Portfolio Program Data & Information: Choosing Measures for Pediatric QI

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Nemours Children’s Health System
Presentation Overview

- Environment
  - Nemours Children’s Health System
- Finding Metrics
- Leveraging the Electronic Medical Record to Secure the Data
- Panel Discussion / Questions
Nemours Children’s Health System

>50 specialty and primary care locations in four states: DE, FL, PA and NJ
Resources

- Fully integrated electronic medical record
- Datawarehouse
- Institution-wide Office of Quality & Safety
- Employed medical staff
- Aspirational goals
  - Being in the top 5% in targeted quality and health outcomes
  - “Help me receive exactly the care I need and want, how and when I need and want it”
Identifying Metrics

- Posted by regulatory agencies
- Medical staff directed
- Clinically directed
AHRQ Pediatric Quality Indicators

- Derived from hospital inpatient discharge data

- NQI 01 Neonatal Iatrogenic Pneumothorax Rate
- NQI 02 Neonatal Mortality Rate
- NQI 03 Neonatal Blood Stream Infection Rate
- 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 Blood Stream Infection Rate
- PDI 13 Transfusion Reaction Count
- PDI 14 Asthma Admission 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
- PDI 19 Pediatric Safety for Selected Indicators
- PDI 90 Pediatric Quality Overall Composite
- PDI 91 Pediatric Quality Acute Composite
- PDI 92 Pediatric Quality Chronic Composite

http://www.qualityindicators.ahrq.gov/Modules/pdi_resources.aspx
Children's Health Insurance Program Reauthorization Act (CHIPRA) of 2009 (Pub.L. 111-3) added Section 1139A(a) to the Social Security Act

- included mandates to strengthen quality of care for and health outcomes of children (in Medicaid and CHIP)
- Selected measures from National Committee for Quality Assurance (NCQA), Joint Commission, AMA- Physician Consortium for Performance Improvement), among others
- Population/Community Health; Clinical Care; Care Coordination
**HEDIS**

- Healthcare Effectiveness Data and Information Set (HEDIS) – used by > 90% American’s health plans to measure performance.
- 81 measures across 5 domains of care
  - **Effectiveness of Care**
    - Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents
    - Childhood/Adolescent Immunization Status
    - HPV vaccine for female adolescents
    - Lead screening
    - Appropriate testing for children with pharyngitis
    - Appropriate treatment for children with URI
    - Appropriate medications for people with asthma
    - Follow-up care for children prescribed ADHD medication
    - Medication Reconciliation post discharge
Joint Commission

- **Core Measure Set**
  - **Children’s Asthma Care**
    - Medications for inpatient asthma
    - Home management plan of care given to patient/caregiver
  - **Immunizations**
    - Pneumococcal immunization (high risk populations)
    - Influenza immunization
CMS EHR Incentive Program (Meaningful Use)  
2014 Clinical Quality Measures (CQMs)

- Appropriate testing for children with pharyngitis
- Weight assessment/counseling for nutrition & physical activity
- Chlamydia screening
- Use of appropriate medications for asthma
- Childhood immunization status
- Appropriate treatment for URI
- ADHD: Follow-up care for children on medication
- Preventive care & screening for clinical depression

Medical Staff Directed

- National Patient Safety Goals
  - Critical lab results (prompt notification)
  - Medication reconciliation
  - Central line-associated bloodstream infection (NICU, PICU)
  - Catheter associated urinary tract infection

- Handoffs

- Pain Assessment

  - Opportunity to include in OPPE (Ongoing Professional Practice Evaluation)
Clinically Directed

