

A photograph of a woman with long brown hair, wearing a white button-down shirt, coughing into her elbow. The image is partially obscured by a large red curved graphic element on the right side.

# RESPONSIBLE MANAGEMENT OF UPPER RESPIRATORY TRACT INFECTIONS (URTIs) IN PHARMACY

## GRIP guidance

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# OVERUSE AND MISUSE OF ANTIBIOTICS DRIVE ANTIBIOTIC RESISTANCE<sup>1</sup>

- Antibiotic resistance occurs when bacteria resist the effects of antibiotics, making common infections harder to treat and increasing the risk of disease spread, severe illness and death<sup>1-4</sup>
- The majority of URTIs are viral, and antibiotics do not work against viruses<sup>5-11</sup>
- Responsible, symptomatic management of URTIs has huge potential to prevent unnecessary antibiotic use and thereby limit antibiotic resistance

## RESPONSIBLE MANAGEMENT OF ACUTE URTIs IN THE PHARMACY

Would the patient benefit from antibiotics?

Should the patient see a doctor?



Is the patient aware of the issue of antibiotic resistance?

What symptomatic approach would most benefit the patient?

**“Antimicrobial resistance threatens the very core of modern medicine”<sup>1</sup>**

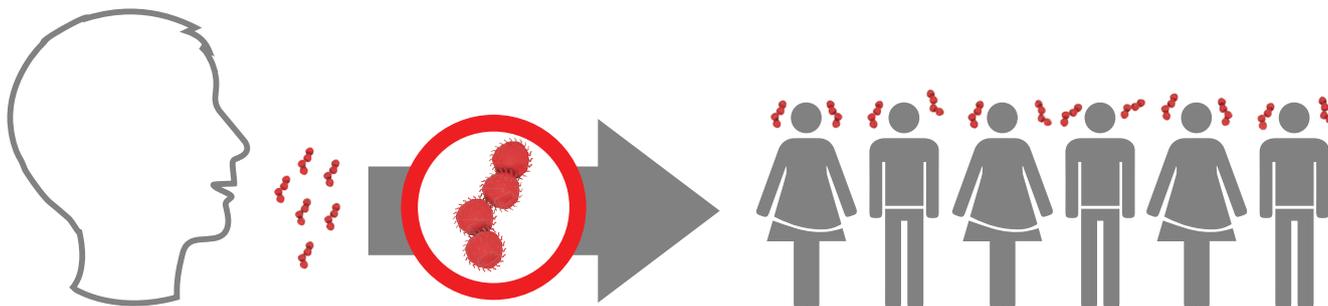
**In a study of outpatient visits, 80% of antibiotics given for acute URTIs were found to be unnecessary<sup>9</sup>**

1. World Health Organization. Global action plan on antimicrobial resistance, 2015. Available at: <http://www.who.int/antimicrobial-resistance/publications/global-action-plan/en/> (accessed April 2020); 2. Munita JM, Arias CA. Microbiol Spectr 2016;4; 3. Leekha S, et al. Mayo Clin Proc 2011;86:156-67; 4. Zaman SB, et al. Cureus 2017;9:e1403; 5. Hildreth CJ, et al. JAMA 2009;302:816; 6. Ebell MH, et al. JAMA 2000;284:2912-8; 7. Van Gageldonk-Lafeber AB, et al. Clin Infect Dis 2005;41:490-7; 8. Kenealy T, Arroll B. Cochrane Database Syst Rev 2013;6:CD000247; 9. Scott JG, et al. J Fam Pract 2001;50:853-8; 10. Baron S. Medical Microbiology 4th edition. Chapter 93. Infections of the respiratory system. 1996. University of Texas Medical Branch at Galveston, Galveston, Texas; 11. Creer DD, et al. Thorax 2006;61:75-9.

# ANTIBIOTIC RESISTANCE AFFECTS EVERYONE, TODAY

- Antibiotic misuse reduces their potential to cure bacterial infections<sup>1-5</sup>
- Antibiotic-resistant bacteria can stay in the body for up to 1 year<sup>6</sup>

**PEOPLE CAN CARRY RESISTANT BACTERIA AND SPREAD THEM TO OTHERS IN THEIR COMMUNITY<sup>5</sup>**



**We could find ourselves in a world where common infections could once again kill, as antibiotics will no longer work effectively<sup>1,2</sup>**

1. World Health Organization. Global action plan on antimicrobial resistance, 2015. Available at: <http://www.who.int/antimicrobial-resistance/publications/global-action-plan/en/> (accessed April 2020); 2. Zaman SB, et al. Cureus 2017;9:e1403; 3. Goossens H, et al. Lancet 2005;365:579-87; 4. Riedel S, et al. Eur J Clin Microbiol Infect Dis 2007;26:485-90; 5. World Health Organization. Antimicrobial resistance. Fact sheet, 2018. Available at: <http://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance> (accessed April 2020); 6. Costelloe C, et al. BMJ 2010;340:c2096.

