Quality Improvement Project: Implementing Infant-Driven Feeding™ in the Neonatal Intensive Care Unit

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Children's Hospital of Pittsburgh of UPMC NICU

- SS-bed Level IV NICU
- Approximately 1000 admissions per year
- Respiratory distress is our #1 chief complaint
- All gestational ages

Implementation Timeline

2015
- Educated 200 bedside staff via IDF™ web-based module
- Established super-user committee and NICU Feeding Task Force
- Submitted IDF™ hospital policy

2016
- Implemented IDF™ in the unit March
- Provided ongoing supports, re-educated staff, identified areas for improvement, adjusted protocol

2017
- Gathered outcome data
- Ongoing adjustments, re-education, trouble shooting

2018-
- Implementation of continuous quality improvement and feedback
Quality Improvement Project

Retrospective Group, 2015
- N = 71
- Average length of stay: 42.67 days
- Average PMAM at first oral feed: 36.86 weeks

Prospective Group, 2017-2018
- N = 80
- Average length of stay: 37.69 days
- Average PMAM at first oral feed: 36.68 weeks

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
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<tbody>
<tr>
<td>Infants born &lt;37 weeks</td>
<td>ME of the intracerebral hemorrhage, grade III or higher</td>
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<td>Infants admitted &gt;7 days</td>
<td>Agenesis of the corpus callosum</td>
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<td>Infants with pyloric stenosis</td>
<td>Known neuromotor dysfunction</td>
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<td>Infants that required ECMO</td>
<td>Genetic syndromes</td>
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Figure 2: The graph depicting the decrease in time to full feeds when infant-fed protocol groups were compared to the control group (traditional practice).

Outcomes of implementing IDF™ Protocol:
- Time to full oral feedings
  - P value = 0.029
  - Confidence interval = 0.48-9.3

![Graph showing decrease in time to full feeds](image)
Outcomes of implementing IDE™ Protocol:
Length of hospital stay

<table>
<thead>
<tr>
<th>Days (median value)</th>
<th>Retrospective cohort (n=71)</th>
<th>Prospective cohort (n=80)</th>
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<tbody>
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Age at first oral feeding

2015:
36.86 weeks

2017/2018:
36.68 weeks

Current Status

- Persistence of volume-driven culture
- Challenge of educating new staff
- System-wide IDE™ usage
- Long-term outcome studies

References