112 Improving Neonatal Vascular Access in Surgical Patients

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Aim: Many neonatal surgical patients require intravenous (IV) access for >1 week. Technical, organisational, and cultural factors reduced placement of peripherally inserted central catheters (PICCs). Most babies requiring parenteral nutrition/central medications undergo central venous line placement under general anaesthetic (GA). Repeated bedside cannulation causes distress to patients and parents, with workload burden resulting in extravasation injuries. We aim to reduce these factors by increasing PICC usage in a ward setting.

Method:
1) Stopping procurement of several types of PICCs.
2) Establishing one size/type of PICC.
3) Procuring introducer kits for more successful IV access.
4) Organising departmental training.
5) Packaging equipment into ‘Grab Bags’, reducing time burden.
6) Supporting institutional memory, by training non-rotating staff.

We followed a Plan, Do, Study, Act cycle over 4 months.

Results: Final results pending. The intervention has occurred, in 1 month we will re-measure:
1) SHO-grade workload burden via questionnaires.
2) Requirements for cannula insertion.
3) Number of infants undergoing GA for IV access only.
4) Extravasation injuries.

We will measure risks of increasing PICC placement (through an iterative process), including:
1) Line infection rates.
2) Line dislodgement rates and consequences (e.g., GA for line insertion).
3) Associated changes in cost.

Conclusions: The initial message yielded perceptions that ‘the department is doing things wrong’. The message of PICCs adding an ‘extra string to our bow’ was clearer, non-judgemental and with strong rationale for change.
Training non-rotating staff promotes sustainability but required senior clinician agreement to procure equipment, delaying our timeline – target completion is in 1 month.