# HOW CAN GRIP HELP?

- The Global Respiratory Infection Partnership (GRIP) is a group of healthcare professionals from around the world, consisting of primary care and hospital doctors, microbiologists, pharmacists and researchers
- GRIP has developed a framework and educational support materials for symptomatic management of URTIs<sup>1</sup>
- The World Health Organization warns that “steps need to be taken **immediately** in order to raise awareness of antimicrobial resistance and **promote behavioural change**”<sup>2</sup>
- Promoting behaviour change is at the core of GRIP’s mission, based on a pentagonal (5-P) framework which encompasses policy, prevention, prescriber, pharmacy and patient<sup>3</sup>

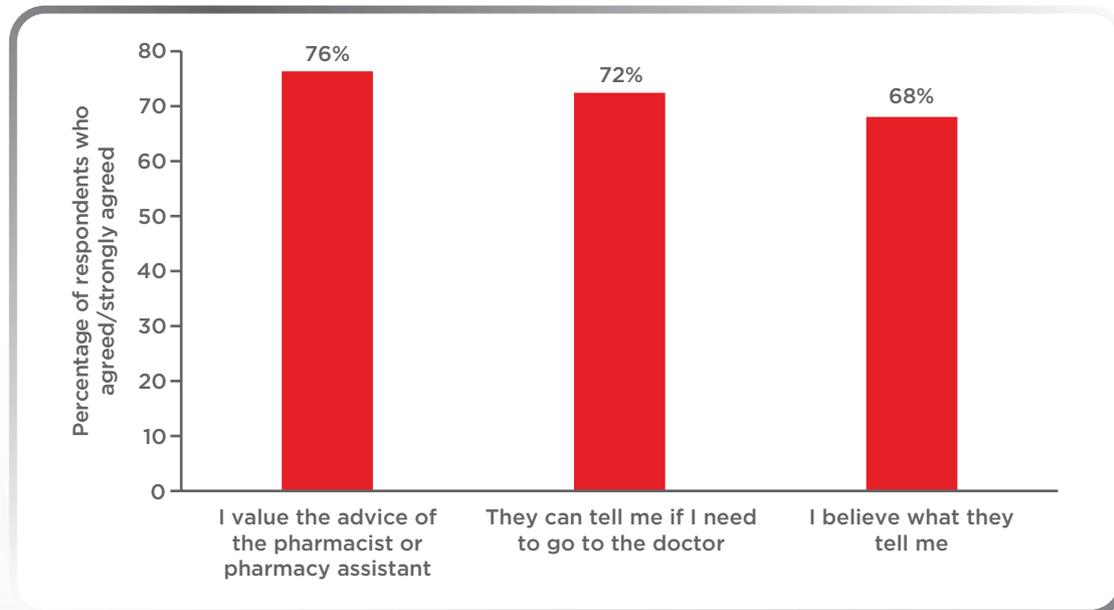
## THE GRIP 5-P FRAMEWORK FOR CHANGE<sup>3</sup>



1. Global Respiratory Infection Partnership (GRIP). Available at: <https://www.grip-initiative.org/> (accessed April 2020); 2. World Health Organization. Global action plan on antimicrobial resistance, 2015. Available at: <http://www.who.int/antimicrobial-resistance/publications/global-action-plan/en/> (accessed April 2020); 3. Essack S, Pignatari AC. Int J Clin Pract 2013;67(Suppl 180):4-9.

# THE PHARMACY TEAM IS CRITICAL FOR ANTIBIOTIC STEWARDSHIP

- The pharmacy team has a **key role** to play in antibiotic stewardship<sup>1,2</sup>
- Community pharmacists are amongst the most accessible of healthcare providers. Pharmacies are often the first place patients go to for advice on common health complaints and the last point of contact before antibiotic treatment commences<sup>2</sup>
- A survey across 13 countries (n=5196) showed that **people trust pharmacists** to give sound and appropriate advice about sore throat<sup>3</sup>



- URTIs are among the most commonly treated acute problems in primary care<sup>4</sup>
- GRIP has developed a simple **1,2,3-step approach** for use in the pharmacy setting that aids responsible management of URTIs, including sore throat



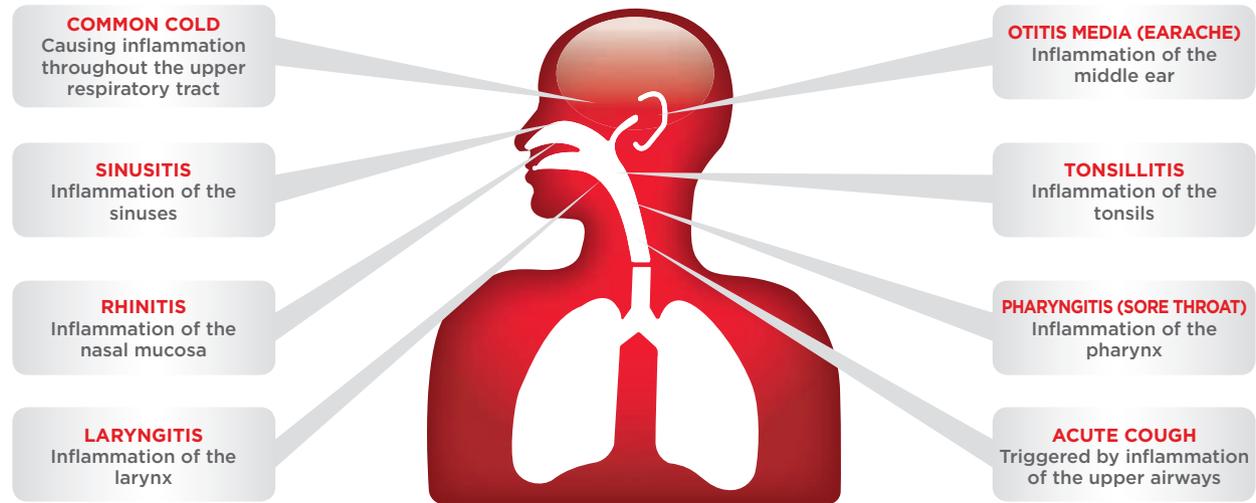
# RESPONSIBLE URTI MANAGEMENT - WHAT PATIENTS NEED TO KNOW

Encouraging symptomatic relief of URTIs

# WHAT IS A URTI?

- Respiratory tract infections are classified as upper or lower, based on the area of the respiratory tract that is affected.<sup>1</sup> **URTIs** are those affecting the nasal cavities/sinuses, pharynx, epiglottis, larynx and upper airways<sup>1</sup>

