327: A New Reimbursement Model: Pediatric Quality Metrics and Value Based Care

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Cathy Haut, DNP, CPNP-AC/PC, CCRN, FAANP

Speaker Introduction

• Dr. Cathy Haut has been a nurse practitioner for more than 20 years and is currently employed by Nemours Al Dupont Hospital for Children in Wilmington, Del., as the coordinator of nursing research and evidence-based practice. She is certified as both a primary and acute care pediatric nurse practitioner. She has experience mentoring students and peers and has had the benefit of being mentored throughout her career.

• Dr. Aaron Carpenter is the senior director for ambulatory and advanced practice nursing at Nemours Alfred I duPont Hospital for Children in Wilmington, Del. His clinical experience is in pediatric emergency medicine and pediatric primary care. Dr. Carpenter has partnered with leaders in the Nemours Children’s Health System to advance value-based care for children’s health.

Disclosures

Neither Aaron Carpenter, nor Cathy Haut have any conflicts of interest in presentation of this topic.

Learning Objectives

• Review the history and evolution of pediatric quality metrics related to both Primary and Acute Care practice.

• Discuss quality metrics in relation to benchmarks in pediatric outpatient and hospital-based care.

• Describe a collaborative opportunity between a childrens’ hospital and insurance company to focus on quality and value – based care.

Consider the following:

1. What are Quality Metrics?

2. What is Value-Based Care?

3. Quality Metrics and Value Based Care in Acute and Primary Practice???

Health Care Quality??!! Did you Know?

Vaccine Data: Influenza

Influenza epidemic in 1918: 50 million deaths, approx. 675,000 in the US
Influenza vaccine: 1938

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<tbody>
<tr>
<td></td>
<td>Pandemic</td>
<td>115</td>
<td>188</td>
<td>181</td>
<td>54</td>
<td>54</td>
<td>54</td>
<td>54</td>
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<tr>
<td></td>
<td>(January)</td>
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<table>
<thead>
<tr>
<th>Year</th>
<th>Adults</th>
<th>Children</th>
<th>Healthcare Workers</th>
<th>Pregnant Women</th>
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<tbody>
<tr>
<td>2017–2018</td>
<td>37.1%</td>
<td>57.9%</td>
<td>76.4%</td>
<td>48.1%</td>
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</tbody>
</table>
Quality Metrics: HPV Vaccine

- NCQA (National Committee for Quality Assurance)
- HEDIS (Healthcare Effectiveness Data and Information Set)
- HPV, meningococcal and Tdap vaccines by age 13
- National Quality Benchmark: Immunizations overall: 72%
- Nemours: 89%

*2018 CDC Cancer Champion Awards: Nemours Pediatrics, Shipley St, Seaford, DE

Quality Metrics: HPV Vaccine

Benchmark Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Estimate</th>
<th>Benchmark</th>
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<tbody>
<tr>
<td>Ages 2–17 who had dental visit in calendar year</td>
<td>54.6</td>
<td>66</td>
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<tr>
<td>Advice about child safety seats by HCP, 0–40lbs</td>
<td>66</td>
<td>78</td>
</tr>
<tr>
<td>Wellness check up in past 12 months</td>
<td>85.1</td>
<td>91</td>
</tr>
<tr>
<td>Ages 2–17, HCP advice about wearing helmet</td>
<td>39.5</td>
<td>44</td>
</tr>
<tr>
<td>Ages 19–35 mos who received 1 or more varicella</td>
<td>90.6 90.5</td>
<td>96.4</td>
</tr>
<tr>
<td>Ages 19–35 mos who received 1 or more MMR</td>
<td>91.1 91.3</td>
<td>96.4</td>
</tr>
<tr>
<td>Ages 13–15 yrs who received 3 or more polio vaccine</td>
<td>38.4</td>
<td>46.1</td>
</tr>
<tr>
<td>Ages 13–15 yrs who received 1 or more meningococcal vaccine</td>
<td>81.8 82.9</td>
<td>96.5</td>
</tr>
<tr>
<td>Ages 16–17 yrs who received 1 or more meningococcal vaccine</td>
<td>82.9 83.4</td>
<td>96.8</td>
</tr>
</tbody>
</table>

Quality Prevention Benchmarks: Vaccinations and Well Care

Benchmark Measures

<table>
<thead>
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<th>Measure</th>
<th>Estimate</th>
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</tr>
</thead>
<tbody>
<tr>
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<td>90.6 90.5</td>
<td>95.7</td>
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<tr>
<td>Ages 19–35 mos who received 1 or more MMR</td>
<td>91.1 91.3</td>
<td>96.4</td>
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<td>82.9 83.4</td>
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Quality in Healthcare

Quality: "a standard, measure of excellence, feature, trait or attribute that sets aside or specifies an overall or detailed expectation"

Quality in Healthcare = Reliability and Cost containment

Institute of Medicine Domains of Quality:
Safety, Effectiveness, Patient-centered, Timely, Efficient and Equitable.

