Reducing Readmissions for Newborns with Hyperbilirubinemia

Kristi Patterson
CentraCare Health, pattersonk@centracare.com

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Reducing Readmissions for Newborns with Hyperbilirubinemia
Kristi Patterson, RN BSN
Performance Improvement, Value and Analytics
St. Cloud Hospital, St. Cloud, Minnesota

Purpose Statement
The purpose of this project is to reduce 30 day readmission rates by 20% for normal newborns with hyperbilirubinemia on their index admission by utilizing the AAP clinical practice guideline including:

- Utilizing the AAP nomogram based on age in hours
- Screening prior to discharge
- Implementing the recommended interventions at discharge

Synthesis of Evidence
Over 40 articles were reviewed and graded utilizing the AACN Levels of Evidence with 6 key articles identified.

Table 1. AACN Level of Evidence & Key Findings

<table>
<thead>
<tr>
<th>Evidence Level</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Universal pre-discharge TSB</td>
</tr>
<tr>
<td></td>
<td>TSB not to be used in isolation of clinical presentation or based on a single reading</td>
</tr>
<tr>
<td>D</td>
<td>Systematic assessment of all newborns prior to discharge</td>
</tr>
<tr>
<td></td>
<td>Report age in hrs</td>
</tr>
<tr>
<td></td>
<td>Provide phototherapy equip before DC</td>
</tr>
<tr>
<td></td>
<td>TSB/TcB between 24-72 h in all infants</td>
</tr>
<tr>
<td>E</td>
<td>Screening is a key intervention</td>
</tr>
<tr>
<td></td>
<td>Visual inspection alone is insufficient</td>
</tr>
</tbody>
</table>

Table 1. Process Measures: Pre- and Post-Implementation

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre-Implementation</th>
<th>Post-Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TcB within 24 hrs</td>
<td>10%</td>
<td>76%</td>
</tr>
<tr>
<td>Risk factors for hyperbili documented</td>
<td>27%</td>
<td>96%</td>
</tr>
<tr>
<td>DC exam addresses jaundice status</td>
<td>87%</td>
<td>100%</td>
</tr>
<tr>
<td>Follow up within 2 days if DC &lt;72 hrs</td>
<td>77%</td>
<td>88%</td>
</tr>
</tbody>
</table>

Table 2. Outcome Measure: 30 Day Readmissions by Quarter

Table 3. Outcome Measure: 30 Day Readmission by Fiscal Year

Pre/Post Measures

30 Day Readmissions for Newborns with Hyperbilirubinemia
Readmitted with Jaundice

Goal: < 2.7%

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2012</td>
<td>4.3%</td>
</tr>
<tr>
<td>FY2013</td>
<td>3.2%</td>
</tr>
<tr>
<td>FY2014</td>
<td>1.7%</td>
</tr>
<tr>
<td>FY2015*</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

*FY2015 through February

Team Members

- Carla Bieniek, Case Manager
- Melissa Erickson, Clinical Resource Nurse
- Amy Junes, Educator
- Dr. Kathy Kulus, Pediatric Hospitalist Program
- Terri Nicosi, Nursery Nurse
- Jeannie Olson, Core Charge
- Kristi Patterson, Performance Improvement

Ad hoc Members:
- Michelle Scopaniak, Case Manager
- Dr. Elaina Lee, Pediatrician

References


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Synthesis of Evidence
Over 40 articles were reviewed with 6 key articles identified.