## URTIs CAUSE INFLAMMATION THROUGHOUT THE UPPER RESPIRATORY TRACT, RESULTING IN THE FOLLOWING SYMPTOMS<sup>1,2</sup>

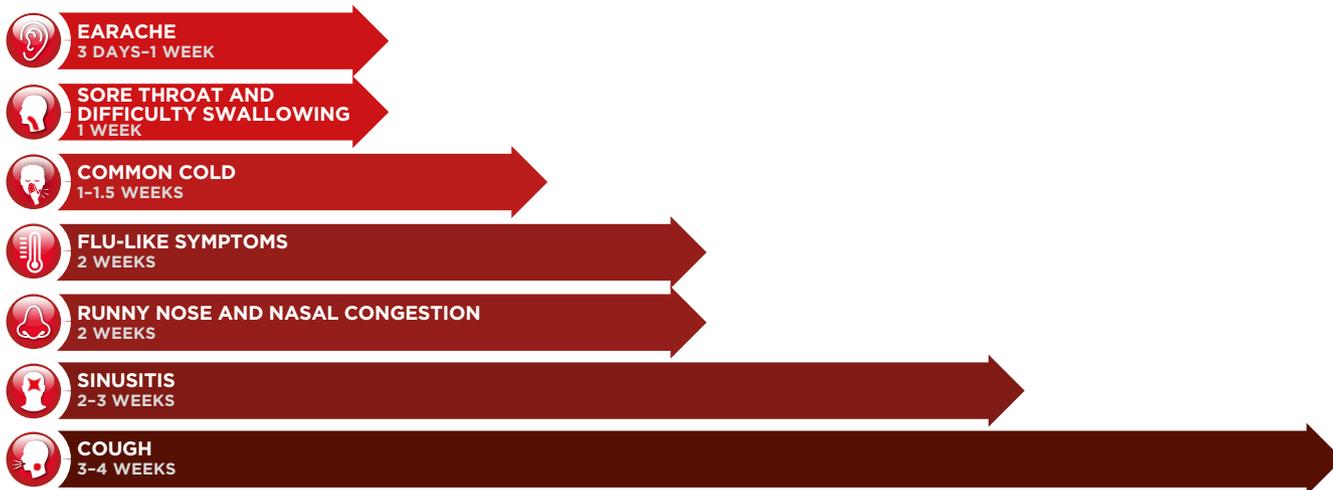


- The **manifestation, symptoms and severity of a URTI can vary between patients.** Patients with a URTI can present with one or more symptoms, depending on the cause, duration and severity of the infection<sup>3</sup>

# MOST URTIs ARE NON-SERIOUS AND SELF-LIMITING

- URTIs are among the most commonly treated acute problems in primary care<sup>1</sup>
- Most URTIs are non-serious, self-limiting<sup>2,3</sup> and **resolve without antibiotics** in 1-4 weeks<sup>4-12</sup>
- Despite this, **antibiotics are often provided** for URTIs<sup>13-15</sup> but **may do more harm than good** in most patients<sup>4,16</sup>

## UPPER RESPIRATORY TRACT INFECTION IS SELF-LIMITING,<sup>2,3</sup> SHORT-LIVED, AND THE DURATION OF EACH SYMPTOM FROM ITS FIRST OCCURRENCE VARIES<sup>4-12</sup>



In the majority of cases, symptomatic relief products are an effective and appropriate way of meeting the patient's needs<sup>17</sup>

1. Francis NA, et al. BMJ 2009;339:b2885; 2. Baron S. Medical Microbiology 4th edition. Chapter 93. Infections of the respiratory system. 1996. University of Texas Medical Branch at Galveston, Galveston, Texas; 3. Kenealy T, Arroll B. Cochrane Database Syst Rev 2013;6:CD000247; 4. National Institute for Health and Care Excellence. Sore throat (acute): antimicrobial prescribing. Clinical guideline 84. January 2018. Available at: <https://www.nice.org.uk/guidance/ng84> (accessed June 2021); 5. National Institute for Health and Care Excellence. Otitis media (acute): antimicrobial prescribing. Clinical guideline 91. March 2018. Available at: <https://www.nice.org.uk/guidance/ng91> (accessed June 2021); 6. National Institute for Health and Care Excellence. Sinusitis (acute): antimicrobial prescribing. Clinical guideline 79. October 2017. Available at: <https://www.nice.org.uk/guidance/ng79> (accessed June 2021); 7. National Institute for Health and Care Excellence. Cough (acute): antimicrobial prescribing. Clinical guideline 79. October 2017. Available at: <https://www.nice.org.uk/guidance/ng120> (accessed June 2021); 8. Spinks A, et al. Cochrane Database Syst Rev 2013;11:CD000023; 9. Macy E. Perm J 2012;16:61-6; 10. Centers for Disease Control and Prevention. Flu symptoms and complications. 2018. Available at: <https://www.cdc.gov/flu/consumer/symptoms.htm> (accessed April 2020); 11. Gwaltney JM, et al. JAMA 1967;202:494-500; 12. Arruda E, et al. J Clin Microbiol 1997;35:2864-8; 13. Scott JG, et al. J Fam Pract 2001;50:853-8; 14. Dekker AR, et al. Fam Pract 2015;32:401-7; 15. Gulliford MC, et al. BMJ Open 2014;4:e006245; 16. Wright J, Paauw DS. Med Clin North Am 2013;97:667-79; 17. Thomas M, et al. Br J Gen Pract 2000;50:817-20.

