Choosing Wisely in Pediatric Emergency Medicine: Five Opportunities to Improve Value and Outcomes

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Introduction

- Unnecessary diagnostic testing in children cared for in emergency departments (EDs) occurs commonly, contributes to health care waste, and can be associated with patient harm.
- Choosing Wisely (CW) is a program designed to emphasize best-practice recommendations and address barriers to the growing global problem of unnecessary testing.

Objective

- A task force of U.S. and Canadian pediatric emergency medicine (PEM) physicians was formed to create a Choosing Wisely recommendation list for children receiving care in EDs.

Methods

Solicit Candidate Items	33 Multi-disciplinary providers from 6 pediatric EDs	Submit 5 – 10 tests or therapies that are frequently overused in the ED
Scoring Candidate Items	Task force member anchored scoring after removal of duplications)	Rubric based on: frequency of overuse, evidence, risk of harm
25 Highest Scored Items sent to PEM member survey	PEM QI experts respond to survey to submit their "top 10"	Most frequent 5 items submitted = Top 5
Final 5 List multidisciplinary review	AAP Sections, CW USA, & CW Canada	Solicited review, iterative feedback, and final approvals

Five Things Physicians and Patients Should Question

1 Do not obtain radiographs in children with bronchiolitis, croup, asthma, or first-time wheezing.

Respiratory illnesses are among the most common reasons for pediatric emergency department (ED) visits, with wheezing being a frequently encountered clinical finding. For children presenting with first-time wheezing or with typical findings of asthma, bronchiolitis, or croup, radiographs rarely yield important positive findings and expose patients to radiation, increased cost of care, and prolonged ED length of stay. National and international guidelines emphasize the value of the history and physical examination in making an accurate diagnosis and excluding serious underlying pathology. Radiography performed in the absence of significant findings has been shown to be associated with overuse of antibiotics. Radiographs should not be routinely obtained in these situations unless findings such as significant hypoxia, focal abnormalities, prolonged course of illness, or severe distress are present. If wheezing is occurring without a clear atopic etiology or without upper respiratory tract infection symptoms (eg, rhinorrhea, nasal congestion, and/or fever), appropriate diagnostic imaging should be considered on a case-by-case basis.

2 Do not obtain screening laboratory tests in the medical clearance process of pediatric patients who require inpatient psychiatric admission unless clinically indicated.

The incidence of mental health problems in children has increased in the last two decades, with suicide surpassing homicide as the second leading cause of death in teenagers. Most children with acute mental health issues do not have underlying medical etiologies for these symptoms. A large body of evidence, in both adults and children, has shown that routine laboratory testing without clinical indication is unnecessary and adds to health care costs. Any diagnostic testing should be based on a thorough history and physical examination. Universal requirements for routine testing should be abandoned.

3 Do not order laboratory testing or a CT scan of the head for a patient with an unprovoked, generalized seizure or a simple febrile seizure who has returned to baseline mental status.

Children presenting with unprovoked, generalized seizures or simple febrile seizures who return to their baseline mental status rarely have blood test or CT scan findings that change acute management. CT scans are associated with radiation-related risk of cancer, increased cost of care, and added risk if sedation is required to complete the scan. A head CT scan may be indicated in patients with a new focal seizure, new focal neurologic findings, or high-risk medical history (such as neoplasm, stroke, coagulopathy, sickle cell disease, age <6 months).

4 Do not obtain abdominal radiographs for suspected constipation.

Functional constipation and nonspecific, generalized abdominal pain are common presenting complaints for children in emergency departments. Constipation is a clinical diagnosis and does not require testing, yet many of these children receive an abdominal radiograph. However, subjectivity and lack of standardization result in poor sensitivity and specificity of abdominal radiographs to diagnose constipation. Use of abdominal radiographs to diagnose constipation has been associated with increased diagnostic error. Clinical guidelines recommend against obtaining routine abdominal radiographs in patients with clinical diagnosis of functional constipation. The diagnosis of constipation or fecal impaction should be made primarily by history and physical examination, augmented by a digital rectal examination when indicated.

5 Do not obtain comprehensive viral panel testing for patients who have suspected respiratory viral illnesses.

Viral infections occur frequently in children and are a common reason to seek medical care. The diagnosis of a viral illness is made clinically and usually does not require confirmatory testing. Additionally, there is a lack of consistent evidence to demonstrate the impact of comprehensive viral panel (i.e., panels simultaneously testing for 8–20+ viruses) results on clinical outcomes or management, especially in emergency department settings. Hence, most national and international clinical practice guidelines do not recommend their routine use. Additionally, some viral tests are quite expensive, and obtaining nasopharyngeal swab specimens can be uncomfortable for children. Comprehensive viral panel testing can be considered in high-risk patients (eg, immunocompromised) or in situations in which the results will directly influence treatment decisions such as the need for antibiotics, performance of additional tests, or hospitalization. Testing for specific viruses might be indicated if the results of the testing may alter treatment plans (e.g., antivirals for influenza) or public health recommendations (e.g., isolation for SARS-CoV-2). For more specific recommendations related to diagnosis and management of SARS-CoV-2, please see www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/).

Results

- 205 items were collected from the 33 contributors at six pediatric EDs. .
  - Roles: PEM physician (n=16), PEM fellow (n=6), Advanced practice providers (n=5), pediatric nurse (n=4), pediatrician (n=1), emergency medicine physician (n=1).
  - Years of experience: <5 (n=9), 5-12 (n=11), >12 (n=13)
  - 22 females (67%), 11 males (33%)
- 72 non-duplicative items were independently scored by the task force to create the top 25 item electronic survey.
- 89 survey invites sent to AAP PEM Committee for Quality Transformation (COQT) members: 63% response rate.
- Task force members removed three items based on their similarity to existing CW items on non-PEM CW lists.
- Final five items published by CW USA and CW Canada: December 1, 2022.

Conclusion

- A multinational PEM task force used a systematic process to develop the first CW list for pediatric patients in the ED setting.
- Future activities will include the dissemination of this CW list and the design and implementation of effective interventions aimed at improving clinical practices specific to these CW items.

References & Top 5 List

Choosing Wisely Top 5

…or Google: "Pediatric Emergency Choosing Wisely"

PEMBLOG

Brad Sobolewski's PAS 2023 Choosing Wisely Site: https://pemcincinnati.com/blog/choosingwisely-pas2023/

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1. Scan the QR code to the left for a link to the Choosing Wisely website
2. Share a post using the hashtags **#ChoosingWisely** and **#PAS 2023** on your favorite social media platform (Twitter, Instagram, Facebook, etc.)

PAS Attendee @Your_handle
The #ChoosingWisely recommendations highlight five things physicians and patients can do to reduce unnecessary tests and interventions for children in the Emergency Department. Read more at https://www.choosingwisely.org/societies/american-academy-of-pediatrics-section-on-emergency-medicine-and-the-canadian-association-of-emergency-physicians/ #PAS2023

Choosing Wisely Task Force Member Institutions: Children's Hospital of The King's Daughters; Children's Hospital of Michigan; Michigan Medicine University of Michigan; Children's National; Children's Hospital Colorado; SickKids The Hospital for Sick Children; University of Calgary; Seattle Children's; Emory University School of Medicine; Cincinnati Children's