

# Pediatric Update

Meaningful Use...how to make it meaningful.

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- I have no financial relationship with any commercial interest related to the content of this activity.

**Disclosures**

- The American Recovery and Reinvestment Act of 2009 specifies three main components of Meaningful Use.
- Simply put, "meaningful use" means providers need to show they're using certified EHR technology in ways that can be measured significantly in quality and in quantity.

**Meaningful Use**

- **Meaningful Use (MU) Defined**

- Promotes the spread of electronic health records to improve health care and seeks to:
    - Improve quality, safety, efficiency, and reduce health disparities
  - Engage patients and family
  - Improve care coordination, population health, and public health
  - Maintain privacy and security of patient health information
- 
- Stages move from building a foundation for data capturing and sharing to the use of data to improve health outcomes.
    - **Stage 1 : Data Capturing and Sharing** Final Rule Released: July 2010 | Incentive program: 2011
    - **Stage 2: Advance Clinical Processes** Final Rule Released: August 2012 | Incentive program: 2014
    - **Stage 3: Improved Health Outcomes** Timeline to be determined

**Meaningful Use**

**From Child Health Informatics Center of the AAP**

- The second phase of the Centers for Medicare & Medicaid Services (CMS) Electronic Health Record (EHR) Incentive Programs places more emphasis than Stage 1 Meaningful on the importance of clinical quality measures (CQMs). Beginning with Stage 2, CMS is creating a separate place for these measures that puts them on par with core and menu objectives.

## Stage 2

- Stage 2 Meaningful User requires that eligible professionals report on 9 from a list of 64 CQMs covering no less than 3 of 6 National Quality Strategy domains:
  - Patient and Family Engagement
  - Patient Safety
  - Care Coordination
  - Population and Public Health
  - Efficient Use of Healthcare Resources
  - Clinical Processes/Effectiveness
- And for the first time, CMS is recommending core CQMs for both adult and pediatric populations as part of measuring clinical quality in Stage 2. Here are the 9 CMQs targeting pediatric populations

**CQMs**

# Pediatric Specific CQMs

Title	Measure
Appropriate Testing for Children with Pharyngitis	Percentage of children 2-18 years of age, who were diagnosed with pharyngitis, ordered an antibiotic and received a group A streptococcus (strep) test for the episode.
Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents	<p>Percentage of patients 3-17 years of age who had an outpatient visit with a Primary Care Physician (PCP) or Obstetrician/Gynecologist (OB/GYN) and who had evidence of the following during the measurement period. Three rates are reported.</p> <ul style="list-style-type: none"><li>• Percentage of patients with height, weight, and body mass index (BMI) percentile documentation.</li><li>• Percentage of patients with counseling for nutrition.</li><li>• Percentage of patients with counseling for physical activity.</li></ul>
Chlamydia Screening for Women	Percentage of women 16-24 years of age who were identified as sexually active and who had at least one test for Chlamydia during the measurement period.
Use of Appropriate Medications for Asthma	Percentage of patients 5-64 years of age who were identified as having persistent asthma and were appropriately prescribed medication during the measurement period.

# Pediatric Specific CQMs (continued)

Title	Measure
Childhood Immunization Status	Percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTaP); three polio (IPV), one measles, mumps and rubella (MMR); three H influenza type B (HiB); three hepatitis B (Hep B); one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (Hep A); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday.
Appropriate Treatment for Children with Upper Respiratory Infection (URI)	Percentage of children 3 months-18 years of age who were diagnosed with URI and were not dispensed an antibiotic prescription on or three days after the episode.
ADHD: Follow-Up Care for Children Prescribed Attention Deficit/Hyperactivity Disorder (ADHD) Medication	<p>Percentage of children 6-12 years of age and newly dispensed a medication for attention-deficit/hyperactivity disorder (ADHD) who had appropriate follow-up care. Two rates are reported.</p> <ul style="list-style-type: none"> <li>Percentage of children who had one follow-up visit with a practitioner with prescribing authority during the 30-Day Initiation Phase.</li> <li>Percentage of children who remained on ADHD medication for at least 210 days and who, in addition to the visit in the Initiation Phase, had at least two additional follow-up visits with a practitioner within 270 days (9 months) after the Initiation Phase ended.</li> </ul>



## Pediatric Specific CQMs (continued)

Title	Measure
Preventive Care and Screening: Screening for Clinical Depression and Follow-Up Plan	Percentage of patients aged 12 years and older screened for clinical depression on the date of the encounter using an age appropriate standardized depression screening tool AND if positive, a follow-up plan is documented on the date of the positive screen.
Children who have dental decay or cavities	Percentage of children ages 0-20, who have had tooth decay or cavities during the measurement period.

