Welcome to Munchkin Land: The World of Pediatric CDI

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Learning Objectives

• At the completion of this educational activity, the learner will be able to:
  – Establish positive working relationships with pediatric physicians
  – Develop physician education specific to pediatric documentation
  – Collect pediatric data to benchmark metrics for pediatric CDI success
  – Discuss measures to maintain a pediatric CDI program
Program History

Wake Forest Baptist Medical Center

- Wake Forest Baptist Medical Center
  - An integrated healthcare system that includes Wake Forest Baptist Health, Brenner Children's Hospital, Davie Hospital, and Lexington Medical Center
- Wake Forest Baptist Health – Brenner Children’s Hospital
  - Established in 1986 as part of Baptist Hospital through a gift from the Brenner Foundation
  - The region’s only full-service pediatric hospital
  - Provides expert care for neonates through teens in a state-of-the-art facility
  - Expertise includes more than 140 pediatricians specializing in more than 30 areas of pediatric medicine

Wake Forest Baptist Medical Center

- In 2014, Brenner Children’s was named by U.S. News & World Report as one of America’s best children’s hospitals and is nationally ranked in two pediatric specialties:
  - Neonatology (#26)
  - Orthopedics (#39)
Wake Forest Baptist Medical Center

- 2014 Best Doctors in America Database recognized 46 pediatric specialists at Brenner
- Housed on 3 floors on the main campus of WFBH
  - 160 private rooms
  - 6 play rooms
  - Interactive play room
  - Rooftop garden with playground equipment

Wake Forest Baptist Medical Center

- North Carolina's first level one pediatric trauma center was established at Brenner in 2011, when a new state-of-the-art, child-friendly emergency medicine facility just for pediatric patients opened

Brenner Children's Hospital

- Staffed by over 140 full-time pediatric faculty with members representing the following pediatric subspecialties:
  - Adolescent medicine
  - Allergy and immunology
  - Behavior and development
  - Cardiology
  - Critical care
  - Dermatology
  - Endocrinology
  - Gastroenterology
  - General pediatrics
  - Genetics
  - Hematology and oncology
  - Infectious diseases
  - Neonatal/perinatal medicine
  - Nephrology
  - Neurology
  - Ophthalmology
  - Orthopedics
  - Plastic and reconstructive surgery
  - Psychiatry
  - Psychology
  - Pulmonology
  - Radiology
  - Urology
Establishing a Positive Working Relationship With the Pediatric Physician

Establishing Relationships With Pediatric Physicians

- Start at the top – get administrative buy-in
- Education
  - CDI role
  - Process
  - WIIFM
- Develop trust and collegiality
  - Learn processes of various disciplines, including pediatricians and specialists.
  - Meet with physicians face to face.
  - Share data.
  - Provide LOTS of chocolate!

Developing Physician Education Specific to Pediatrics

- Educate yourself (CDI)
  - Hire subject matter experts
  - Learn all about pediatric disease processes
- Partner with physicians
  - Let them share their expertise
  - Attend rounds with them
  - Support their goals
- Schedule routine education sessions
- Create educational tools
  - Handouts
  - Bulletin boards
  - Electronic newsletters
Develop Physician Education Specific to Pediatric Documentation

Turning Words Into Data

**Chief complaint:**
“Unresponsive with right arm twitching and lip smacking”

**Primary admitting diagnosis:**
Possible seizures
No previous medical history

**ICD-9**
780.39
Seizures

**MS-DRG**
101 Seizures W/O MCC

**Estimated length of stay**
2.2 days

**Severity of illness and risk of mortality**
None (2/2)

**Reimbursement**
Low (wt 0.8011)

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**Chief complaint:**
“Unresponsive with right arm twitching and lip smacking”

**Primary admitting diagnosis:**
Status epilepticus secondary to embolic stroke with hemorrhagic conversion, coma
Respiratory failure
Brain-compression PFO

