

# COMPASS Therapeutic Notes Supporting the Community Pharmacy Minor Ailments Service in Northern Ireland

## Part One: Winter Ailments

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<b>Useful Web sites:</b>	
Clinical Evidence =	<a href="http://www.clinicalevidence.com">www.clinicalevidence.com</a>
Health Protection Agency =	<a href="http://www.hpa.org.uk">www.hpa.org.uk</a>
NICE =	<a href="http://www.nice.org.uk">www.nice.org.uk</a>
Prodigy Knowledge=	<a href="http://www.prodigy.nhs.uk">www.prodigy.nhs.uk</a>
SIGN =	<a href="http://www.sign.ac.uk">www.sign.ac.uk</a>

<b>Glossary:</b>	
<b>ACE Inhibitor</b>	= Angiotensin Converting Enzyme Inhibitor
<b>COPD</b>	= Chronic Obstructive Pulmonary Disease
<b>IDDM</b>	= Insulin Dependent Diabetes Mellitus
<b>MAOI</b>	= Monoamine Oxidase Inhibitor
<b>URTI</b>	= Upper Respiratory Tract Infection
<b>Medicines noted in green are on the minor ailments formulary</b>	

- **Completion of the assessment questions at the end of this issue will provide you with 2 hours towards your CPD requirements**
- **Further copies of this and any other edition in the COMPASS Therapeutic Notes series along with relevant assessment questions can be found at:**  
<http://www.centuralservicesagency.com/display/compass>

### Introduction & Background

A community pharmacy minor ailment service is a locally tailored service whereby patients are encouraged to consult a participating community pharmacist, rather than their GP, for a defined list of minor ailments.

Such a service is aimed particularly at patients seeking treatment for a specified list of self-limiting conditions. The community pharmacist will advise them and, if appropriate, can recommend treatment from an agreed local formulary of medicines, give advice or refer the patient to their GP if necessary.

#### **Who is the Northern Ireland minor ailment service open to?**

The Northern Ireland minor ailment service is open to patients who are registered with a GP practice and are exempt from paying prescription charges. **All infants under the age of 3 months are excluded from the service** and some older children will be excluded from the service for particular conditions.

If the pharmacist decides that a medicine is required, patients will be supplied with appropriate medicine(s) from the minor ailments formulary free of charge. Therefore, the payment barrier, which can prevent patients choosing to see a pharmacist instead of their GP, is removed.

#### **What are the benefits of the minor ailments service?**

Using the minor ailments service, pharmacists can reduce the huge burden on GP time taken up with self-treatable conditions. One study found that Northern Ireland GPs spend 45% of their time dealing with minor

ailments<sup>1</sup> and another that, across the UK, each GP's workload could be reduced by 16 consultations a day if self-medication were used for certain minor ailments.<sup>2</sup>

By using the minor ailments service, patients get quicker, easier and more appropriate access to the support they need to look after themselves<sup>3</sup>

#### **Is the minor ailment service an appropriate use of pharmacist's time?**

Pharmacists are trained to deal with minor ailments and already spend a good proportion of their time advising on these conditions, recommending over-the-counter products or referring patients to other health care professionals.<sup>4</sup> Although pharmacists have always provided treatment for self-limiting conditions, up to now patients exempt from prescription charges have not been necessarily motivated, or do not have the resources, to obtain care from sources other than their GP.<sup>5,6</sup>

#### **So what illnesses are termed "minor ailments"?**

Minor ailments are generally taken to include conditions that require little or no medical intervention, for example cough, "colds", sore throat, and hay fever.

#### **How may a patient be referred onto the minor ailments service?**

Patients may be referred onto a service by:

- a member of the GP practice staff (e.g. receptionist, nurse, practice pharmacist or GP)
- a community pharmacist
- the patient themselves.

## Section One: Managing Cough through the Minor Ailments Service

### What are the most common causes of an acute cough?

The majority of coughs presenting in the pharmacy will be caused by a viral upper respiratory tract infection (URTI).

The most common **non-respiratory causes** of cough are dyspepsia and use of ACE-inhibitors.

### What are the clinical features of acute viral cough?

Viral coughs typically present with sudden onset and associated fever. Sputum production is minimal and symptoms are often worse in the evening. Associated "cold" symptoms are also often present; these usually last between 7 and 10 days. Duration of longer than 14 days might indicate a secondary bacterial infection but this is clinically difficult to establish without analysing sputum samples.

### What is it important to rule out?

It is the pharmacist's responsibility to identify those cases of cough that might have a more serious pathology. Asking symptom-specific questions will help to determine if referral is needed.

### Patients presenting with cough – the questions to ask

#### What age is the patient?

Children will most likely be suffering from an URTI but **asthma**, especially if the cough is non-productive and at night, should be considered. In adults, conditions such as **bronchitis**, **pneumonia** and **carcinoma** become more prevalent.

#### How long has the patient had the cough?

Most coughs are self-limiting and will be better within a few days with or without treatment. In general, a cough of longer than 3 weeks duration that is not improving should be referred to the GP for further investigation.

#### What type of cough is it?

With a **non-productive cough**, sometimes described as dry, tickly or tight, no sputum is produced. These coughs are usually caused by a viral infection and are self-limiting.

With a **productive cough**, sometimes described as chesty or loose, the patient will report coughing up sputum. Many patients will say that they are not producing sputum, although they go on to say that they can "feel it on their chest". In these cases the cough is probably productive in nature and should be treated as such.