# RELIEF OF URTI SYMPTOMS

● A URTI is often a multi-symptom condition, and relief of specific, individual symptoms can be tailored to the patient's preferences

URTI symptom	Examples of active ingredients	Local formulation	Systemic formulation	Mode of action
Earache	Local anaesthetic (e.g. topical lidocaine)	✓	✗	Anaesthetic mode of action. Uptake of the local anaesthetic is increased when the tympanic membrane is inflamed <sup>1</sup>
Sore throat and difficulty swallowing	Local antiseptic or anaesthetic (e.g. amylmetacresol, 2,4-dichlorobenzyl alcohol, hexylresorcinol, lidocaine)	✓	✗	Amylmetacresol and 2,4-dichlorobenzyl alcohol have an antiseptic mode of action to fight bacteria and viruses <sup>2-4</sup> Lidocaine has an anaesthetic mode of action that numbs the throat <sup>5</sup> Hexylresorcinol numbs the throat and has antiseptic properties <sup>2,5</sup>
	Non-steroidal anti-inflammatory drugs (e.g. flurbiprofen)	✓	✗	Flurbiprofen reduces pain and inflammation by inhibiting the production of prostaglandins <sup>6</sup>
	Non-steroidal anti-inflammatory drugs (e.g. ibuprofen) Paracetamol	✗	✓	Ibuprofen inhibits prostaglandin production to reduce inflammation and relieve pain and fever <sup>7,8</sup> Paracetamol relieves pain <sup>9</sup> and fever <sup>8,9</sup> but has only low-level anti-inflammatory action <sup>9</sup>
Cold and flu-like symptoms (e.g. headache, muscle aches, fever)	Non-steroidal anti-inflammatory drugs (e.g. ibuprofen) Paracetamol	✗	✓	
Runny nose and nasal congestion	Antihistamines (e.g. diphenhydramine)			Antihistamines reduce histamine-related nasal mucosal swelling and secretion <sup>10</sup>
	Decongestants (e.g. pseudoephedrine, oxymetazoline, xylometazoline) Anti-cholinergics (e.g. ipratropium)	✓	✓	Decongestants constrict swollen nasal blood vessels <sup>10,11</sup> Anti-cholinergics reduce the amount of mucus produced in the nose <sup>12,13</sup>
Sinusitis	Decongestants (e.g. pseudoephedrine)	✓	✓	
Cough	Menthol	✓	✗	Suppresses the cough reflex <sup>14,15</sup>
	Cough suppressants (e.g. dextromethorphan) Sedative antihistamines (e.g. diphenhydramine)	✗	✓	

1. Bolt P, et al. Arch Dis Child 2008;93:40-4; 2. Shephard A, Zybeshari S. Antiviral Res 2015;123:158-623; 3. Oxford JS, et al. Antivir Chem Chemother 2005;16:129-34; 4. Richards RM, Xing DK. J Pharm Sci 1993;82:1218-20; 5. McNally D, et al. J Pharm Pharm Sci. 2012;15:281-94; 6. Buchanan W, Kassam A. Am J Med 1986;80:145-526; 7. Burian M, Geisselinger G. Pharmacol Ther 2005;107:139-54; 8. Rainsford KD. Inflammopharmacology 2009;17:275-342; 9. Graham GG, et al. Inflammopharmacology 2013;21:201-32; 10. Meltzer EO, et al. Int J Gen Med 2010;3:69-91; 11. Taverner D, Latte GJ. Cochrane Database Syst Rev 2007;1:CD001953; 12. Eccles R, et al. Curr Med Res Opin 2010;26:889-99; 13. AlBalawi ZH, et al. Cochrane Database Syst Rev 2013;6:CD008231; 14. Morice AH, et al. Thorax 2006;61(Suppl 1):i1-24; 15. Dicipinigitis PV, et al. Cough 2009;5:11.



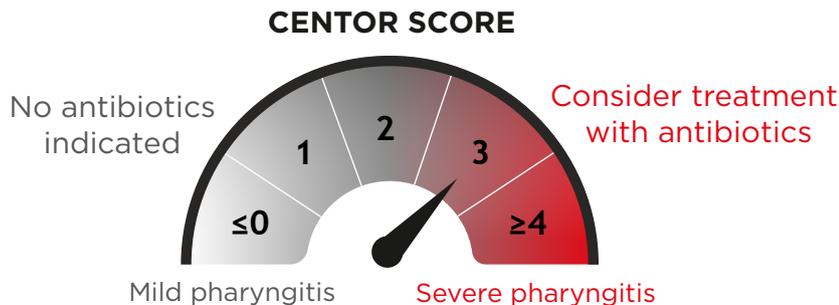
# 1,2,3 FOR SORE THROAT MANAGEMENT IN PHARMACY