**TABLE 1** National Quality Forum–Endorsed Inpatient Pediatric Measures

Agency	Measures
Agency for Healthcare Research and Quality <sup>3</sup>	<p>Hospital-level:</p> <ul style="list-style-type: none"> <li>• Accidental puncture or laceration</li> <li>• Pressure ulcer</li> <li>• Foreign body left in during procedure</li> <li>• Central venous catheter-related blood-stream infections</li> <li>• Iatrogenic pneumothorax in neonates</li> <li>• Iatrogenic pneumothorax</li> <li>• Neonatal mortality</li> <li>• Bloodstream infections in neonates</li> <li>• Pediatric heart surgery mortality</li> <li>• Pediatric heart surgery volume</li> <li>• Postoperative hemorrhage or hematoma</li> <li>• Postoperative respiratory failure</li> <li>• Postoperative sepsis</li> <li>• Postoperative wound dehiscence</li> <li>• Transfusion reactions</li> </ul>
The Joint Commission <sup>4</sup>	<p>Area-level indicators:</p> <ul style="list-style-type: none"> <li>• Asthma admissions</li> <li>• Diabetes, short-term complications</li> <li>• Gastroenteritis admissions</li> <li>• Perforated appendix admissions</li> <li>• Urinary tract infection admissions</li> </ul> <p>CAC core measures:</p> <ul style="list-style-type: none"> <li>• Reliever medication</li> <li>• Systemic corticosteroids</li> <li>• Home management plan of care</li> </ul>
Centers for Disease Control and Prevention <sup>5</sup>	<p>Immunization:</p> <ul style="list-style-type: none"> <li>• Pneumococcal polysaccharide</li> <li>• Influenza</li> </ul> <ul style="list-style-type: none"> <li>• Catheter-associated urinary tract infection</li> <li>• Central line-associated bloodstream infection</li> </ul>

- Percent of pediatric asthma inpatients who received relievers during hospitalization
- Percent of pediatric asthma inpatients who received systemic corticosteroids during hospitalization.
- Percent of pediatric asthma inpatients with documentation that they or their caregivers were given a written Home Management Plan of Care (HMPC) document.

## **Joint Commission**

### **Children's Asthma Care**

- Percent of acute care hospitalized inpatients 65 years of age and older AND inpatients aged between 5 and 64 years who are considered high risk and were screened for receipt of **pneumococcal vaccine** and were vaccinated prior to discharge, if indicated.
- Percent of acute care hospitalized inpatients age 6 months and older who were screened for seasonal **influenza** immunization status and were vaccinated prior to discharge, if indicated.

## **Joint Commission**

### **Immunization**

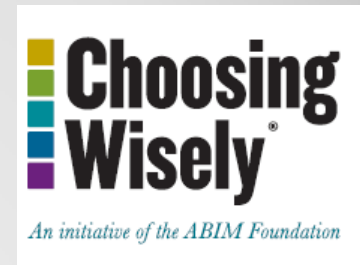
- **Infants and Children younger than 2 Years of Age**
  - PCV13 is routinely given to infants as a series of 4 doses, one dose at each of these ages: 2 months, 4 months, 6 months, and 12 through 15 months.
- **Children 2 through 5 Years of Age**
  - Healthy children 24 months through 4 years of age who are unvaccinated or have not completed the PCV13 series should get 1 dose.
  - Children 24 months through 5 years of age with medical conditions such as the following should get 1 or 2 doses of PCV13 if they have not already completed the 4-dose series. Ask your healthcare provider for details.
    - Sickle cell disease
    - A damaged spleen or no spleen
    - Cochlear implant(s)
    - CSF leaks
    - HIV/AIDS or other diseases that affect the immune system (such as diabetes, cancer, or liver disease),
    - Chronic heart or lung disease,
    - Children who take medications that affect the immune system, such as chemotherapy or steroids.
- **Children 6 through 18 Years of Age**
  - A single dose of PCV13 should be given to children 6 through 18 years of age with certain medical conditions who have not previously received PCV13, regardless of whether they have previously received the 7-valent pneumococcal conjugate vaccine (PCV7) or the 23-valent pneumococcal polysaccharide vaccine (PPSV23).