Patients presenting with chronic cough with haemoptysis associated with fever and night sweats need to be referred to their GP. Symptoms such as these may be indicative of a serious underlying

Agent	Comments
ACE-inhibitors	<ul style="list-style-type: none"> <li>Well recognised adverse effect, more prevalent in women.</li> <li>Typically the cough is irritating, non-productive and persistent.</li> <li>In some patients the cough may be so troublesome that ACE inhibitor therapy may have to be discontinued.</li> </ul>
Beta-blockers	
Mycophenolate mofetil	
Nitrofurantoin	

pathology, e.g. **lung cancer** or **tuberculosis**.

One of the less common causes of acute cough is **croup**. This is viral in origin and typically affects infants aged between 9 and 18 months old; it is said to be more common in boys. The cough has a harsh barking quality. It develops a day or so after the onset of "cold-like" symptoms. Attacks of coughing typically occur in the middle of the night and subside within a few hours, although they can recur. It is often associated with difficulty in breathing and an inspiratory stridor (noise in the throat on breathing in). Referral to the GP is necessary.

#### If sputum is produced, what colour is it?

**Clear** or **white** sputum normally suggests that no infection is present.

**Yellow**, **green** or **brown** sputum normally indicates infection. However, mucopurulent sputum may be caused by a viral infection and does not require automatic referral.

**Haemoptysis** can be rust coloured (pneumonia), pink tinged (left ventricular failure) or dark red (carcinoma). Referral to the GP is indicated.

#### Is the patient reporting any other symptoms?

A "cold", sore throat and catarrh may be associated with a cough. The patient may have a temperature and generalised muscle aches. This would be in keeping with a viral infection and be self-limiting. Chest pain, shortness of breath or wheezing are all indications for referral.

#### What is the patient's previous medical history?

Certain cough remedies are best avoided in **diabetics** and anyone with **heart disease** or **hypertension**.

A recurrent night-time cough can indicate **asthma**, especially in children, and should be referred to the GP. Asthma may sometimes present as a chronic cough without wheezing. A family history of eczema, hay fever and asthma is worth asking about.

A persistent cough, usually worse at night and associated with shortness of breath and ankle oedema, may indicate **heart failure**. Patients presenting with

similar symptoms need to be referred to their GP.

**Gastro-oesophageal reflux** can cause coughing. Sometimes such reflux is asymptomatic apart from coughing.

#### Does the patient smoke?

One in three long-term smokers develop a chronic cough. The pharmacist is in a good position to offer help with smoking cessation. On stopping, the cough may initially become worse as the action of the cilia is re-established during the first few days and it is worth mentioning this.

#### Is the patient currently taking any medication?

It should be established whether the patient is taking any medicines. See **Table ONE** for a list of medicines which can cause cough. Any patient in whom medication is suspected as the cause of the cough should be referred to their GP.

It is also useful to know which cough medicines the patient has already tried. If more than one appropriate remedy has been tried for an appropriate length of time without success, then referral to the GP is advisable.

#### Which patients presenting with a cough require referral to their GP?

Any patient presenting with the following should be advised to see their GP:

- Cough lasting more than 3 weeks and not showing signs of improvement.
- Patients with asthma reporting a night-time cough.
- Patients with COPD with increased dyspnoea and purulent sputum.
- Patients reporting haemoptysis.
- Patients reporting chest pain.
- Patients reporting shortness of breath or wheezing.
- A child with suspected croup
- Patients reporting recurrent nocturnal cough.
- Patients in which an adverse drug reaction is suspected.
- Patients in which medication has failed.

## Managing Cough

Pharmacists are well aware of the debate about the clinical efficacy of the cough remedies available. In particular, the lack of scientific evidence that expectorants have any effect and the use of combinations with apparently contradictory ingredients has been cited. However, many people who visit the pharmacy for advice do so because they want some relief from their symptoms and, while the effectiveness of cough remedies remains unproven, they can have a useful placebo effect.

**Cough suppressants** may provide some relief from a **non-productive cough**, particularly if given at night. However, controlled trials have not confirmed any significant effect of cough suppressants over placebo in symptom reduction. **Pholcodine** is the cough suppressant on the minor ailments formulary in Northern Ireland. (See **Table TWO**).

For a **productive cough** the use of cough suppressants is inappropriate since the cough serves the purpose of clearing the airways. **Expectorants** have been used on the grounds that increasing the volume of secretions in the respiratory tract facilitates removal by ciliary action and coughing. However, clinical evidence of efficacy is lacking, and many authorities consider expectorants to be of no value other than as a placebo.<sup>9</sup> Under the minor ailments service, patients presenting with a productive cough can be given **simple linctus**. Simple linctus will act as a demulcent by providing a protective coating over the pharynx. Simple linctus is particularly useful in children and pregnant women. See **Table THREE**.

Age	Dose	Formulary preparations	Contraindications, cautions, interactions
Adults	5 to 10 milligrams, three or four times a day	Pholcodine linctus (sugar-free) contains 5 milligrams of pholcodine in 5mls.	<ul style="list-style-type: none"> <li>• Caution concomitant use with alcohol and other CNS depressants.</li> <li>• Caution in asthma</li> <li>• Constipation has been reported.</li> <li>• May cause drowsiness</li> </ul>
Children aged 5-12 years*	2.5 to 5 milligrams, three or four times a day	Pholcodine <b>paediatric</b> linctus (sugar-free) contains 2 milligrams of pholcodine in 5mls.	
Children aged 1-5 years*	2 to 2.5 milligrams, three or four times a day		
Children less than 1 year	Not recommended	Not recommended	Not recommended

\*The BNF advises that the use of cough suppressants (e.g. pholcodine) is not generally recommended in children and should be avoided altogether in those less than 1 year of age.

