According to the Institute of Medicine, up to 30% of healthcare delivered in the U.S. is unnecessary and may cause harm. Patterned after the Choosing Wisely® campaign (www.choosingwisely.org) of the ABIM Foundation (www.abimfoundation.org), this document summarizes key areas prone to overuse or misuse of medical tests and procedures in pediatrics at Intermountain Healthcare. It also points out evidence-based care that shouldn’t be overlooked. Links are provided to tools that summarize and support the evidence (CPMs and national guidelines), tools to reinforce best practice at the point of care (orders, forms, and quick references), and tools to enable conversations with patients (patient education).

1. IMAGING | Limit imaging to tests that may alter care.

- **Respiratory infections** — Limit chest x-rays in acute bronchiolitis and pneumonia. Chest x-rays are not necessary to evaluate bronchiolitis; they are unlikely to alter care and may lead to inappropriate use of antibiotics. Routine chest x-rays are also not generally needed in children with uncomplicated, mild lower respiratory tract infections.

- **Abdominal pain** — Consider ultrasound instead of CT scanning. Abdominal CT scans involve significant radiation exposure. The Choosing Wisely® list from the American Gastroenterological Association advises that CT scans be used only when they’re likely to provide information that changes treatment.

- **Headache** — Avoid imaging for uncomplicated headaches. According to the Choosing Wisely® list from the American College of Radiology, unless there are specific risk factors for structural disease, imaging is not likely to change care or improve outcomes.

- **Minor/mild closed head injury** — In most cases, avoid imaging (it is rarely indicated). Imaging for head trauma is not necessary unless risk factors or neurologic deficits are present.

- **Other imaging decisions** — Check appropriateness criteria or consult a radiologist if you’re not certain that imaging is necessary.


2. LAB TESTS | Limit lab tests to those with an evidence base that supports their use.

- **Respiratory viral panels** — Don’t order unless the test will influence treatment decisions. Late in the viral respiratory season, a full panel is not necessary.

- **Lab test selection** — Order the right test. See the following guidance from ARUP on several specific tests:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Recommended</th>
<th>NOT recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. pylori infection</td>
<td>Breath/stool testing</td>
<td>Serologic testing</td>
</tr>
<tr>
<td>Vitamin D</td>
<td>25-(OH)D</td>
<td>1,25-(OH)D</td>
</tr>
<tr>
<td>HLA disease association</td>
<td>Differs per disorder</td>
<td>HLA testing (predictive value too poor for diagnosis of ankylosing spondylitis, etc.)</td>
</tr>
<tr>
<td>Thyroid hormone</td>
<td>TSH, followed by free T4 if necessary</td>
<td>FTI and/or T3 uptake (outdated and not appropriate)</td>
</tr>
</tbody>
</table>

More information: www.ARUPconsult.com or the ARUP Consult iPhone app.
3. MEDICATIONS | Use antibiotics and other drugs only when truly necessary; choose generics when possible.

- **Antibiotic use** — Don’t prescribe antibiotics for acute rhinosinusitis or bronchitis. Antibiotics are rarely needed and can contribute to antibiotic resistance. The Choosing Wisely® list from the American Academy of Allergy, Asthma, and Immunology states that most acute rhinosinusitis is caused by a viral infection and resolves without treatment in 2 weeks — only 0.5% to 2% of cases become bacterial infections. According to the Choosing Wisely® list from the American Academy of Family Physicians, antibiotics are prescribed in more than 80% of outpatient visits for acute sinusitis, which accounts for 16 million office visits and $5.8 billion in annual healthcare costs.

  More information: [Bronchitis CPM](#) Coughs and colds patient education (English / Spanish)

- **Antibiotic choice** — If antibiotics are prescribed, choose a narrow-spectrum medication if possible. Narrow-spectrum medications are less likely to cause resistance or lead to superinfection.

- **Medication administration** — Use PO when it will suffice, not IV or IM. Generally, intravascular or intramuscular medications should be used only if the patient cannot keep medications down or the patient is not improving with PO therapy.

- **Proton pump inhibitor (PPI) therapy** — Limit PPI therapy in fussy infants. The safety and efficacy of proton pump inhibitors for infants has not been demonstrated in clinical trials, and PPIs have potential side effects.

  More information: [Review on PPI therapy in Pediatrics](#)

- **Generics** — Choose generics first. Generic medications that are AB rated have been proven to be as effective as brand-name drugs. [SelectHealth’s GenericSample Program](#) waives the copay/coinsurance for the first 30-day fill of select generic prescriptions.

4. UNDERUSED CARE | Don’t skip the evidence-based tests and treatments below.

- **Preventive care** — Take advantage of preventive care visits to address healthy weight and lifestyle management for the whole family.

  More information: [Intermountain Preventive Care Recommendations: Children and Teens](#) [Pediatric Weight Management CPM](#)

  Preventive care patient education for teens (English / Spanish) 8 to Live By patient education (English / Spanish)

- **Development** — Remember autism and other developmental screening at appropriate visits.

  More information: [Intermountain Preventive Care Recommendations: Children and Teens](#)

- **Iron deficiency** — Screen for Hematocrit (HCT) or Hemoglobin (Hb), annually for children at risk of deficiency.

  More information: [Intermountain Preventive Care Recommendations: Children and Teens](#)

- **Sexually transmitted diseases** — Screen for chlamydia in sexually active teenagers.

  More information: [Intermountain Preventive Care Recommendations: Teens](#)

- **Depression** — Screen for depression regularly. The PHQ-2 is an effective, brief screening tool and can be followed by the PHQ-9 if the PHQ-2 is positive.

  More information: [PHQ-9 form](#) (PHQ-2 is first 2 questions) [Suicide Risk Evaluation](#) [Depression CPM](#) [Patient education](English / Spanish)

National Choosing Wisely® Resources — 5 Things that Physicians and Patients Should Question

Choosing Wisely®, an initiative of the ABIM Foundation, encourages physicians, patients, and other healthcare providers to talk about medical procedures that are unnecessary (and might even cause harm). This initiative provides evidence-based recommendations from a variety of specialty societies at [www.choosingwisely.org](http://www.choosingwisely.org). Each list focuses on 5 specific procedures. The titles of several recommendations are listed below (click the underlined titles below to open each list):

Selected lists:

- Allergy, Asthma, and Immunology
- Cardiology
- Family Practice
- Gastroenterology
- Internal Medicine
- Nephrology
- Nuclear Cardiology
- Obstetrics and Gynecology
- Oncology
- Pediatrics
- Radiology

Other Choosing Wisely resources:

- Consumer education: [www.choosingwisely.org/doctor-patient-lists](http://www.choosingwisely.org/doctor-patient-lists)
- Twitter: @ABIMFoundation
- Medical Professionalism blog: [blog.abimfoundation.org](http://blog.abimfoundation.org)