# High Risk

- Percentage of newborns that were fed breast milk only during the newborn's entire hospitalization excluding those whose mothers initial feeding plans were not to exclusively feed breast milk.
- Percentage of newborns that were fed breast milk only during the newborn's entire hospitalization

**Joint Commission**  
**Perinatal care**

- *Choosing Wisely*® aims to promote conversations between providers and patients by helping patients choose care that is:
  - Supported by evidence
  - Not duplicative of other tests or procedures already received
  - Free from harm
  - Truly necessary
- In response to this challenge, national organizations representing medical specialists have asked its providers to “choose wisely” through the identification of tests or procedures commonly used in their field, whose necessity should be questioned and discussed. The resulting lists of “Things Providers and Patients Should Question” will spark discussion about the need—or lack thereof—for many frequently ordered tests or treatments.



# Choosing Wisely



*An initiative of the ABIM Foundation*

American Academy of Pediatrics

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## **Five Things Physicians and Patients Should Question**

# **Five things**



1

## **Antibiotics should not be used for apparent viral respiratory illnesses (sinusitis, pharyngitis, bronchitis).**

Although overall antibiotic prescription rates for children have fallen, they still remain alarmingly high. Unnecessary medication use for viral respiratory illnesses can lead to antibiotic resistance and contributes to higher health care costs and the risks of adverse events.

2

## **Cough and cold medicines should not be prescribed or recommended for respiratory illnesses in children under four years of age.**

Research has shown these products offer little benefit to young children and can have potentially serious side effects. Many cough and cold products for children have more than one ingredient, increasing the chance of accidental overdose if combined with another product.

3

## **Computed tomography (CT) scans are not necessary in the immediate evaluation of minor head injuries; clinical observation/Pediatric Emergency Care Applied Research Network (PECARN) criteria should be used to determine whether imaging is indicated.**

Minor head injuries occur commonly in children and adolescents. Approximately 50% of children who visit hospital emergency departments with a head injury are given a CT scan, many of which may be unnecessary. Unnecessary exposure to x-rays poses considerable danger to children including increasing the lifetime risk of cancer because a child's brain tissue is more sensitive to ionizing radiation. Unnecessary CT scans impose undue costs to the health care system. Clinical observation prior to CT decision-making for children with minor head injuries is an effective approach.

4

## **Neuroimaging (CT, MRI) is not necessary in a child with simple febrile seizure.**

CT scanning is associated with radiation exposure that may escalate future cancer risk. MRI also is associated with risks from required sedation and high cost. The literature does not support the use of skull films in the evaluation of a child with a febrile seizure. Clinicians evaluating infants or young children after a simple febrile seizure should direct their attention toward identifying the cause of the child's fever.

5

## **Computed tomography (CT) scans are not necessary in the routine evaluation of abdominal pain.**

Utilization of CT imaging in the emergency department evaluation of children with abdominal pain is increasing. The increased lifetime risk for cancer due to excess radiation exposure is of special concern given the acute sensitivity of children's organs. There also is the potential for radiation overdose with inappropriate CT protocols.



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**Five More Things Physicians  
and Patients Should Question**

**Five More things**

6

**Don't prescribe high-dose dexamethasone (0.5mg/kg per day) for the prevention or treatment of bronchopulmonary dysplasia in pre-term infants.**

High-dose dexamethasone (0.5 mg/kg day) does not appear to confer additional therapeutic benefit over lower doses and is not recommended. High doses also have been associated with numerous short- and long-term adverse outcomes, including neurodevelopmental impairment.

7

**Don't perform screening panels for food allergies without previous consideration of medical history.**

Ordering screening panels (IgE tests) that test for a variety of food allergens without previous consideration of the medical history is not recommended. Sensitization (a positive test) without clinical allergy is common. For example, about 8% of the population tests positive to peanuts but only approximately 1% are truly allergic and exhibit symptoms upon ingestion. When symptoms suggest a food allergy, tests should be selected based upon a careful medical history.

8

**Avoid using acid blockers and motility agents such as metoclopramide (generic) for physiologic gastroesophageal reflux (GER) that is effortless, painless and not affecting growth. Do not use medication in the so-called "happy-spitter."**

There is scant evidence that gastroesophageal reflux (GER) is a causative agent in many conditions though reflux may be a common association. There is accumulating evidence that acid-blocking and motility agents such as metoclopramide (generic) are not effective in physiologic GER. Long-term sequelae of infant GER is rare, and there is little evidence that acid blockade reduces these sequelae. The routine performance of upper gastrointestinal (GI) tract radiographic imaging to diagnose GER or gastroesophageal disease (GERD) is not justified. Parents should be counseled that GER is normal in infants and not associated with anything but stained clothes. GER that is associated with poor growth or significant respiratory symptoms should be further evaluated.