Patient Age	Preparation	Dose
Child aged 1-12 years	Simple linctus paediatric	5-10ml three or four times daily
Adults and children over 12 years	Simple linctus	5ml three or four times daily

<b>Insulin-dependent diabetic patients</b>	<p>People with IDDM should be asked to monitor their blood glucose more frequently because insulin requirements increase during acute infections.</p> <p>In short-term, acute conditions the amount of sugar in cough medicines is relatively unimportant. Diabetic control is often upset during infections and the additional sugar is not now considered to be a major problem. Nevertheless, many diabetic patients may prefer a sugar-free product. The <b>simple linctus</b> and <b>pholcodine</b> on the Minor Ailments formulary are sugar-free versions.</p>
<b>Fluid intake</b>	Maintaining a high fluid intake helps to hydrate the lungs and hot drinks can have a soothing effect.
<b>Alternative delivery routes</b>	Lozenges are an alternative for patients who find carrying a bottle of cough medicine around with them difficult.

## Section Two: Managing Sore Throat through the Minor Ailments Service

Sore throat is a common complaint, occurring predominantly in children and young adults, and more often in winter than summer. Most people with a sore throat do not consult their GP – only about 5% do so but many will consult their pharmacist.

### What are the clinical features of a sore throat?

Symptoms obviously include a sore throat, but the degree of throat discomfort can range from itch to severe pain. Sore throats are often associated with other symptoms including fever, headache, tonsillar exudate, nausea, vomiting and abdominal pain. Cough, rhinorrhoea and hoarseness are uncommon with bacterial infection, and may be suggestive of a viral cause.<sup>11</sup>

### How long will a sore throat usually last?

Sore throat is a self-limiting condition. Symptoms resolve within 3 days in 40% of people and within 1 week in 85% of people, irrespective of whether or not the sore throat is due to a streptococcal infection.<sup>12</sup> Explanation, reassurance and symptomatic treatment is frequently all that is necessary when a person consults with a sore throat.

### What are the most common causes of a sore throat?

Most sore throats that present in the pharmacy will be caused by a viral infection, with only about one in 10 being due to bacterial infection,<sup>11</sup> hence treatment with antibiotics is unnecessary in most cases. Clinically it is almost impossible to differentiate between a viral or bacterial cause.

Pharmacists must try to differentiate between self-limiting infection and

other causes of sore throat. Asking symptom-specific questions will help the pharmacist to determine the cause and whether referral is needed.

### Patients presenting with a sore throat – the questions to ask

#### What age is the patient?

Establishing whether the patient is a baby, child or adult will influence the choice of treatment and whether referral is necessary. Streptococcal throat infections are more likely in children of school age. Viruses are the most common cause of sore throat in adults. Glandular fever is most prevalent in adolescents. Oral thrush affects the very young and very elderly.

### **How long has the patient had the sore throat?**

Most sore throats are self-limiting and will be better within 7-10 days. If it has been present for longer, then the patient should be referred to their GP for further advice.

### **How severe is the pain?**

If the sore throat is described as being extremely painful, especially in the absence of "cold", cough and catarrhal symptoms, then referral should be recommended when there is no improvement within 24 to 48 hours.

### **Is the patient complaining of any other symptoms?**

"Cold", catarrh and cough may be associated with a sore throat. There may also be a fever and general aches and pains. These are in keeping with a minor self-limiting viral infection.

The probability that the sore throat is bacterial in origin rises if the patient has marked **tonsillar exudate, tender cervical glands, fever over 39.4°C** and the sore throat has persisted for more than **one week**.

Patients reporting **hoarseness** which has persisted for more than 3 weeks, especially when it is not associated with an acute infection, is an indication for referral to the patient's GP. There are many causes of persistent hoarseness, some of which are serious. For example, lung, oesophageal or laryngeal cancer can present in this way and hoarseness may be an early symptom.

Difficulty swallowing (**dysphagia**) can occur in severe throat infection. It can happen when an abscess develops in the region of the tonsils (quinsy) as a complication of tonsillitis. This will usually result in a hospital admission requiring high-dose parenteral antibiotics. Glandular fever (infectious mononucleosis) is one viral cause of sore throat that often produces marked discomfort and may cause dysphagia. Glandular fever is caused by the Epstein-Barr virus and its peak incidence is among adolescents and young adults. The signs and symptoms of glandular fever often mimic those of streptococcal sore throat. It is characterised by pharyngitis (occasionally with exudate), fever, cervical lymphadenopathy and fatigue. The person can also suffer from general malaise prior to the start of other symptoms. If this is suspected, referral to the GP is necessary for an accurate diagnosis.

### **What is the appearance of the throat?**

It is commonly thought that the presence of white spots, exudates or pus on the tonsils is an indication for referral to the GP or a means of differentiating between viral and bacterial infection, but this is not always so. Unfortunately the

appearance can be the same in both types of infection and sometimes the throat can appear almost normal without exudates in a streptococcal infection.

An exception not to be forgotten is candidal infection that produces white plaques. However, these are rarely confined to the throat alone. As well as in the throat, plaques are usually seen on the gums and tongue. When they are scraped off, the surface is raw and inflamed.