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th># Key Articles</th>
<th>Key Findings</th>
</tr>
</thead>
</table>
| B     | Well-designed controlled studies, both randomized and nonrandomized, with results that consistently support a specific action, intervention, or treatment | 2 | • Universal pre-discharge TSB
• TcB not to be used in isolation of clinical presentation or based on a single reading |
| D     | Peer-reviewed professional organizational standards, with clinical studies to support recommendations | 3 | • Systematic assessment of all newborns prior to discharge
• Report age in hrs
• Provide phototherapy equip before discharge
• TSB/TcB between 24-72 h in all infants |
| E     | Theory-based evidence from expert opinion or multiple case reports | 1 | • Screening is a key intervention
• Visual inspection alone is insufficient |

Table 2. Outcome Measure: 30 Day Readmissions by Quarter

Table 3. Outcome Measure: 30 Day Readmission by Fiscal Year

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Pre/Post Measures

<table>
<thead>
<tr>
<th>Process Measures: Pre- and Post-Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TcB within 24 hrs</td>
</tr>
<tr>
<td>Baseline</td>
</tr>
<tr>
<td>10%</td>
</tr>
</tbody>
</table>

EBP Practice Change
1. Engage nurses and physicians
2. Align policy & practice with the AAP Clinical Practice Guideline
3. Early screening & intervention
4. Standardize assessments, interventions, and documentation
5. Address care transitions

Quarterly 30 Day Readmission Rate for Newborns with Hyperbilirubinemia
EBP Project Poster Title
Your name & credentials
Institution, St. Cloud, Minnesota

Purpose Statement
The purpose of this project is to reduce 30 day readmission rates by 20% for normal newborns with hyperbilirubinemia on their index admission by utilizing the AAP clinical practice guideline including:

- Utilizing the AAP nomogram

Synthesis of Evidence
Include bullet points of your literature findings, include grading at appropriate charge

- Bullet

Pre/Post Measures
Use this template if you want to emphasize measurements/outcomes

Include charts, graphs, policies, orders, Epic screen shots – whatever you can do to show your results
Your pre and post data should be here

Team Members

EBP Practice Change

References
This can be in font size 6. Template includes APA format as an example provided
# EBP Project Poster Title

**Your name & credentials**

Institution, St. Cloud, Minnesota

## Purpose Statement

Font size recommended at 10

## Synthesis of Evidence

Include bullet points of your literature findings, include the grading as appropriate

- Bullet

## Pre/Post Measures

Use this template if you want to emphasize measurements/outcomes

Include charts, graphs, policies, orders, Epic screen shots – whatever you can do to show your results

Your pre and post data should be here

## Team Members

| Your email here |

## EBP Practice Change

<table>
<thead>
<tr>
<th>Year</th>
<th>Press Ganey Percentile</th>
<th>Patient Satisfaction</th>
<th>Annual Change in Visits &amp; Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>91</td>
<td>-8%</td>
<td>-7%</td>
</tr>
<tr>
<td>2007</td>
<td>91</td>
<td>0%</td>
<td>+8%</td>
</tr>
<tr>
<td>2008</td>
<td>91</td>
<td>+1%</td>
<td>-27%</td>
</tr>
<tr>
<td>2009</td>
<td>91</td>
<td>0%</td>
<td>+1%</td>
</tr>
<tr>
<td>2010</td>
<td>91</td>
<td>-3%</td>
<td>-5%</td>
</tr>
</tbody>
</table>

## References

This can be in font size 6. Template includes APA format as an example provided

Research Study Poster Title
Your name & credentials
Institution, St. Cloud, Minnesota

Introduction
Font size recommended at 10

Research Problem/Question

Methodology
Include bullet points of your literature findings, include the grading as appropriate
• Bullet

Analysis/Results
Include charts, graphs, policies, orders, Epic screen shots – whatever you can do to show your results
Your pre and post data should be here

Conclusions/Implications

Acknowledgements/Funding
(if appropriate)

References
This can be in font size 6. Template includes APA format as an example provided

Your email here
Performance Improvement Poster Title
Your name & credentials
Institution, St. Cloud, Minnesota

**Plan**
Identify and analyze the problem

**Check**
Gather data and evaluate
Include charts, graphs, policies, orders, Epic screen shots – what ever you can do to show your results
Your pre and post data should be here

**Act**
Standardize the solution – systematic changes and training needs for full implementation

**Team Members**

**References**
This can be in font size 6. Template includes APA format as an example provided