Encouraging symptomatic relief of URTIs

# SORE THROAT

- Up to **8 out of 10 sore throats are caused by viral URTIs** (such as the common cold or flu),<sup>1</sup> against which antibiotics do not work<sup>2</sup>
- Sore throat is usually self-limiting and resolves within 1 week<sup>3,4</sup>
- Group A  $\beta$ -haemolytic Streptococcus is associated with about 10% of adult sore throats and up to 30% in children.<sup>5</sup> In such cases, antibiotic therapy may be justified to prevent complications and/or shorten illness duration<sup>6</sup>
- However, it is difficult to distinguish between a viral or bacterial infection **based on signs and symptoms**<sup>7</sup>
  - There is **no evidence** for using the colour of nasal discharge or phlegm as a marker for the disease aetiology<sup>8</sup>
  - The Centor criteria may help to identify patients with streptococcal infection<sup>9-11</sup>
  - Antibiotics may be considered for patients with three or more Centor criteria<sup>9</sup>

## THE CENTOR CRITERIA CAN HELP TO IDENTIFY PATIENTS IN WHICH ANTIBIOTICS MAY BE CONSIDERED<sup>9-11</sup>

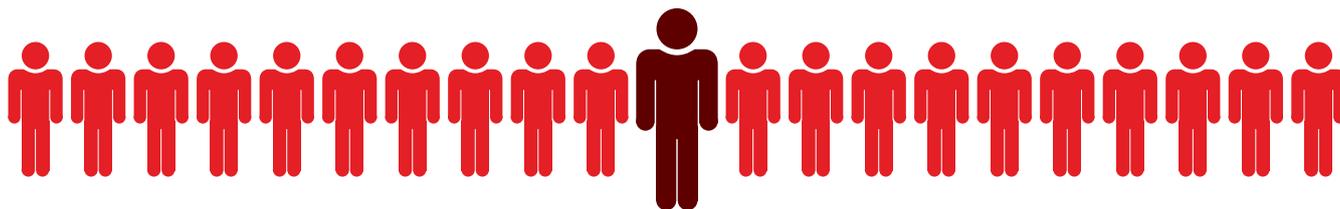


CRITERIA	POINTS
Absence of cough	1
Swollen and tender anterior cervical nodes	1
Temperature >38°C	1
Tonsillar exudates or swelling	1
Age	
3-14 years	1
15-44 years	0
45 years and older	-1
Cumulative score	—

1. Ebell MH, et al. JAMA 2000;284:2912-8; 2. Hildreth CJ, et al. JAMA 2009;302:816; 3. National Institute for Health and Care Excellence. Sore throat (acute): antimicrobial prescribing. Clinical guideline 84. January 2018. Available at: <https://www.nice.org.uk/guidance/ng84> (accessed June 2021); 4. Spinks A, et al. Cochrane Database Syst Rev 2013;11:CD000023; 5. Bisno AL. N Engl J Med 2001;344:205-11; 6. Pelucchi C, et al. Clin Microbiol Infect 2012 Apr;18 Suppl 1:1-28; 7. Aalbers J, et al. BMC Med 2011;9:67; 8. Eccles R. Lancet Infect Dis 2005;5:718-25; 9. Centor RM, Samlowski R. Am Fam Physician 2011;83:26-8; 10. Centor RM, et al. Med Decis Making 1981;1:239-46; 11. McIsaac WJ, et al. JAMA 2004;291:1587-95.

# ANTIBIOTICS ARE NOT INDICATED FOR SORE THROAT PAIN

- A key feature of sore throat is **inflammation**<sup>1,2</sup> resulting in throat pain that patients describe using a variety of sensory, affective and functional descriptors (e.g. dry, agonising, difficult to swallow)<sup>3</sup>
- Antibiotics do not target the inflammation underlying sore throat and are not direct pain relievers
- Antibiotics have minimal effects on the symptoms of sore throat<sup>4,5</sup>
  - A study in patients with streptococcal infection receiving the flurbiprofen lozenge showed that additional antibiotic treatment made no difference to symptoms of pain<sup>5</sup>
- Studies show that patients with sore throat are looking for pain relief<sup>6,7</sup>

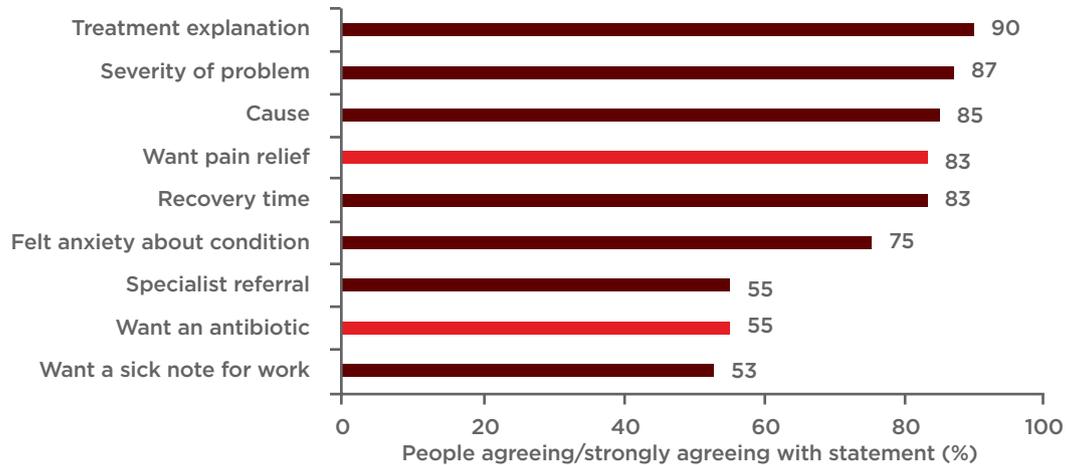


**21** patients with sore throat need to be treated with antibiotics for **1** patient to benefit from this treatment after 7 days<sup>4</sup>