### **Does the patient have a history of recurrent sore throats?**

Recurrent bouts of severe infection with systemic upset would mean that referral to the GP is best.

### **Is the patient currently taking any medication?**

The pharmacist should establish whether any medication has been tried already to treat the symptoms. If one or more medicines have been tried without improvement, then referral to their GP should be considered.

**Corticosteroid inhalers** can cause hoarseness and candidal infections of the throat and mouth. If you suspect that this is the problem, check that the patient is rinsing their mouth after using their inhaler and check the patient's inhaler technique. Referral to the patient's GP may be required. Oral candidiasis is also associated with use of **antibiotics** or **immunosuppressants**, and is more common in the very young and the elderly.

**Agranulocytosis** (a marked decrease in the numbers of circulating granulocytes) is a rare complication associated with some medications. Agranulocytosis can manifest itself as a sore throat. The patient will also probably present with signs of infection, including fever and chills. Medicines known to cause this adverse event include captopril, carbimazole, clopidogrel, cytotoxic agents, clozapine, penicillamine and sulfasalazine. Any patient taking any of these agents and presenting with a sore throat should be referred to their GP immediately.

### **Which patients presenting with a sore throat require referral to their GP?**

Any patient presenting with the following should be advised to see their GP:

- Sore throat lasting one week or more.
- Any patient with recurrent bouts of severe infection with systemic upset.
- Any patient with hoarseness lasting more than 3 weeks.
- Any patient reporting dysphagia.
- Any patient in which an adverse drug reaction is suspected.
- Any patient in which medication has failed.

## **Managing sore throat**

Pharmacists can offer a selection of symptomatic treatments for sore throat aimed at providing relief from discomfort and pain until the infection subsides.

### **Oral analgesics**

#### **What pain relief should be advised for a person with a sore throat?**

Oral analgesics are first-line in the management of sore throat. The patient can be advised to take the analgesic regularly to sustain pain relief. The pharmacist has a choice of **paracetamol, aspirin** and **ibuprofen** on the minor ailments formulary for sore throat.

Paracetamol, aspirin or ibuprofen provide rapid and effective pain relief in sore throat. A systematic review found that paracetamol or an NSAID reduce the pain of sore throat compared with placebo.<sup>13</sup> See **Table FOUR** for information on using oral analgesics.

**Aspirin** has analgesic and antipyretic properties; it also has anti-inflammatory properties if given at doses greater than 4 grams daily. It should not be given **under 16** because of its suspected link with Reye's syndrome. Analgesics are often obtained for family use and it is worth reminding parents of the minimum age for the use of aspirin.

GI irritation (indigestion, heartburn, nausea, vomiting) is experienced by some patients after taking aspirin, and for this reason aspirin is best taken with or after food. Aspirin can cause GI bleeding and should not be recommended for any patient who either currently has, or has a history of, peptic ulcer. Hypersensitivity to aspirin occurs in some people and aspirin should be avoided in any patient with a history of asthma.

Aspirin 300mg soluble tablets can be dissolved in water and gargled before swallowing. This is particularly useful in the management of sore throat.

**Paracetamol** is an effective first-choice analgesic and antipyretic in most people.<sup>14</sup> It is generally well tolerated and safe. It has analgesic and antipyretic but little or no anti-inflammatory action. It is less irritating to the stomach than aspirin. At high doses, paracetamol can cause liver toxicity. This can be a problem after an overdose with paracetamol, since damage may not be apparent until a few days later.

Remind patients that the maximum daily dose of paracetamol is 4grams

Table FOUR: Oral analgesics <sup>10</sup>			
Agent	Age	Dose	Notes
Aspirin	Only suitable for those <b>over 16 years of age.</b>	300 to 900mg every 4 to 6 hours. Maximum 4grams daily	Aspirin 300mg soluble tablets can be dissolved in water and gargled before swallowing. This is particularly useful in the management of sore throat. Take aspirin with or after food. Not suitable for anyone with current or past peptic ulcer, or anyone with asthma.
Ibuprofen	Infant aged 3 to 6months	50mg three times daily	Use with caution in asthma or in cardiac, renal or hepatic impairment. Not suitable for anyone with current or past peptic ulcer. Take with or after food.
	Infant aged 6 months to 1year	50mg three to four times daily	
	Child aged 1 to 3years	100mg three times daily	
	Child aged 4 to 6years	150mg three times daily	
	Child aged 7 to 9years	200mg three times daily	
	Child aged 10 to 12years	300mg three times daily	
	Adults	1.2 to 1.8 grams daily in 3-4 divided doses. Maximum dose in adults 2.4grams daily.	
Paracetamol	Infant aged 3months to 1year	60 to 120mg up to four times a day	Caution in renal or hepatic impairment
	Child 1 to 5years	120 to 250mg up to four times a day	
	Child 6 to 12years	250 to 500mg up to four times a day	
	Adults	500mg to 1gram up to four times a day	

**Ibuprofen** has analgesic, anti-inflammatory and antipyretic activity. The dose required for analgesic activity is 200-400mg. Ibuprofen should not be used by anyone with a history of asthma. Ibuprofen can be irritating to the stomach, causing indigestion, nausea and diarrhoea. Gastric bleeding can also occur. For these reasons, it is best to advise patients to take ibuprofen with or after food, and it is best avoided in anyone with peptic ulcer or a history of peptic ulcer. Cross-sensitivity between aspirin and ibuprofen occurs, so it would be wise for pharmacists not to recommend ibuprofen for anyone with a previous sensitivity reaction to aspirin. Sodium and water retention may be caused by ibuprofen and it is therefore best avoided in patients with congestive heart failure or renal impairment.