- 40 divisions across campuses met with VP Q & S
  - Based on evidence review, each division collaborated and identified two meaningful metrics linked to clinical outcomes
- Continuous improvement teams
- Researcher led
<table>
<thead>
<tr>
<th>Specialty</th>
<th>Patient Population 1</th>
<th>Clinical Condition/Process 1</th>
<th>Primary associated outcome improvement w/ #1</th>
<th>Patient Population 2</th>
<th>Clinical Condition/Process 2</th>
<th>Primary associated outcome improvement w/ #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergy</td>
<td>Asthma</td>
<td>Use of the ACT score to guide asthma therapy</td>
<td>Improved Pediatric Quality of Life via diagnostic and therapeutic accuracy</td>
<td>Asthma</td>
<td>Use of teach and follow-up testing of use of metered dose inhaler</td>
<td>Increased medication compliance</td>
</tr>
<tr>
<td>Anesthesia</td>
<td>Surgical patients</td>
<td>Decreasing anemia postoperatively</td>
<td>Decrease returns to ER and stay in PACU</td>
<td>Surgical patients</td>
<td>Guidelines for temperature regulation intraoperatively and arrival to PACU</td>
<td>Complications and PACU stay</td>
</tr>
<tr>
<td>Cardiac Anesthesia</td>
<td>Congenital heart disease surgical patients</td>
<td>Improve communication within/outside the operating room with a standardized checklist</td>
<td>Medication errors</td>
<td>Prevent hospital acquired infections</td>
<td>Compliance with insertion checklist/Decreased CLABSI, CAUTI, VAP</td>
<td>Reduce medication errors and clinical delays</td>
</tr>
<tr>
<td>Cardiac Surgery</td>
<td>Congenital heart diseases surgical patients</td>
<td>Improve communication within/outside the operating room with a standardized checklist</td>
<td>Reroute postoperative complications</td>
<td>Prevent hospital acquired infections</td>
<td>Compliance with insertion checklist/Decreased CLABSI, CAUTI, VAP</td>
<td>Reduce hospital acquired conditions</td>
</tr>
<tr>
<td>Cardiology</td>
<td>Chest pain</td>
<td>Standardized diagnostic and therapeutic approach to pediatric patients with chest pain</td>
<td>Diagnostic and therapeutic accuracy</td>
<td>Postop heart surgery long term care</td>
<td>Standardized approach to the follow-up care and coordination of selected repaired lesions</td>
<td>Diagnostic and therapeutic accuracy</td>
</tr>
<tr>
<td>Critical Care</td>
<td>Intensive care unit patients</td>
<td>Improve communication within/outside the ICU with a standardized checklist</td>
<td>Reduce medication errors and unexpected admissions to the ICU</td>
<td>Prevent hospital acquired infections</td>
<td>Compliance with insertion checklist/Decreased CLABSI, CAUTI, VAP</td>
<td>Reduce infections</td>
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<tr>
<td>Dental</td>
<td>Patients getting sealants</td>
<td>Decrease rate of sealant repairs</td>
<td>Decrease returns to office and time in office</td>
<td>&quot;SLytt&quot; prep repair of inter-corneal caries</td>
<td>Patients requiring repair of caries located on the surface of adjacent teeth</td>
<td>Time under anesthesia</td>
</tr>
<tr>
<td>Developmental Medicine</td>
<td>Patients on antipsychotic medications</td>
<td>Track BMI monitoring</td>
<td>Minimization of unintended weight changes</td>
<td>Patients on certain medications</td>
<td>Proctolin levels are tracked</td>
<td>Diagnostic and therapeutic accuracy</td>
</tr>
<tr>
<td>Diagnostic Referral</td>
<td>Immunocompromised and/or technology dependent</td>
<td>Influence education, counseling, and documentation</td>
<td>Reduction in admissions for flu related reasons</td>
<td>Patients at risk for osteopenia (steroids, anti-epileptic medications, non-embolulating)</td>
<td>Bone health screening and education</td>
<td>Prevention of pathologic fractures</td>
</tr>
<tr>
<td>Emergency Room</td>
<td>Upper respiratory infections</td>
<td>Reduction in the prescription of antibiotics in patients presenting with Upper respiratory viral infections</td>
<td>Diagnostic and therapeutic accuracy</td>
<td>Strep throat</td>
<td>Reduction in the prescription of antibiotics in patients presenting with strep throat</td>
<td>Diagnostic and therapeutic accuracy</td>
</tr>
<tr>
<td>Endocrinology</td>
<td>Hypoglycemia</td>
<td>Medical optimization with estradiol</td>
<td>Medication optimization</td>
<td>Diabetes</td>
<td>Immunization documentation of the vaccination ≤ 1 yr</td>
<td>Prevention of infection</td>
</tr>
<tr>
<td>Gastroenterology</td>
<td>Crohn's disease</td>
<td>Monitor patients on methotrexate with ION guidelines</td>
<td>Decrease medication complications</td>
<td>Infammatory bowel disease new patients</td>
<td>Nutritional assessment guidelines for new patients</td>
<td>Optimal nutritional growth and plan</td>
</tr>
<tr>
<td>General Pediatrics Consultative</td>
<td>Adolescent Immunization</td>
<td>Improve the overall rate of compliance with all doses of HPV vaccination</td>
<td>Reduce disease risk</td>
<td>Prevent re-admissions</td>
<td>Standardize communication with inpatient providers in order to reduce re-admissions</td>
<td>Reduce re-admissions</td>
</tr>
<tr>
<td>General Surgery</td>
<td>Appendicitis (non-raptured)</td>
<td>Standardized medical management approach</td>
<td>Increase same day discharge</td>
<td>Patients with intussusceptions</td>
<td>Standardized medical management approach</td>
<td>Increase same day discharge</td>
</tr>
<tr>
<td>Genetics</td>
<td>Thyroid disease</td>
<td>Standardized management of congenital hypothyroidism medication</td>
<td>Diagnostic and therapeutic accuracy</td>
<td>Down's syndrome</td>
<td>Standardized management of Down's syndrome patients preventive screenings</td>
<td>Diagnostic and therapeutic accuracy</td>
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Align Metrics across Nemours Q & S Programs