# 1,2,3 FOR SORE THROAT

- Studies show that patients with sore throat primarily want information<sup>1,2</sup>

## REASONS FOR VISITING DOCTOR ABOUT SORE THROAT<sup>2</sup>



Responses (n=2040) to the question "How strongly do you agree or disagree with the following statements about why you visit your doctor?" (Multiple responses allowed, single response for each statement: strongly agree, agree, neither agree nor disagree, disagree, strongly disagree)

- Some of these patient needs can be met in the pharmacy, including information on the likely duration, assessment of severity, and an explanation of potential symptomatic management, including pain relief
- GRIP recommends a simple **1,2,3-step approach** to responsibly address the needs of individuals with sore throat in the pharmacy setting

## 1,2,3 APPROACH FOR SORE THROAT



# 1 ADDRESS PATIENT'S CONCERNS

- Ask the patient about his/her main symptom(s) and what he/she is concerned about
- Patients describe sore throat in various ways, using sensory, affective and functional descriptors<sup>1</sup>
- Reassure them that **effective symptomatic relief** is available for **all types of sore throat**<sup>1</sup>

**HUSKY/HOARSE**  
**DIFFICULTY SWALLOWING**  
**LUMP IN THE THROAT**  
**DRY**  
**RAW**  
**AGONISING**  
**BURNING**  
**THROAT SORENESS**  
**SWOLLEN THROAT**  
**PAIN**  
**IRRITATED/SCRATCHY**  
**FIGHT**

- Recognise that sore throat **can be worrying and uncomfortable** for patients
- Provide reassurance on **duration and severity** of sore throat
- Establish what the patient is expecting from treatment

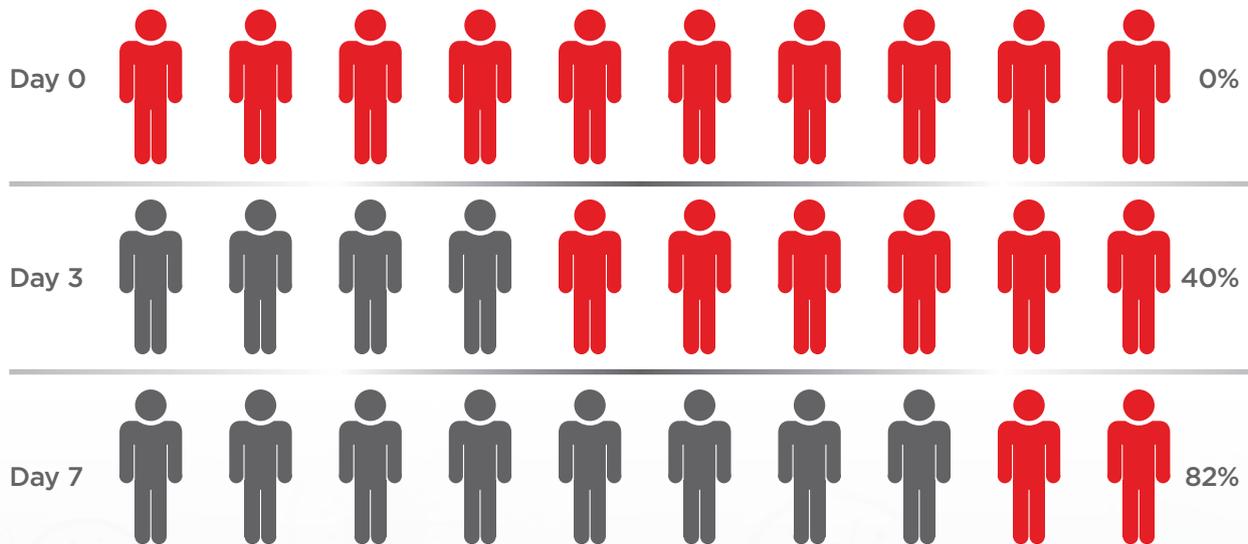


Sore throat usually lasts for approximately 1 week<sup>2,3</sup>

## 2 BE VIGILANT - ASSESS SEVERITY

- The majority of sore throats are viral (up to 8 out of 10),<sup>1</sup> non-serious and self-limiting<sup>2,3</sup>

### NUMBER OF PATIENTS WITH SORE THROAT WHO ARE SYMPTOM-FREE OVER 1 WEEK<sup>2</sup>



- However, **bacterial infections**, most commonly Group A  $\beta$ -haemolytic Streptococcus, are associated with approximately **10–20% of sore throats** in adults and up to 30% in children<sup>1,4</sup>
- In higher risk patients, bacterial throat infections can lead to complications (e.g. acute rheumatic fever),<sup>5</sup> so **it is important to check for red flags and risk factors**