#### Local anaesthetics

**Lidocaine** and **benzocaine** are the 2 local anaesthetics included in a

number of marketed products. Very few published clinical trials involving products marketed for sore throat have been conducted yet local anaesthetics are widely considered useful as a symptomatic treatment. All local anaesthetics have a short duration of action and frequent dosing is required to maintain the anaesthetic effect, whether formulated as a lozenge or spray. They appear to be free from any drug interactions, have minimal side effects and can be given to most patients, although they should be avoided in the third trimester of pregnancy. A small number of patients might experience a hypersensitivity reaction with either ingredient; this appears to be more common with benzocaine.

**AAA<sup>®</sup> Sore Throat spray** contains benzocaine 1.5mg per metered dose. It is a local anaesthetic for symptomatic temporary relief of pain associated with sore throat.<sup>15</sup> See **Table FIVE** for guidance.

#### Antibacterial lozenges

**Dequadin<sup>®</sup>** lozenges contain dequalinium chloride 0.25mg in each lozenge. Dequalinium is a quaternary ammonium antiseptic active against many gram-positive and gram-negative bacteria, yeasts and fungi.<sup>16</sup> See **Table FIVE** for administration guidance.

**Merocets<sup>®</sup>** contain cetylpyridinium chloride 1.4mg in each lozenge. Cetylpyridinium is an antiseptic agent which has been shown to have some antibacterial properties.<sup>9</sup>

#### Anti-inflammatory lozenges

**Strefen<sup>®</sup>** lozenges contain 8.75mg of flurbiprofen.<sup>17</sup> **Strefen<sup>®</sup>** lozenges are contraindicated in anyone with existing or history of peptic ulceration and should be used with caution in anyone with asthma. The lozenge should be moved around the mouth whilst sucking in order to avoid local irritation of the buccal mucosa.

Table FIVE: Local anaesthetics and lozenges used in sore throat			
Preparation	Age	Dose	Notes
<b>AAA<sup>®</sup> Sore Throat spray</b>	Adults	Spray two metered doses every two to three hours if required	Not more than sixteen doses in 24 hours
	Children 6 - 12years	One metered dose every two to three hours if required	Not more than 8 doses in every 24 hours
	Children under 6years	Not suitable for use in children under 6years	
<b>Dequadin<sup>®</sup> lozenges</b>	Adults and children over 10years	One lozenge to be sucked every 2 to 3 hours	Not more than eight lozenges in 24 hours.
	Children under 10years	Not suitable for use in children under 10years	
<b>Merocets<sup>®</sup> lozenges</b>	Adults and children over 6years	One lozenge every 3 hours	
	Children under 6years	Not suitable for use in children under 6 years	
<b>Strefen<sup>®</sup> lozenges</b>	Adults and children over 12years	One lozenge sucked every 3 - 6hours	Not more than 5 lozenges in 24 hours. It is recommended that this product should be used for a maximum of three days.
	Children under 12years	Not suitable for use in children under 12years	

## Section Three: Managing the “Common Cold” through the Minor Ailments Service

The “common cold” comprises a mixture of viral upper respiratory tract symptoms and although “colds” are self-limiting, many people seek symptomatic relief.

### **What is the prevalence of the “common cold”?**

The “common cold” is extremely prevalent. Upper respiratory tract infections are the most common affliction that affects the general population, with people on average suffering between two and four “colds” per year.<sup>18</sup> Children can have up to 12 “colds” a year,<sup>18</sup> and it can appear to a child’s parents that one “cold” follows another with no respite. By the age of 10 the number of “colds” contracted is half that observed in preschool children.

### **What causes the “common cold”?**

The “cold” is an infection usually caused by members of five families of viruses:

- Myxovirus
- Paramyxovirus (parainfluenza, respiratory syncytial virus)
- Adenovirus
- Picornavirus (rhinovirus)
- Coronavirus

Rhinoviruses (40% of “colds”) and coronaviruses (10% of “colds”) are the most common causes.<sup>18</sup>

### **How is the “cold” passed from person to person?**

Transmission can occur by:

- Inhalation of airborne respiratory droplets from people infected with the virus,
- Direct contact with infectious secretions.

Contrary to popular belief, the common “cold” is not associated with exposure to cold temperatures, fatigue, or sleep deprivation.<sup>18</sup>

### **What are the clinical features of the “common cold”?**

The symptoms of the “cold” are well known. However, the nature and severity of symptoms will be influenced by factors such as the causative agent and the patient’s age and underlying medical conditions. Following an incubation period of between 1 and 3 days the patient develops a sore throat and sneezing, followed by a profuse nasal discharge and congestion. Cough and postnasal drip commonly follow. Cough is associated with 30% of “colds” and tends to be the most bothersome symptom. It generally starts about the 4<sup>th</sup> or 5<sup>th</sup> day when nasal symptoms decrease.<sup>19</sup> There may be a small increase in body temperature (about 1°C) in adults. Infants and young children are more likely to develop higher temperatures.<sup>18</sup> Most people will reliably self-diagnose within 16 hours of onset of symptoms.<sup>20</sup>

### **Typically, how long will a “cold” last?**

The median duration of a “cold” is one week.<sup>18</sup> Approximately 25% of “colds”

will last up to 2 weeks, and in smokers with a rhinovirus infection the cough is more likely to be troublesome and prolonged.<sup>19</sup> Cigarette smokers are likely to have a more severe illness than non-smokers but do not have a higher incidence of “colds”.<sup>21</sup>

### **Patients presenting with symptoms of a “cold” – the questions to ask**

#### **What age is the patient?**

Establishing whether the patient is a baby, child or adult will influence the choice of treatment and whether referral is necessary.

