



TOP-FIVE

RECOMMENDATIONS on low-value practices

Better care. **Better** decision-making. **Better** use of resources.

The Paediatrics and Child Health Division

represents 4,500 Fellows and trainees of The Royal Australasian College of Physicians (RACP). We aim to improve the health and wellbeing of neonates, infants and children as well as adolescents and young adults (known as young people) through education and training, research, and policy and advocacy.

1

Do not routinely prescribe oral antibiotics to children with fever without an identified bacterial infection

2

Do not routinely undertake chest X-rays for the diagnosis of bronchiolitis in children or routinely prescribe salbutamol or systemic corticosteroids to treat bronchiolitis in children

3

Do not routinely order chest X-rays for the diagnosis of asthma in children

4

Do not routinely treat gastroesophageal reflux disease (GORD) in infants with acid suppression therapy

5

Do not routinely order abdominal X-rays for the diagnosis of non-specific abdominal pain in children



1

Do not routinely prescribe oral antibiotics to children with fever without an identified bacterial infection

The vast majority of children presenting with fever do not have a bacterial infection and therefore will not benefit from being prescribed oral antibiotics. For instance, one study of febrile infants found overall bacteraemia frequency of well below 1 per cent. Sometimes, in exception to this, oral antibiotics are prescribed to treat an unapparent bacterial infection or prevent development of severe bacterial infection and appear to have beneficial effects, though even the significance of these effects is disputed. Given that inappropriate prescribing of antibiotics is a major cause of antibiotic resistance and antibiotics have adverse effects, it is not considered good clinical practice to prescribe antibiotics in children without a specific bacterial infection.





2

Do not routinely undertake chest X-rays for the diagnosis of bronchiolitis in children or routinely prescribe salbutamol or systemic corticosteroids to treat bronchiolitis in children

Chest X-rays

Chest X-rays for patients with acute lower respiratory tract infections rarely affect clinical treatments and outcomes. Chest X-ray films do not discriminate well between bronchiolitis and other forms of lower respiratory tract infection and in mild cases do not offer information that is likely to affect treatment. It is estimated that 133 children with typical bronchiolitis would have to undergo radiography to identify 1 radiograph that is suggestive of an alternate diagnosis.

Salbutamol

With the exception of improving clinical scores in infants treated as outpatients, the evidence overwhelmingly shows that bronchodilators, including salbutamol, do not improve oxygen saturation, reduce hospital admissions or shorten the duration of hospitalisation and time to resolution of illness in children with bronchiolitis. Compared with these minimal benefits, salbutamol is associated with adverse impacts such as tachycardia, oxygen desaturation and tremors. If a bronchodilator is required, epinephrine appears to be a superior alternative to salbutamol in reducing the severity of bronchiolitis.

Steroids

The majority of randomised controlled trials have not found a clinically relevant, sustained impact of systemic or inhaled glucocorticoids on admissions or length of hospitalisation in children with bronchiolitis or other forms of lower respiratory tract infection.

3

Do not routinely order chest X-rays for the diagnosis of asthma in children

There is extensive evidence that the majority of X-rays ordered for children admitted for asthma and wheezing disorders do not provide clinically relevant information and therefore do not contribute to their diagnosis and management.

Clear clinical criteria outlining the indications for X-rays in asthma should be defined to avoid unwarranted chest X-rays in children with acute wheeze.

4

Do not routinely treat gastroesophageal reflux disease (GORD) in infants with acid suppression therapy

Gastroesophageal reflux is common in preterm infants, infants and children and uncomplicated gastroesophageal reflux typically does not require medical therapy. However, gastroesophageal reflux may evolve into gastroesophageal reflux disease (GORD), a condition where the persistent leaking of stomach contents back into the oesophagus results in heartburn and other troublesome symptoms. Proton pump inhibitors (PPI) are sometimes prescribed in cases of GORD to achieve a pronounced and long-lasting reduction of gastric acid production.

However, numerous randomised controlled trials have concluded that PPIs are no more effective than placebo in treating GORD in infants, though there is some evidence (of moderate quality) of their effectiveness in treating GORD in older children. Moreover, there is still a paucity of trials confirming the long term safety of PPI use in children more generally while there is considerable evidence that PPIs have significant negative side effects such as headache, diarrhoea, constipation, nausea, increased rates of infection and increased rates of food allergy.



5

Do not routinely order abdominal X-rays for the diagnosis of non-specific abdominal pain in children

Retrospective studies of medical records of children and adults admitted for constipation and other forms of non-specific abdominal pain conclude that in only a very small minority (under 5 per cent) of cases do abdominal X-rays make a difference in patient treatment. A recent study also showed that abdominal X-rays were performed more frequently in misdiagnosed children. Numerous studies yield significantly varying estimates of the sensitivity and specificity of abdominal x-rays and insufficient evidence of a diagnostic association between symptoms of constipation and faecal loading seen on abdominal radiographs. There is significant scope for reducing the number of abdominal X-rays performed without sacrificing diagnostic accuracy for children with abdominal pain.



For the list of references supporting these recommendations and further information on the development process, see evolve.edu.au/recommendations/pchd
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WHAT IS EVOLVE?

As part of a global movement, Evolve is a flagship initiative led by physicians, specialties and the Royal Australasian College of Physicians (RACP) to drive high-value, high-quality care in Australia and New Zealand.

Evolve aims to reduce low-value care by supporting physicians to:

- be leaders in changing clinical behaviour for better patient care
- make better decisions, and
- make better use of resources.

Evolve works with specialties to identify their 'Top-Five' clinical practices that, in particular circumstances, may be overused, provide little or no benefit, or cause unnecessary harm. Evolve 'Top-Five' recommendations on low-value practices are developed through a rigorous, peer-reviewed

process; led by clinical experts, informed by evidence and guided by consultation.

Evolve enables physicians to:

- safely and responsibly phase out low-value tests, treatments and procedures, where appropriate
- enhance the safety and quality of healthcare
- provide high-value care to patients based on evidence and expertise, and
- influence the best use of health resources, reducing wasted expenditure and the carbon footprint of the healthcare system.

The RACP, through Evolve, is a founding member of Choosing Wisely Australia® and Choosing Wisely New Zealand, with all Evolve 'Top-Five' recommendations part of the Choosing Wisely campaign.