[IOM, 2001]
**Quality in Healthcare: Origins**

**Agency for Healthcare Research and Quality (AHRQ)**

https://www.qualityindicators.ahrq.gov

- Prevention Quality Indicators
- Inpatient Quality Indicators
- Patient Safety Indicators
- Pediatric Quality Indicators

**Centers for Medicare & Medicaid Services (CMS)**

- https://www.cms.gov/Medicare/Quality‐Initiatives‐Patient‐Assessment‐Instruments/QualityMeasures
- Regulates payment based on hospital quality: Hospital Acquired Conditions, 30 day Readmission Rates

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**American Academy of Pediatrics (2016)**

Key challenges in pediatric quality measurement:
- Continued gap in health care quality.
- Children and families need to remain the central focus of all measurement activities.
- Quality measurement benefit = meaningful impact at the practice and patient levels.
- Measures should be:
  - Relevant and meaningful at the practice level
  - Easily integrated into day-to-day practice and workflow
  - Scientifically sound
  - Aligned with the needs of patients and families
  - Aligned to health system decision-making
  - Aligned to broad child health aspirational goals
  - Aligned to future models of pediatric practice: team care

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**NAPNAP (2013)**

NAPNAP Position Statement on the Role of Pediatric Nurse Practitioners in Quality Improvement:

- All pediatric nurse practitioners (PNPs) to engage in quality improvement (QI) efforts
- QI initiatives are essential to promote optimal health for children and access to evidence-based, safe, quality care.
- Acknowledgement of the importance of patient and family engagement in health care
- Quality care concepts in nursing education (QSEN)
- NAPNAP is committed to broad participation in QI efforts by PNPs in all practice settings.

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**NAPNAP Position Statement Quality Metrics**

To promote quality improvement, NAPNAP supports:

1. Active involvement of PNPs in QI efforts regardless of practice setting.
2. Parent/family engagement in QI efforts.
3. PNP engagement in efforts to develop meaningful quality measures of pediatric health care.
4. Incorporation of QI techniques in the core curriculum of PNP programs and as part of lifelong learning for PNPs in practice.
5. PNP leadership in coordination of care across the continuum.

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**Quality Constructs**

- Care when and where needed
- Customized patient care, allowing patient control
- Sharing knowledge and information
- Safety is key
- Transparency is necessary
- Needs are anticipated
- Waste is decreased
- Cooperation and collaboration among clinicians

AHRQ, 2020

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**Quality Metrics**

1. Specific measures of performance developed to support institutional assessment and quality improvement:
   - Tools that help measure healthcare processes, outcomes, patient perceptions and organizational structure and/or systems that are associated with high quality healthcare. (Centers for Medicare and Medicaid, CMS.gov, 2010)
   - “the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.” (IOM, 2001)
Consensus Determination
- Patient and Data Driven
- Based on Best Performers
- Determining:
  - Medicaid and CHIP 2019 Core Set of Children’s Health Care Quality Measures for
  - History of Quality Metrics

Determining Pediatric Quality Metrics
- Based on Best Performers
- National Evidence
- Patient and Data Driven
- Consensus Determination
- Data Transparency
- Mortality
- Safety
- Readmission
- Effectiveness and Timeliness of Care

2020 Child Core Set:
- Primary Care Access and Preventive Care
- Maternal and Perinatal Health
- Care of Acute and Chronic Conditions
- Behavioral Health Care
- Dental and Oral Health Services

2019 Core Set of Children’s Health Care Quality Measures for Medicaid and CHIP

Neonatal and Pediatric Critical Care Transport Benchmarks
- English-language Literature
- National Transport Organization recommendations
- Expert opinion
- Classic Delphi Method

- Unplanned dislodgement of therapeutic devices
- Verification of TT placement
- Average mobilization time of transport team
- First attempt TT placement success
- Rate of transport related injuries
- Rate of medication administration errors
- Rate of patient medical equipment failure during transport
- Rate of CPR performed during transport
- Rate of SRE’s
- Unintended neonatal hypothermia on arrival to hospital destination
- Rate of transport-related crew injury
- Use of standardized patient care hand-off