#### **How long has the patient had symptoms?**

Patients may describe a rapid onset of symptoms or a gradual onset over several hours; the former is said to be more commonly true of flu, the latter of the “cold”. Such guidelines are general rather than definitive. The symptoms of the “common cold” usually last for 7-14 days. As stated earlier, symptoms such as cough may persist after the worst of the “cold” is over.

#### **What symptoms does the patient have?**

- Most people will experience **rhinorrhoea** and/or **nasal congestion**.
- **Sneezing** - due to irritated nasal passages.
- **Coughing** - due to irritation of the pharynx or as a result of irritation of the bronchus caused by postnasal drip.
- **Headache** - caused by inflammation and congestion of the nasal passages and sinuses.
- **Fever** - although a **high** fever may be an indication that the patient has a flu-like illness rather than a “cold”.
- **Dry and sore throat**
- **Earache** - a common complication of “colds”, especially in children. It can initially be managed by the pharmacist. Paracetamol and ibuprofen can be given for pain. However, if pain were to persist or be associated with an unwell child (fever, listlessness, vomiting), then referral to the GP would be advisable.
- **Facial pain**, frontal headache or headache that is worsened by sneezing, coughing or bending over may signify sinus complications.

#### **What is the patient’s previous medical history?**

**Asthma** attacks can be triggered by respiratory viral infections. Most asthma sufferers will start or increase their usual medication to prevent such an occurrence. However, if these measures fail, referral to the patient’s GP is recommended.

People with **COPD** may be advised to see their GP if they have a severe “cold” or flu-like infection as it often causes an exacerbation of their COPD.

### **Is the patient currently taking any medication?**

It is useful to know which remedies the patient has already tried. If more than one appropriate remedy has been tried for an appropriate length of time without success, then referral to the GP may be considered.

Some products for symptomatic relief may interact with prescribed therapy, occasionally with serious consequences. Therefore, careful attention needs to be given to taking a medication history and selecting an appropriate product.

### **What conditions is it important to rule out?**

Because the “cold” has no specific cure and is self-limiting in nature it would be easy to dismiss the differential diagnosis as unimportant. However, because of the very high number of cases seen it is essential that pharmacists have a thorough understanding of the condition so that severe symptoms or symptoms suggestive of other conditions are identified.

### **Flu**

Patients often use the word “flu” when describing a “common cold”. However, subtle differences in symptoms between the two conditions should allow differentiation. It is helpful to remember that the “flu season” tends to be between December and March, whereas the “common cold” can strike at any time. The onset of influenza is sudden and the typical symptoms are shivering, chills, malaise, and marked aching of the limbs, insomnia, a non-productive cough and loss of appetite. Flu is therefore normally debilitating and a person with flu is much more likely to send a third party to the pharmacy for medication than present in person.

### **Allergic Rhinitis**

Allergic rhinitis is characterised by nasal itching, sneezing, rhinorrhoea, and nasal obstruction. It is also often accompanied by itchy, watery eyes. It can be perennial, seasonal, or due to occupational exposure.

### **Acute sinusitis**

Complications, such as sinusitis, can arise from the “common cold”. Following a “cold”, sinuses can become filled with nasal secretions, which stagnate because of a reduction in ciliary function of the cells lining the sinuses. Bacteria – commonly *Streptococcus* and *Haemophilus* – can then secondarily infect these stagnant secretions. The pain in the early stages tends to be relatively localised, usually unilateral and dull, but becomes bilateral and more severe the longer the condition persists. Bending down, moving the eyes from side to side, coughing or sneezing often exacerbates the pain.

Oral or nasal sympathomimetics can be tried but if this fails then referral to the GP is needed because appropriate antibiotic therapy may be needed.

### Otitis media

This is commonly seen in children following a “common cold” and results from the virus spreading to the middle ear via the eustachian tube. The overriding symptom is pain due to an accumulation of pus within the middle ear or inflammation of the tympanic membrane. Referral to the GP would be appropriate for otoscopic examination. The GP may prescribe an antibiotic, although the importance of antibiotics in speeding the resolution of otitis media has not been definitively established. The pharmacist should offer symptomatic relief of pain.

#### Why is it important to distinguish between “colds” and flu?

Differentiating between “colds” and flu may be needed to make a decision about whether referral is necessary. Patients in “at-risk” groups might be considered for antiviral treatment (see BNF for guidance on appropriate use of antivirals).

Flu is generally considered likely if:

- Temperature is 38°C or higher
- A minimum of one respiratory symptom is present
- A minimum of one constitutional symptom (headache, malaise, myalgia, sweats/chills, or rhinorrhoea) is present.

Flu can be complicated by a secondary bacterial infection such as pneumonia. Complications are much more likely to occur in the very young, the very elderly and those who have pre-existing heart or lung disease.