## 2 BE VIGILANT - ASSESS SEVERITY



### SERIOUS BACTERIAL INFECTION? SIGNS OF SERIOUS INFECTION

Any of these red flag symptoms require further investigation:<sup>1-8</sup>

- Feeling of severe general sickness
- Confusion and/or an altered mental state
- Difficulty waking and sleepiness in young children
- Shortness of breath and respiratory distress
- Reduction in urine
- Prolonged fever – sweats and chills
- Drooling, muffled voice or severe swelling of the back of the throat
- Unable to swallow adequate liquids



### POTENTIAL RISK FACTORS

Be alert to those patients at increased risk of complications:<sup>9,10</sup>

- Elderly patients aged >65 years or young children <2 years or born prematurely
- Immunocompromised or on certain drugs – e.g. corticosteroids, chemotherapy, carbimazole or disease-modifying drugs for arthritis
- Patients with pre-existing conditions such as diabetes, cystic fibrosis, chronic lung disease, HIV

- Patients with high risk of complications or signs of a serious infection should be **referred to a doctor**
- Sore throat that **persists** without improvement for more than 1 week, or that appears to be getting **progressively worse** (e.g. with a fever), may also require a doctor

1. National Health Service. Sepsis symptoms. Available at: <https://www.nhs.uk/conditions/sepsis> (accessed April 2020); 2. Centers for Disease Control and Prevention. Sepsis recognition and treatment. Available at: <https://www.cdc.gov/media/releases/2017/p0831-sepsis-recognition-treatment.html> (accessed April 2020); 3. Sepsis Alliance. Sepsis basics. Available at: <https://www.sepsis.org/sepsis-basics/symptoms> (accessed April 2020); 4. Van Duijn HJ, et al. Br J Gen Pract 2007;57:561-8; 5. MSD Manual. Sore throat. Available at: <https://www.msdmanuals.com/en-gb/professional/ear,-nose,-and-throat-disorders/approach-to-the-patient-with-nasal-and-pharyngeal-symptoms/sore-throat> (accessed April 2020); 6. Centor RM, Samlowski R. Am Fam Physician 2011;83:26-8; 7. Medscape. Which physical findings are characteristic of peritonsillar abscess. 2020. Available at: <https://www.medscape.com/answers/194863-108461/which-physical-findings-are-characteristic-of-peritonsillar-abscess-pta> (accessed April 2020); 8. Patient. Sore throat. 2016. Available at: <https://patient.info/doctor/sore-throat-pro> (accessed June 2021); 9. Self Care Forum. Sore throat. 2020. Available at: <http://www.selfcareforum.org/wp-content/uploads/2020/10/10-Sore-Throat-2020> (accessed June 2021); 10. Centers for Disease Control and Prevention. People at high-risk of developing flu-like complications. Available at: [www.cdc.gov/flu/about/disease/high\\_risk.htm](http://www.cdc.gov/flu/about/disease/high_risk.htm) (accessed April 2020).

## 2 BE VIGILANT - ASSESS SEVERITY



### SERIOUS VIRAL INFECTION?

These viral infections may present with the following symptoms:

#### Influenza<sup>1</sup>

- Sudden onset of:
- Nasal discharge
  - Cough
  - Fever
  - Gastrointestinal symptoms
  - Fatigue
  - Generalised pain (headache, myalgia and arthralgia)
  - Ocular symptoms (photophobia, conjunctivitis and pain upon eye movement)

#### Infectious mononucleosis<sup>2</sup>

- Fever
- Lymphadenopathy
- Severe sore throat
- General symptoms (fatigue, myalgia, chills, sweats, anorexia, retro-orbital headache)
- Non-specific rash
- Splenomegaly
- Hepatomegaly

#### Respiratory syncytial virus infection<sup>3</sup>

- Rhinitis
- Cough
- Fever
- Ear infections and croup may also occur in children

#### COVID-19<sup>4</sup>

- Fever
- A new, continuous cough
- Loss or change to sense of smell or taste

### PATIENTS WITH THESE SYMPTOMS MAY REQUIRE FURTHER ATTENTION, INCLUDING:<sup>1-6</sup>

- Onward referral to a doctor or hospital
- Antiviral therapy where appropriate
- Antibiotics should be avoided as they are ineffective against viruses
  - Amoxicillin may cause a hypersensitivity reaction in patients with infectious mononucleosis
- Vaccination may be considered in high-risk groups

1. National Institute for Health and Care Excellence. Influenza - seasonal. Available at: <https://cks.nice.org.uk/topics/influenza-seasonal/> (accessed September 2020); 2. National Institute for Health and Care Excellence. Glandular fever (infectious mononucleosis). Available at: <https://cks.nice.org.uk/topics/glandular-fever-infectious-mono-nucleosis> (accessed September 2020); 3. GOV.UK. Respiratory syncytial virus (RSV): symptoms, transmission, prevention, treatment. Available at: <https://www.gov.uk/government/publications/respiratory-syncytial-virus-rsv-symptoms-transmission-prevention-treatment> (accessed September 2020); 4. NHS UK. Coronavirus (COVID-19). Available at: <https://www.nhs.uk/conditions/coronavirus-covid-19/symptoms/> (accessed September 2020); 5. Hildreth C, et al. JAMA 2009;302:816; 6. Chovel-Sella A, et al. Comparative Study Pediatrics. 2013;131:e1424-7.

