas where people had and visualised the change, we then set up a sustainability plan to ensure the changes had a positive impact on the service.

**Project SHIP:** Stop Hypothermia in Prematurinats

2017 (as number of admissions and as percentages of admissions)

Deferred Cord Clamping

**Baseline Data:**
- Our rate of DCC in preterms <37 weeks gestation was 52% prior to any intervention (October/November 2017 data, 57 admissions).
- Our baseline for the admission was 10.5°C.

We conducted a study to change the practice of prompt clamping to delayed clamping for all preterm deliveries at <37 weeks gestation. This involved redesigning the delivery room layout to allow easier access to the baby immediately after birth. We trained all the staff on the unit to use delayed clamping and to be aware of the benefits.

**Deferrred Cord Clamping:**
- DCC is defined as a core standard of care.
- DCC is delayed as a standard of care.
- DCC is delayed on a display on the neonatal unit for education and as a visual reminder of the change.
- We also set up a sustainability plan to ensure the changes had a positive impact on the service.

We then ran the study using the actual transport incubator and simulated in-situ in the delivery suite in order to assess environmental factors and the impact of the practice.

**Feedback:**
- DOT: We ran the study using the actual transport incubator and simulating in-situ in the delivery suite in order to assess environmental factors and the impact of the practice.

**Study:**
- We conducted a study to change the practice of prompt clamping to delayed clamping for all preterm deliveries at <37 weeks gestation. This involved redesigning the delivery room layout to allow easier access to the baby immediately after birth. We trained all the staff on the unit to use delayed clamping and to be aware of the benefits.

**Conclusion:**
- We aim to prevent hypothermia in preterm babies and improve the quality of care provided prior to admission to the neonatal unit. We will continue to monitor our progress and make any necessary adjustments to ensure the best possible care for our patients.