**ICD-9**
434.11
Cerebral embolism w/ cerebral infarction

**MS-DRG**
064 Intracranial hemorrhage or cerebral infarction with MCC

**Estimated length of stay**
6.6 days

**Severity of illness and risk of mortality**
Major (4/4)

**Reimbursement**
Better (wt 2.9456)
Turning Words Into Data

ICD-9 748.60 Congenital anomaly of the lung

MS-DRG 165 Major chest procedure w/o CC/MCC

Presented for scheduled admission for "upper lobectomy"
Primary admitting diagnosis:
Congenital pulmonary airway malformation (CPAM)

Estimated length of stay 4.5 days
Comorbidities
Severity of illness and risk of mortality
None (0/0)
Reimbursement
Low (wt 2.259)

Collect Pediatric Data to Benchmark Metrics for Pediatric CDI Success
Benchmarking Pediatric Metrics for CDI

- Determine goals/focus
  - Improve DRG performance
    - Symptom DRGs
    - CC/MCC capture
  - Improve national benchmarking
    - Risk of mortality
    - Severity of illness
  - More accurate reflection of medical necessity
- Partner with quality
  - Pediatric HACs
  - PQIs

DRG Performance

- External audit identified the following areas of potential DRG improvement:

<table>
<thead>
<tr>
<th>DRG Code</th>
<th>Description</th>
<th>Final Coded</th>
<th>Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>194</td>
<td>SIMPLE PNEUMONIA &amp; PLEURISY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>SIMPLE PNEUMONIA &amp; PLEURISY W/O CC/MCC</td>
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<td></td>
</tr>
<tr>
<td>641</td>
<td>MISC DISORDERS OF NUTRITION,METABOLISM,FLUIDS/ELECTROLYTES W/O MCC</td>
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<tr>
<td>690</td>
<td>KIDNEY &amp; URINARY TRACT INFECTIONS W/O MCC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Incidence of these DRGs being final coded for Brenner:
  - 2011: 329 cases
  - 2012: 260 cases
  - 2013: 63 cases
  - 2014: 59 cases

Improving DRG Performance

- Educational examples specifically for Brenner patients
  - Sepsis 3-day rule-outs
  - Respiratory distress (acute)
- Increased review coverage
- Increased frequency of queries
- Hired pediatric nurses
- Populated the working DRG and GMLOS in the EMR
Educational Example

Premature infants from 22–36 weeks gestation age:

Please include the prematurity status with the gestational age together in the progress notes under the assessment and plan and the active problem list.

Avoid:
“Premature birth – provide developmental care as appropriate. Obtain car seat test prior to discharge.”

For coding prematurity:
1. Prematurity, birth weight 500–749 grams, with less than 24 completed weeks of gestation.
   Example: “11/25/2014 male infant born at 23 5/7 WGA, 600 grams.”
2. Prematurity, 1,250–1,499 grams, 29–30 completed weeks.
   Example: “11/25/2014 male infant born at 29 2/7 WGA, 1,299 grams.”

Severity of Illness

SOI: Total population

Severity of Illness

SOI: Medicine
Risk of Mortality

<table>
<thead>
<tr>
<th>Year</th>
<th>ROM: Surgical</th>
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<tbody>
<tr>
<td>2010</td>
<td>0.00%</td>
</tr>
<tr>
<td>2011</td>
<td>0.20%</td>
</tr>
<tr>
<td>2012</td>
<td>0.40%</td>
</tr>
<tr>
<td>2013</td>
<td>0.60%</td>
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<td>2014</td>
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<tr>
<td>2018</td>
<td>1.60%</td>
</tr>
<tr>
<td>2019</td>
<td>1.80%</td>
</tr>
</tbody>
</table>

Pediatric Quality

Hospital-acquired conditions (HAC), prevention quality indicators (PQI), pediatric quality indicators (PDI), neonatal quality indicators (NQI)

HAC the PQIs With the NQIs and PDIs

- It's all in the age
  - Age range delineation used at Brenner:
    - Neonate/newborn: Admission date during the neonatal period (birth to 28 days)
    - Pediatric: Greater than 28 days up to 18 years
- NQI:
  - NQI 01: Neonatal iatrogenic Pneumothorax Rate
  - NQI 02: Neonatal Mortality Rate
  - NQI 03: Neonatal Bloodstream Infection Rate
Neonatal Quality Indicators

