585 REDUCING INTRAVENTRICULAR HEMORRHAGE IN A LEVEL III NEONATAL INTENSIVE CARE UNIT

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Background Intraventricular hemorrhage (IVH) is a common complication of prematurity and has been associated with adverse short and long term outcomes. Despite the identification of risk factors for IVH, the overall rate has remained stable during the last decade.

Objectives Our aim was to reduce the incidence of severe IVH in preterm infants (<30 weeks) in our NICU from 8% to 4% between October 2014 and December 2015.

Methods A multidisciplinary team drafted a charter using the Model for Improvement (fig 1). Implementation began in October 2014. Ongoing interventions include: midline head positioning (MHP) during the first week of life, a minimal handling bundle inclusive of a multidisciplinary admission huddle (fig 2), increasing IVH awareness using a web-based risk calculator (www.neoqic.org/sivh-calculator), and standardizing infusion rates for boluses/blood products.

Outcome measures include number of severe and overall IVH by birth month and fiscal year rate (%). Process measures include compliance with MHP and admission huddle (%), and discussion of IVH risk (%). Balancing measure is the rate of unplanned extubation.

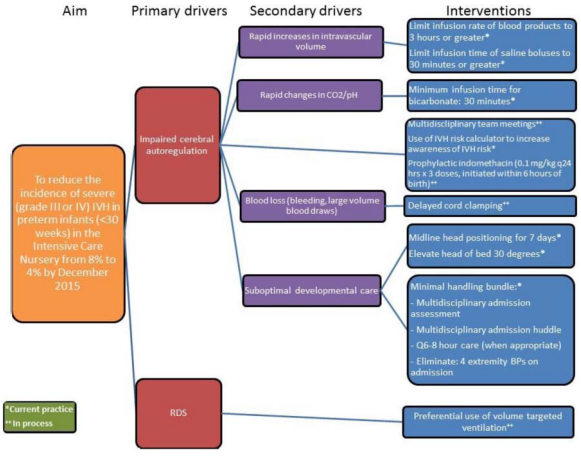
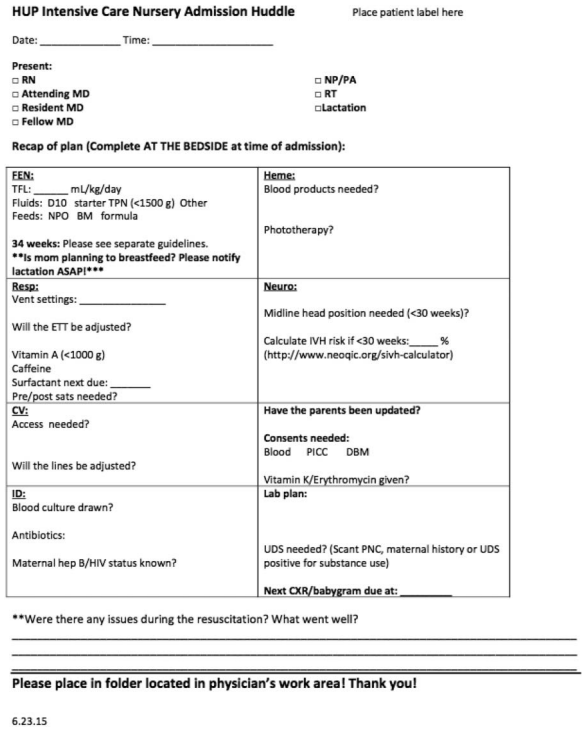


Figure 1 Driver diagram.



HUP Intensive Care Nursery Admission Huddle Place patient label here

Date: _____ Time: _____

Present:
□ RN □ NP/PA
□ Attending MD □ RT
□ Resident MD □Lactation
□ Fellow MD

Recap of plan (Complete AT THE BEDSIDE at time of admission):

FEN: TFL: _____ mL/kg/day Fluids: D10 starter TPN (<1500 g) Other Feeds: NPO BM formula **34 weeks:** Please see separate guidelines. ****Is mom planning to breastfeed? Please notify lactation ASAP!*****	**Heme:** Blood products needed? Phototherapy?
Resp: Vent settings: _____ Will the ETT be adjusted? Vitamin A (<1000 g) Caffeine Surfactant next due: _____ Pre/post sats needed?	**Neuro:** Midline head position needed (<30 weeks)? Calculate IVH risk if <30 weeks:_____ % (http://www.neoqic.org/sivh-calculator)
CV: Access needed? Will the lines be adjusted?	**Have the parents been updated?** **Consents needed:** Blood PICC DBM Vitamin K/Erythromycin given?
ID: Blood culture drawn? Antibiotics: Maternal hep B/HIV status known?	**Lab plan:** UDS needed? (Scant PNC, maternal history or UDS positive for substance use) **Next CXR/babygram due at: _____**

****Were there any issues during the resuscitation? What went well?**

_____
_____
_____

Please place in folder located in physician's work area! Thank you!

6.23.15

Figure 2 Admission huddle checklist. The admission huddle occurs within 15 minutes of admission. The infant is assessed by the nursing and medical teams, followed by a brief recap of the history and the admission plan for the infant with special attention to the items below. This is the 7th version of the admission huddle form.

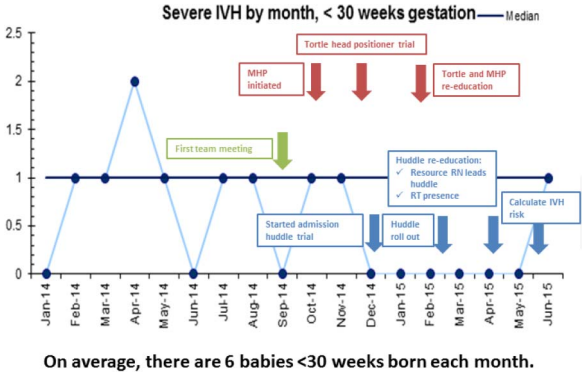


Figure 3 Number of severe IVH, by month. This figure denotes the number of severe IVH diagnoses according to birth month for patients <30 weeks gestational age admitted to the HUP ICN from January 2014 to June 2015. The median number of severe IVH cases is 1 per month, with an average of 6 infants born <30 weeks gestational age (range 2–12). Specific interventions/PDSA components are indicated as below.

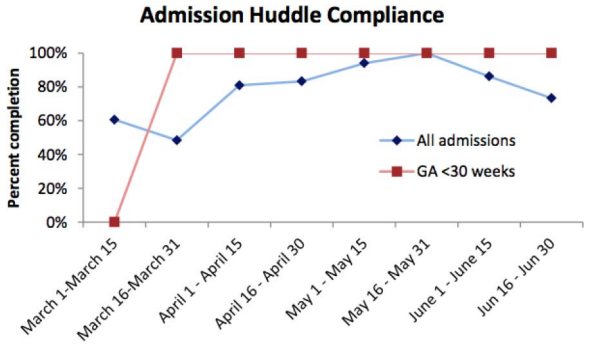


Figure 4 Admission huddle compliance, by month.

Results The average monthly rate of severe IVH has decreased from 8.3% in FY14 to 5.1% in FY15 (fig 3). We report 227 days and 37 infants <30 weeks without severe IVH despite infants with similar IVH risk during the intervention period. MHP and admission huddle compliance for infants <30 weeks have recently reached 100% (fig 4).

Conclusions By implementing potentially better practices, we have measurably reduced severe IVH. Future directions include delayed cord clamping, prophylactic indomethacin for IVH prevention, and reviewing IVH cases with providers.