Five Things Clinicians and Patients Should Consider

1 Don't routinely discharge children with acute pain on opioid analgesia for more than three days. Do prescribe morphine as a first line opioid when opioid analgesia is required.

Most acute pain can be successfully treated with a multimodal therapeutic approach consisting of a combination of non-opioid pharmacotherapy (acetaminophen and/or nonsteroidal anti-inflammatory drugs [NSAIDS]), physical, and psychological interventions. Opioids should not be routinely prescribed for pain in children unless these strategies are therapeutically inadequate. When opioids are indicated, current opioid prescribing guidelines and standards recommend that opioids prescribed for acute pain for children who do not regularly take opioids should be prescribed for only short-term use at the lowest effective dose of morphine, the preferred first line opioid. Evidence suggests a duration of three days or less is often sufficient; more than seven days is rarely indicated and is associated with a risk of long-term opioid use. Prescribing physicians should provide patient- and caregiver-centred education about potential benefits and harms of opioid therapy, treatment options for the management of pain, and safe storage and disposal of unused medications, to allow them to make informed decisions about their care.

2 Don't use Free T4 or T3 to screen for primary hypothyroidism or to monitor and adjust levothyroxine (T4) dose in this condition.

Thyroid function tests are among the most commonly ordered laboratory tests. Since thyroid-stimulating hormone (TSH) is sensitive to even small changes in free thyroxine (fT4) and triiodothyronine (T3) levels, current guidelines state that TSH alone should be used to screen for primary hypothyroidism and to assess the adequacy of thyroid hormone replacement for this condition. In the presence of a normal TSH, which constitutes the majority of cases, fT4 and T3 add little clinical value. In spite of this, fT4 and T3 continue to be frequently ordered in combination with TSH. These inappropriate tests can lead to unnecessary repeat testing, further investigations and referrals, and in some cases, even unnecessary treatments. In select patients, for example, with suspected or known pituitary or hypothalamic disease, where the TSH may not be reliable, a free T4 would be indicated.

3 Don't routinely hospitalize or start empiric antibiotics for otherwise healthy and well-appearing children presenting with a febrile illness and first episode of neutropenia.

While the management of febrile neutropenia in cancer patients has been well studied with clear practice guidelines, the management of previously healthy, immunocompetent children with a febrile illness and first episode of neutropenia is often treated with empiric broad-spectrum antibiotics and hospitalization. However, multiple studies have shown that healthy, immunocompetent children are at low risk of serious bacterial infections if well appearing with a short history of neutropenia (often viral induced). Less aggressive management should be considered in these otherwise well-appearing, previously healthy patients with suspected viral induced, febrile neutropenia if clear clinical criteria are met, including that the rest of the blood counts and blood smear are entirely normal.

4 Don't routinely order urine amino acids (UAAs) as part of a screen for inborn errors of metabolism or in a work-up for critical hypoglycemia. To help rule out inborn errors of metabolism, consider ordering urine organic acids and plasma amino acids instead.

Urine amino acids (UAAs) are often ordered erroneously by clinicians not familiar with this test. This has led to unnecessary testing, mounting costs, false positive "non-specific" results requiring repeat testing, and patient safety events from delays in ordering the correct test. There are only a handful of indications for ordering UAAs, such as Lysinuric Protein Intolerance (LPI), Cystinuria, Hartnup disease, and Fanconi renotubular syndrome. UAAs should not be confused with similar-sounding investigations that are part of the basic metabolic work-up: plasma amino acids and urine organic acids.

continued on next page

5 Don't routinely order catheterization for urinary tract infection (UTI) testing in febrile children 6-24 months of age without first considering a noninvasive technique for urine screening.

Children presenting to the Emergency Department (ED) with fever without a source is very common in the first 2 years of age. As part of the diagnostic process, UTI often needs to be considered. Since this age group is usually not able to provide a midstream 'clean catch' sample, a culture is sent generally using a sterile approach (catheterization or suprapubic aspiration) to avoid contamination and false positive cultures. These options are invasive and painful and can be time consuming in a busy ED. Prior studies have shown that a two-step approach, with dipstick urinalysis performed on a sample that is collected in a urine bag, with an invasive culture sent only if the screening urinalysis test was positive, significantly reduced the catheterization rate in febrile children 6-24 months of age without prolonging ED length of stay and with no missed UTIs. Reducing automatic catheterization for the diagnosis of UTI in this age group will not only decrease the number of invasive, painful and time-consuming procedures, but will also decrease the number of unnecessary urine cultures sent, and the potential consequences of contamination, return visits and unnecessary antibiotic treatment.

How the list was created

The Departments of Paediatrics and Surgery & Perioperative Services at The Hospital for Sick Children (SickKids) in Toronto, Canada established its third list of Choosing Wisely recommendations in 2020 through the following process. A diverse group of SickKids stakeholders including representatives from Diagnostic Imaging, Laboratory Medicine, Pharmacy, Paediatrics, Surgery & Perioperative Services as well as the Hospital's Utilization Management and Antimicrobial Stewardship Committees were encouraged to submit recommendations applicable to a tertiary/quaternary care paediatric hospital and demonstrating evidence of overuse. In an iterative process, all proposed recommendations were reviewed by the Choosing Wisely steering committee to determine their appropriateness for inclusion in the new list. Factors considered included evidence of overuse/misuse, implementation and measurement plan, and presence of a clinician champion to lead the project. With a total of 15 recommendations developed to date, the Hospital continues to review applications for new Choosing Wisely recommendations from stakeholders across a variety of Divisions and Departments.

Sources

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