

# Medicines

## Optimisation news headlines

August 2018

With the arrival of the updated [guidelines for antibiotic prescribing in the community](#), it is noticeable that there are some significant changes, especially in relation to prescribing for children. The coming editions of News Headlines will highlight some of these changes and look at the rationale behind them. We start with a general look at infections in children.

### Antibiotic prescribing in children – what do we know?

#### Introduction

Rates of paediatric urgent care presentations to GPs and emergency departments have increased significantly over the past few years. Fever is the commonest reason for a parent to seek a medical opinion. A significant proportion of children presenting with fever are treated with antibiotics. It is likely that inconsistent approaches to antibiotic prescribing across the urgent care pathway are contributing to parental anxiety, resulting in the rise in urgent care activity.

#### a) Why do clinicians prescribe antibiotics for children?

- Perceived vulnerability of children, especially young children.
- Seeking safety in the face of uncertainty (especially if re-presentation)
  - Uncertainty is driven by the difficulty in distinguishing bacterial and viral infections.
    - Perceived impact on severity and duration of symptoms in bacterial infections if an antibiotic is prescribed.
    - Perceived risk of suppurative complications from an untreated bacterial respiratory tract infection, especially in young children.
- Repercussions of 'missing something' in a child
  - The media are inclined to pick up on any cases where significant morbidity or death in a child has resulted from a healthcare professional 'missing' a severe infection.
    - Fear of complaint or litigation
  - Staff with little experience of seeing unwell children are less confident at ruling out severe infection.

#### b) Epidemiology of serious infections in children

[Streptococcus pneumoniae](#), [Neisseria meningitidis](#), and [Haemophilus influenzae type B](#) are the most common infectious agents responsible for bacterial meningitis and sepsis in children. The introduction of conjugate vaccines against these agents has resulted in a marked reduction in their prevalence in children, explaining the significant reduction in the rate of serious infections in children over the past few years (*as shown via the links*).

#### c) Does the natural history of infections in children and adults differ?

One of the reasons that parents request antibiotics is the persistence of symptoms during an infective episode. However, the natural history of respiratory tract infections differs considerably between adults and children, with children often experiencing considerably longer duration of symptoms following viral infections. Following a rhinovirus infection, 20% of adults remain



symptomatic at 10 days, compared to 73% of children. Cough occurs in 40% of adults with only 20% still affected by day 10, compared to 70% of children experiencing cough with it persisting at day 10 in over 40%. ([Cotton et al. S Afr Fam Pract \(2004\) . 2008 ; 50\(2\): 6–12](#)).

The aetiology of respiratory tract infections also varies markedly between adults and children. A study of children admitted with lower respiratory tract infections demonstrated that a viral cause was responsible in the vast majority (77%). There is even variation within the paediatric population; respiratory tract infections in young children are more likely to be of viral aetiology than in older children. The prevalence of throat swabs positive for Group A streptococcus is far lower in younger children with acute pharyngitis than in older children.

*Taken from an article by Dr Sanjay Patel, Consultant in Paediatric Infectious Diseases, Southampton Children's Hospital.*

## Drug Safety Updates

### [Esmya \(Ulipristal\)](#)

The MHRA has finalised the review of Esmya that was instigated following reports of serious liver injury. Guidance for monitoring of liver function remains in place and there are new restrictions on the indications for use. It is now only licensed:

- as a single pre-operative treatment course or
- as ongoing intermittent treatment for moderate to severe symptoms of uterine fibroids in women of reproductive age who are not eligible for surgery.

### [Pressurised metered dose inhalers \(pMDI\)](#)

To reduce the risk of airway obstruction from aspiration of loose objects remind patients to remove the mouthpiece cover fully, shake the inhaler to remove loose objects that may not be visible, and check the inside and outside of the mouthpiece are clear before inhaling a dose.

## Adrenaline Autoinjectors

We have received a number of enquiries recently concerning the preferred choice of adrenaline autoinjector. The recommended dose of adrenaline for [anaphylaxis](#) in adults when administered by a health care professional (HCP) is 500micrograms and Emerade is the only brand of pen that currently provides this strength.

The autoinjectors are intended as a temporary measure for self-administration whilst awaiting professional help and are not intended for use by HCPs. Patients should not be switched to the 500microgram preparation purely to bring them in line with the recommendations for HCPs but should continue to use their usual device, be it EpiPen, Jext or Emerade.

Full guidance for both patients and health care professionals can be found on the Resuscitation Council (UK) website : <https://www.resus.org.uk/>

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