9

**Avoid the use of surveillance cultures for the screening and treatment of asymptomatic bacteruria.**

There is minimal evidence that surveillance urine cultures or treatment of asymptomatic bacteruria is beneficial. Surveillance cultures are costly and produce both false positive and false negative results. Treatment of asymptomatic bacteruria also increases exposure to antibiotics, which is a risk factor for subsequent infections with a resistant organism. This also results in the overall use of antibiotics in the community and may lead to unnecessary imaging.

10

**Infant home apnea monitors should not be routinely used to prevent sudden infant death syndrome (SIDS).**

There is no evidence that the use of infant home apnea monitors decreases the incidence of SIDS; however, they might be of value for selected infants at risk for apnea or cardiovascular events after discharge but should not be used routinely.

**TABLE 2** Potential Targets for Measurement for Improvement

Category	Disease/Condition	Target
Volume	Bronchiolitis	↓ Steroid, bronchodilator, radiograph utilization
	Pneumonia	↓ Broad-spectrum antibiotic usage
	Asthma	↓ Readmission rates
	Gastroenteritis	↑ Enteral rehydration rates
	Skin and soft tissue infections	↓ Vancomycin usage
Morbidity	Codes on the floor	↓ Preventable codes on the floor
	Serious safety events (definition may be institution-specific)	↑ Days between events
	Sepsis	↓ Failure to rescue rate
	Osteomyelitis/septic arthritis	↓ Discharge with central catheter
	Hand-washing	↑ Rates of compliance
Universal processes	Communication to medical home	↑ Rates on discharge
	Patient satisfaction	↑ Scores related to physician communication
	Readmission and risk-adjusted length of stay for acute conditions	↓ Length of stay and readmission rate (linked together)

# Future?

- Changes from the 2006 guideline include that testing for specific viruses is no longer needed, because multiple viruses may cause bronchiolitis. Routine radiographic or laboratory studies are also unnecessary, and clinicians should diagnose bronchiolitis and assess its severity on the basis of history and physical examination.

## **Bronchiolitis Update**

- Other recommendations include that when making decisions about the assessment and management of children with bronchiolitis, clinicians should evaluate risk factors for severe disease, such as age less than 12 weeks, prematurity, underlying cardiopulmonary disease, or immunodeficiency. Finally, clinicians should not give epinephrine to infants and children diagnosed with bronchiolitis, nor should they receive chest physiotherapy

## **Bronchiolitis Update**

- The results from a retrospective study suggest that narrow-spectrum antibiotics are just as effective as broad-spectrum antibiotics for otherwise healthy children requiring admission for uncomplicated community-acquired pneumonia. Judicious use of antibiotics in both the outpatient and inpatient arenas is important to prevent the development of resistant bacterial pathogens.

**Pneumonia**



- Looking at reducing readmission rates:
  - Compliance with all of the Children's Asthma Care (CAC) core measures — a trio of interventions designed to improve the care of pediatric patients hospitalized because of asthma — was associated with reduced readmission rates
  - CAC: quick reliever and controller; follow-up appointment; environmental or other trigger control; and a written action plan

**Asthma**



- For childhood gastroenteritis, enteral rehydration is as effective if not better than IV rehydration. Enteral rehydration by the oral or nasogastric route is associated with significantly fewer major adverse events and a shorter hospital stay compared with IV therapy and is successful in most children. (2004)

## Gastroenteritis

- Not pediatric specific: cellulitis and cutaneous abscess are the second most common infections leading to hospitalization in the United States
- Resistance to Vancomycin is increasing, as are MRSA infections

## **Skin and Soft Tissue Infections**

- PMETs
- PEW scores
- Handoffs

**Codes on the Floor/Serious Safety  
Events/Sepsis**

- Quality Improvement project
  - Pediatric Patience Experience Rounding
    - Utilize pediatric inpatient survey with real-time data reporting to physicians regarding their communication in efforts to increase physician communication scores on Press Ganey
    - Secondary goals of identifying trends in overall pediatric inpatient experience and implementing hospital change

**Patient Satisfaction**

- Reimbursement!!!

**Readmission and Length of Stay**

We as physicians have a responsibility to provide quality, evidence based care and initiatives help provide this collaboration for future evidence.

Questions?  
Comments?

**The Meaning behind  
Meaningful Use**

- cdc.gov: vaccines and immunizations
- Cms.gov: Regulations and Guidelines
- Hospital pediatrics: Quality Measures in Pediatric Hospital Medicine: Moneyball or Looking for Fabio?
- Choosingwisely.org: An initiative of the ABIM foundation
- Clinical Practice Guideline: The Diagnosis, Management, and Prevention of Bronchiolitis
- The 2011 Pediatric Infectious Diseases Society/Infectious Diseases Society of America guideline

## References