- Incidence of NQIs as monitored and captured per CDI efforts (May 2013 forward):
  - NQI 02: Neonatal Mortality Rate
    - Excluded
  - NQI 03: Neonatal Bloodstream Infection Rate
    - 2 identified cases; confirmed

Pediatric Quality Indicators PDIs

- PDI 01: Accidental Puncture or Laceration Rate
- PDI 02: Pressure Ulcer Rate
- PDI 03: Retained Surgical Item or Unretrieved Device Fragment Count
- PDI 05: Iatrogenic Pneumothorax Rate
- PDI 06: RACHS-1 Pediatric Heart Surgery Mortality Rate
- PDI 07: RACHS-1 Pediatric Heart Surgery Volume
- PDI 08: Perioperative Hemorrhage or Hematoma Rate
- PDI 09: Postoperative Respiratory Failure Rate
- PDI 10: Postoperative Sepsis Rate
- PDI 11: Postoperative Wound Dehiscence Rate
- PDI 12: Central Venous Catheter-Related Bloodstream Infection Rate
- PDI 13: Transfusion Reaction Count
- PDI 14: Adverse Drug Reaction Rate
- PDI 15: Diabetes Short-Term Complications Admission Rate
- PDI 16: Gastroenteritis Admission Rate
- PDI 17: Perforated Appendix Admission Rate
- PDI 18: Urinary Tract Infection Admission Rate

Pediatric Quality Indicators PDIs (cont.)

- Incidence of PDIs as monitored and captured per CDI efforts (May 2013 forward):
  - PDI 01: Accidental Puncture or Laceration Rate
    - 2 identified cases; both avoided with physician queries
  - PDI 09: Postoperative Respiratory Failure Rate
    - 4 identified cases; 2 avoided with a physician queries
  - PDI 10: Postoperative Sepsis Rate
    - 1 identified case; confirmed
Hospital-Acquired Conditions

- We process the currently defined hospital-acquired conditions (HACs) for both adults and pediatrics
- They are addressed the same, regardless of age
  - Foreign Object Retained After Surgery
  - Blood Incompatibility
  - Pressure Ulcer Stages III & IV
  - Falls and Trauma
  - Catheter-Associated Urinary Tract Infection (UTI)
  - Vascular Catheter-Associated Infection
  - Manifestations of Poor Glycemic Control
  - Surgical Site Infection, Mediastinitis, Following Coronary Artery Bypass Graft
  - Surgical Site Infection Following Certain Orthopedic Procedures
  - Surgical Site Infection Following Bariatric Surgery for Obesity
  - Surgical Site Infection Following Cardiac Implantable Electronic Device
  - Deep Vein Thrombosis and Pulmonary Embolism Following Certain Orthopedic Procedures
  - Iatrogenic Pneumothorax With Venous Catheterization

Hospital-Acquired Conditions (cont.)

- Incidence of HACs as monitored and captured per CDI efforts (January 2013 forward):
  - Catheter-Associated Urinary Tract Infection (UTI)
  - Vascular Catheter–Associated Infection

Measuring the Success of Pediatric CDI
Measuring Success for Pediatric CDI

- CMI
- Coverage rates
- Query rates
- Physician response
- Physician agree rate
- LOS
  - Working MS-DRG and associated GMLOS in EMR
  - Educate CM/SW, nurse manager, MD on GMLOS/MS-DRGs

Case-Mix Index

CMI: Brenner 2010–2014

Overall adjusted CMI

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Productivity Metrics

MD response rate by quarter

Productivity Metrics

Agree rate

Measures to Maintain a Pediatric CDI Program
Maintaining a Pediatric CDI Program

- Keep up with research
  - Current market trends/requirements by various monitoring agencies
  - Disease processes and how they are coded
  - Advancement in procedures (e.g., CTS)
  - Current treatments/protocols
- Ongoing education of CDI
  - ICD-10
  - Disease processes/procedures
- Ongoing physician education
  - ICD-10
  - Documentation requirements
- Stay involved/visible
  - Round and run list with MDs

Thank you. Questions?

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