**Physician Clinical Quality Activity**

- **Annual Review**
  - Each Specialty tracks process measures
  - 2 per year

- **Maintenance of Board Certification**
  - Structured review of Quality processes
  - 1 per year

- **Care Coordination Outcomes**
  - Formally adopting best process and link to outcomes
  - 1 ongoing

- **Meaningful Use of the EMR**
  - Demonstrate communication and family-centeredness
  - 22 measures
Nemours MOC QI Program (since 2010)

- Provide leadership and leverage our integrated system
- Make it Easy to Earn Credit
  - QI training via web based training
  - Data secured from EMR (no chart abstraction)
  - Nemours Office of Quality and Safety manages the program and submits to the ABP upon completion
- Embed in care for existing patients
- Foster collaboration with colleagues
- Build internal capacity
- Align with Nemours’ goals
- Embedded granular data elements in documentation (vital signs, medication lists, progress notes) and computerized clinical decision support tools (order sets, tools)

Over the past 2-4 weeks, FNAME:
* Has symptoms (Asth Impair Risk Symptoms IP:17825)
* Has nighttime awakenings (ASTH Impair 5-12 Over Nightime Awakenings IP:17833)
* Has normal activity (Asth Impair Risk Int Normal Activity IP:17827)
* Uses a short-acting beta2-agonist for symptom control (Asth Impair Risk Short Acting Beta 2 IP:17828)

Lung function testing indicates FEV1 is {ASTH IMPAIR RIS 5-12 OVER LUNG FUNCTION IP:17890)

BestPractice Alerts

* Patient has blood pressure that exceeds the 95th percentile for h/t/age/sex. Consider adding hypertension to the problem list if two repeat blood pressures are still elevated using appropriate cuff size.
* Open SmartSet: HYPERTENSION DIAGNOSIS
Medication Safety

- **Outpatient setting**
  - Record / review / update current medications
    - Particularly if medication is prescribed, re-ordered, or revised

- **Inpatient setting**
  - Review current orders
  - Reconcile medications from prior to admission to those to be prescribed
  - Review new orders, continued, discontinued
  - Particularly if admission, transfer of service and discharge
Use the **Section Navigator** to move through the activity.

Make any final decisions for individual orders.

Click the **Order Report** button to review the order’s patient, med and admin details.

Use the **Order Summary** section to review decisions.

Pend, Accept, or Cancel the orders to complete the Transfer Medication Reconciliation activity.

Use the **Summary** section to review your orders and related decisions.

Use **Next and Previous** to move between the activity’s sections.
FName's PEDS (Parent Evaluation Developmental Status) assessment was completed and the results shared with his family. Its scores indicate a recommendation of {PEDS Scores:18562::"Path A"} and FName's will {PEDS Evaluation:18563}.
- Monthly email reminders to review run charts & drill downs
- Periodic electronic surveys to ensure adherence with team meetings, harvest change cycles and identify opportunities for facilitator assistance.
Final Thoughts

- Common measures across regulatory agencies
- Clinicians feel ownership in identifying meaningful metrics
- Align quality initiatives (MOC points can be a great carrot)
Final Thoughts

- Measures commonly relate to improving
  - safety (e.g. medication reconciliation, reduce risk of infection);
  - clinical care (e.g. appropriate recognition/treatment of conditions, adherence with checklists/standard work);
  - communication (home management plans, handoffs)

- Granular “fingerprints” of care can be tracked during EMR documentation and even prompted through order sets and alerts – but the big win is to harvest the change cycles