*Schwarzw, Bigham, Schoettehr, et al. (2015), SCIM
Pediatric Inpatient Benchmarking

<table>
<thead>
<tr>
<th>Inpatient</th>
<th>National Pediatric Benchmark</th>
<th>Nemours</th>
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<tbody>
<tr>
<td>PICU Central Venous Line Infection Rate</td>
<td>1.3 infections/1000 CVL*</td>
<td>1.6 infections/1000 CVL*</td>
</tr>
<tr>
<td>*Children’s Hospital Solutions for Patient Safety Network (SPS) for CLABSI in PICU</td>
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<tr>
<td>Catheter Associated Urinary Tract Infections</td>
<td>1.2 infections/1000 catheter days*</td>
<td>0.5 infections/1000 catheter days*</td>
</tr>
<tr>
<td>CLABSI in PICU 2016</td>
<td></td>
<td></td>
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<tr>
<td>90 day Readmission rate for Diabetic Ketoacidosis</td>
<td>as high as 10%* less than 5%</td>
<td></td>
</tr>
<tr>
<td>CAUTI in SPS 2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preventing emesis after surgery</td>
<td>4.8%*</td>
<td>1.8%</td>
</tr>
<tr>
<td>National Benchmark for Anesthesiology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preventing Post-operative hypothermia</td>
<td>4.8%*</td>
<td>1.2%</td>
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</tbody>
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What word comes to mind when you hear “Value-Based Care”

1. Go to menti.com
2. Enter Code 79-32-45
3. Type in your response

https://www.mentimeter.com/s/968d9e723cc2fc715ec2bce1fa503c9/f00bb096573d/edit
“Alternative Payment Models” (APMs) are a key element of value based care

- No downside financial risk
- Some financial risk
- Large financial risk

Fee for Service, Upside Pay for Performance, Upside Shared Savings, Downside Risk, Payment Reduction, No upside

Limited integration, Moderate integration, Full integration

(Avelar S et al., 2020)

Nemours and Aetna Performance Incentive

- Hospital and Practice performance improvement program
- Mutually agreed upon performance targets
- Incentive payments made based on performance relative to targets

Nemours/Aetna Quality Metric Examples

Inpatient/Acute Care
- HAI/HCWAI
- CLABSI, CAUTI, SSI, VAP
- 30 day readmission
- Average Length of Stay (ALOS)
- Adverse Event Rate

Outpatient Primary/Specialty Care
- Well child visits age 3-6yrs
- Adolescent immunization
- HgA1c
- HCAHPS patient experience/satisfaction

Payment Reform and move to value

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Although the United States spends more on healthcare than other developed countries, its health outcomes are generally not any better

Health Status
- Life Expectancy at Birth
- Infant Mortality
- Quality of Primary Care
- Unmanaged Asthma
- Unmanaged Diabetes
- Quality of Acute Care
- Safety During Childhood
- Heart Attack Mortality

Netherlands, France, Denmark, Finland, Spain, Sweden, Italy, Japan, France, Denmark, Finland, Spain, Sweden, Italy, Japan
Institute for Healthcare Improvement (IHI) Triple Aim

• Approach to optimizing health system performance
• Improving the patient experience of care (quality and satisfaction)
• Improving the health of populations
• Reducing per capita cost of healthcare

Clinical Integration Networks

Federal Trade Commission defines and establishes requirements for CINs
1. Monitor and control utilization of healthcare services designed to control cost and ensure quality
2. Chooses CIN physicians/providers who are likely to further above objectives
3. Invests capital, monetary and human, in the infrastructure and capability to realize efficiencies

Components of a CIN

• Legal structure
• Physician Leadership
• Participation Criteria
• Performance Improvement
• Information Technology (sharing)
• Contracting options
• Flow of funds (distribution of incentives)

The journey to value

Nemours VBSO (Ambulatory)
• Population health
• Primary Care Network
• PCMH certification
• Care coordination
• Clinical Pathway development
• Social Determinants of Health

A.I. duPont Hospital for Children & Nemours Children’s Hospital (Inpatient acute care)
• Clinical & Bench Research
• Lean/Continuous Improvement
• Organizational targets for Pediatric Quality Indicators
• Interprofessional ownership of quality improvement

QUESTIONS??????
References

• Macro 1 et al. Matching Market Opportunities with Strategies to Provide Pediatric Value Based Care. Children’s Hospital Association 2019.