#### Which patients presenting with a “common cold” require referral to their GP?

Any patient presenting with the following should be advised to see their GP:

- Earache not settling with an analgesic
- Facial pain/frontal headache
  - The very young
  - The very elderly
- Those with heart or lung disease
- Those with persisting fever and productive cough

### Managing the “common cold”

There are no drugs of proven benefit for the prophylaxis or treatment of the “common cold”. Therefore, medical management is centred on providing symptomatic relief. For some medicines used in “colds”, particularly older ones, there is little evidence available from which to judge effectiveness. The pharmacist’s role is to select appropriate treatment based on the patient’s symptoms and available evidence, and taking into account the patient’s preferences.

Polypharmacy abounds in the area of “cold” treatments and patients should not be overtreated. Under the minor ailments service, the pharmacist can provide up to two agents from the formulary.

#### What supportive (non-pharmacological) management can be provided?

- Reassure the patient that the “common cold” is a mild self-limiting illness,
- Give a full explanation of the likely course of the illness,
- Ensure adequate fluid intake.

#### What analgesics can be used?

Paracetamol, aspirin, or ibuprofen

can be used. See Section Two – management of sore throat – for details on using these agents.

Paracetamol is present in many “cold” remedies, so people who are self-medicating must take care to avoid accidental overdose.

### Decongestants

Sympathomimetics, such as **pseudoephedrine**, **ephedrine**, and **xylometazoline**, are widely used as nasal decongestants to provide symptomatic relief of the “common cold”. Nasal decongestants work by constricting the dilated blood vessels in the nasal mucosa, reducing mucosal oedema, thus improving nasal stuffiness.<sup>9</sup>

These agents can be given orally or applied topically. **Pseudoephedrine** tablets and elixir are on the minor ailments formulary as are **ephedrine** nasal drops (0.5% and 1%). See **Table SIX** for guidance on the use of decongestants.

#### Restriction on sale or supply of medicines which contain pseudoephedrine

In August 2007 the Medicines and Healthcare Regulatory Agency (MHRA) announced that the sale or supply of products containing **pseudoephedrine** be restricted to:

- **One pack** of 12 of the 60milligram pseudoephedrine tablets or capsules, OR
- **One pack** of 24 of the 30milligrams pseudoephedrine tablets or capsules.

The sale or supply should be carried out by a pharmacist.

Table SIX: Decongestants<sup>9,10</sup>

Agent	Age	Formulation	Dose	Contraindications, cautions, interactions
Ephedrine nasal drops	Adults	Ephedrine 1% nasal drops	1-2 drops into each nostril up to 3 or 4 times a day.	<ul style="list-style-type: none"> <li>• Maximum duration of use 7days.</li> <li>• Each pack should be used by one person only to prevent any cross infection</li> <li>• Contraindicated in individuals who are taking or have taken MAOIs within the preceding two weeks.</li> </ul>
	Children over 3months	Ephedrine 0.5% nasal drops	1-2 drops into each nostril up to 3 or 4 times a day.	
	Children under 3months	No good evidence of value		
Xylometazoline nasal drops	Adults and children over 12years	Xylometazoline 0.1% nasal drops	2-3 drops into each nostril up to 2 or 3 times a day.	
	Children over 3months	Xylometazoline paediatric nasal drops 0.5%	1 or 2 drops in each nostril 1 or 2 times daily.	
	Children under 3months	Not recommended		
Pseudoephedrine tablets and elixir	Adults and children over 12years	Pseudoephedrine 60 milligram tablets or, elixir (30mg/5ml)	60mg every 4-6 hours	<ul style="list-style-type: none"> <li>• Maximum four doses in 24hours.</li> <li>• Caution in hyperthyroidism, diabetes, ischaemic heart disease, hypertension, renal impairment, hepatic impairment</li> <li>• Contraindicated in individuals who are taking or have taken MAOIs within the preceding two weeks. The concomitant use of pseudoephedrine and this type of product may occasionally cause a rise in blood pressure.</li> </ul>
	Children aged 6 – 12years	Pseudoephedrine elixir (30mg/5ml)	30mg every 4-6 hours	
	Children aged 2 – 6years	Pseudoephedrine elixir (30mg/5ml)	15mg (2.5mls) every 4-6 hours	
	Children under 2years	Not recommended		

### **Which is preferable, oral or topical administration of a decongestant?**

Topical administration of sympathomimetics is the safest route of administration. Topical sympathomimetics can be used by most patients, including children over the age of 2 years, pregnant women after the first trimester and patients with pre-existing heart disease, diabetes, hypertension and hyperthyroidism. However, because a small amount could be swallowed facilitating systemic absorption, they are not to be used by anyone on an MAOI (see later).

If nasal drops (or spray) are to be recommended, the pharmacist should advise the patient not to use the product for longer than **7 days**. Rebound congestion (rhinitis medicamentosa) can occur with topically applied, but not oral, sympathomimetics.

The decongestant effects of topical products containing **xylometazoline** are longer lasting (up to 6 hours) than those of some preparations containing **ephedrine**. The pharmacist can give useful advice about the correct way to administer nasal drops.

### **What problems are associated with the use of a decongestant?**

The pharmacist should be aware that some of these drugs (e.g. **pseudoephedrine**), when taken orally, have the potential to keep patients awake because of the CNS stimulating effects. It is reasonable to suggest that the patient avoids taking a dose of the medicine near bedtime.

Sympathomimetics can cause stimulation of the heart, an increase in blood pressure, and may affect diabetic control because they can increase blood glucose levels. They should be used with caution in people with diabetes, those with heart disease or hypertension, and those with hyperthyroidism. Patients with hyperthyroidism are more vulnerable to arrhythmias, so stimulation of the heart is particularly undesirable in these patients.

Sympathomimetics are more likely to cause these unwanted effects when taken orally than when used topically. Nasal drops containing sympathomimetics can therefore be recommended for those patients in whom oral drugs are less suitable. **Saline nasal drops** or the use of inhalations such as **menthol and eucalyptus inhalation BP** would be other possible choices for patients in this group.

### **What interactions are important with sympathomimetics?**

The interaction between sympathomimetics and **MAOIs** is potentially extremely serious; a hypertensive crisis can be induced and several deaths have occurred in such cases. This interaction can occur up to 2 weeks after a patient has stopped taking an MAOI, so the pharmacist must

establish any recently discontinued medication. There is a possibility that topically applied sympathomimetics could induce such a reaction in a patient taking an MAOI. It is therefore advisable to avoid both oral and topical sympathomimetics in patients taking MAOIs.

### **Steam inhalations**

Steam inhalation has been used for the symptomatic relief of the "common cold" for decades. Steam inhalations may be useful in reducing nasal congestion and soothing the air passages, particularly if a productive cough is present. Some clinical trials indicate benefit and none have found any harm.<sup>22</sup> The steam helps to liquefy lung secretions and patients find the warm air comforting. While there is no evidence that the addition of medications to the water produces a better clinical effect than steam alone, some patients may prefer to add a preparation such as **menthol and eucalyptus inhalation BP**.

### **How should patients be instructed to use menthol and eucalyptus inhalation?**

One teaspoonful of inhalant should be added to a pint of hot (not boiling) water and the steam inhaled.<sup>10</sup> Apart from the risk of scalding, boiling water volatilises the constituents too quickly. A cloth or towel can be put over the head to trap the steam.

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## COMPASS THERAPEUTIC NOTES ASSESSMENT

Minor Ailments: Winter Ailments

COMPASS Therapeutic Notes are circulated to GPs, nurses, pharmacists and others in Northern Ireland. Each issue is compiled following the review of approximately 250 papers, journal articles, guidelines and standards documents. They are written in question and answer format, with summary points and recommendations on each topic. They reflect local, national and international guidelines and standards on current best clinical practice. Each issue is reviewed and updated every three years.

Each issue of the Therapeutic Notes is accompanied by a set of assessment questions. These can contribute 2-3 hours towards your CPD requirements. Submit your completed MCQs to the appropriate address (shown below). Assessment forms for each topic can be submitted in **any order** and at **any time**.

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## COMPASS THERAPEUTIC NOTES ASSESSMENT

### Minor Ailments: Winter Ailments

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Successful completion of this MCQ form equates with 2 hours Continued Professional Development time. Circle your answer TRUE (T) or FALSE (F) for each question. When completed please post this form to the relevant address shown overleaf.

#### 1 The Northern Ireland Minor Ailment Service

- |   |   |   |   |
|---|---|---|---|
| a | Is a locally tailored service whereby patients are encouraged to consult a participating community pharmacy, rather than their GP, for a defined list of minor ailments.        | T | F |
| b | Is open to patients who are registered with a GP practice and are exempt from paying prescription charges. All infants under the age of 3 months are excluded from the service. | T | F |
| c | Patients will be supplied with appropriate medicine(s) from the minor ailments formulary free of charge.  | T | F |
| d | Is aimed at reducing the huge burden on GP time taken up with self-treatable conditions.  | T | F |

#### 2 Managing cough

- |   |   |   |   |
|---|---|---|---|
| a | The majority of coughs presenting in the pharmacy will be caused by a bacterial upper respiratory tract infection.    | T | F |
| b | A cough of longer than 3 weeks duration that is not improving should be referred to the GP for further investigation. | T | F |
| c | Caution is required if pholcodine is administered concomitantly with CNS depressants, including alcohol.              | T | F |
| d | Simple linctus is particularly useful in children and pregnant women.   | T | F |

#### 3 Managing sore throat

- |   |  |   |   |
|---|--|---|---|
| a | Antibiotics are first line in managing sore throat.  | T | F |
| b | Aspirin should not be given to anyone under the age of 16.   | T | F |
| c | Ibuprofen is best avoided in patients with congestive heart failure or renal impairment.                               | T | F |
| d | Local anaesthetics have a short duration of action and frequent dosing is required to maintain the anaesthetic effect. | T | F |

#### 4 Managing the common cold

- |   |  |   |   |
|---|--|---|---|
| a | Muscular aches and pains are more common with the flu than with the cold.  | T | F |
| b | Medical management of the cold is centred on providing symptomatic relief.   | T | F |
| c | Steam inhalations may be useful in reducing nasal congestion and soothing the air passages, particularly if a productive cough is present. | T | F |
| d | Ephedrine nasal drops should not be used for more than 7 days.   | T | F |

#### 5 Sympathomimetics

- |   |   |   |   |
|---|---|---|---|
| a | Sympathomimetics, even when used topically, are contraindicated in anyone taking an MAOI.   | T | F |
| b | Rebound congestion can occur with all sympathomimetics.   | T | F |
| c | Sympathomimetics should be used with caution in people with diabetes, those with heart disease or hypertension, and those with hyperthyroidism. | T | F |
| d | Sympathomimetics commonly cause drowsiness.   | T | F |