# 3 COUNSEL ON EFFECTIVE SELF-MANAGEMENT

## REASSURE THE PATIENT AND RECOMMEND SYMPTOMATIC RELIEF

- Target the patient's main cause of discomfort and aim to reduce the underlying inflammation
- Select medication and formulations that best meet the patient's needs
- When antibiotics are necessary, tell the patient the antibiotic alone won't relieve their symptoms<sup>1,2</sup>



Solubles



Drops



Syrups



Gargles



Lozenges



Tablets



Sprays

## ADVISE THE PATIENT WHAT TO DO NEXT

- Symptoms should reduce within 1 week<sup>1,3</sup>
- If symptoms persist without improvement for more than 1 week, get worse, the patient is high risk, or red flag symptoms develop, advise them to visit their doctor
- If antibiotics are necessary, take in accordance with the recommendation from their doctor

# PRODUCTS THAT PROVIDE EFFECTIVE, RAPID SYMPTOMATIC TREATMENT FOR THE PAIN AND INFLAMMATION OF SORE THROAT

- To relieve sore throat, treatments should:
  - Target the underlying inflammation,<sup>1</sup> which is induced by viruses or bacteria<sup>2</sup>
  - Provide evidence-based relief of the painful symptoms of sore throat,<sup>1</sup> which can be mild or severe<sup>3</sup>
  - Provide rapid onset and prolonged duration of action<sup>1</sup>

Formulation	Action and effect					Notes
	Local delivery to throat	Relieves pain	Coats and moistens the throat	Anti-inflammatory action	Low dose, so there is a low risk of side effects	
Anti-inflammatory lozenge or spray (e.g. flurbiprofen)	✓	✓ <sup>4-10</sup>	✓ <sup>7</sup>	✓ <sup>9</sup>	✓ <sup>4-7</sup>	Local anti-inflammatory <sup>11</sup> and pain-relieving <sup>4-10</sup> action in the throat
Antiseptic/anaesthetic lozenge (e.g. amylmetacresol, 2,4-dichlorobenzyl alcohol, hexylresorcinol, lidocaine)	✓	✓ <sup>12-15</sup>	✓	✗	✓ <sup>12</sup>	Lozenge dissolves slowly to release active ingredients <sup>1</sup> for pain relief <sup>12-15</sup>
Oral anti-inflammatory tablet (e.g. ibuprofen)	✗	✓ <sup>16-18</sup>	✗	✓ <sup>17</sup>	✗	Anti-inflammatory action <sup>17</sup> throughout the body. Slower acting <sup>18</sup> than local treatments <sup>7,9</sup>
Oral analgesic tablet (e.g. paracetamol)	✗	✓ <sup>19</sup>	✗	✗	✗	Only low level anti-inflammatory activity <sup>19</sup>

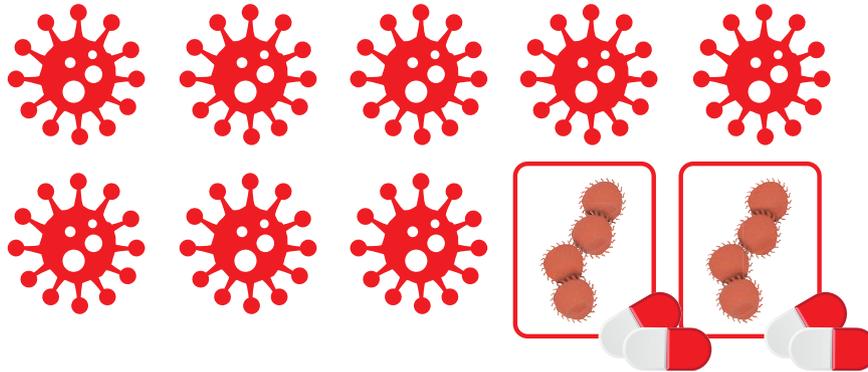
- A local anti-inflammatory drug such as flurbiprofen, delivered as a lozenge or spray, can rapidly<sup>7,9</sup> relieve sore throat pain, difficulty swallowing, swollen throat<sup>7,10</sup> and other symptoms of throat discomfort,<sup>20</sup> with pain relief that lasts for up to 4–6 hours<sup>7,10,21</sup>

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# EDUCATING PATIENTS ABOUT RESPONSIBLE ANTIBIOTIC USE

- Some patients may ask about antibiotics or have been prescribed an antibiotic
- The pharmacy team has an important role in providing education on responsible antibiotic use
- Tell all patients that most sore throats are non-serious, self-limiting<sup>1,2</sup> and resolve without antibiotics in around one week<sup>3,4</sup>
  - Antibiotics do not have any direct pain-relieving effects
  - Antibiotics have side effects<sup>3,5</sup>
- Tell patients that misusing antibiotics can generate **resistant bacteria**,<sup>6</sup> which could stay in their body **for the next year**.<sup>7</sup> The resistant bacteria can be spread<sup>12</sup> to family and friends, making it harder to treat them
- Reassure them that effective symptomatic relief is available for all types of sore throat

**UP TO 8 OUT OF 10 SORE THROATS ARE CAUSED BY VIRUSES<sup>1</sup>**



**Antibiotics only kill bacteria**

**Misuse and overuse of antibiotics are reducing their ability to save lives now and in the future<sup>6,9</sup>**

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# 1,2,3 APPROACH

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1

## ADDRESS PATIENT'S CONCERNS

Ask about the patient's main symptoms and concerns, and expectations of treatment

2

## BE VIGILANT - ASSESS SEVERITY

Look for red flags and risk factors for complications that might need referral to a doctor

3

## COUNSEL ON EFFECTIVE SELF-MANAGEMENT

Reassure the patient, recommend symptomatic relief and advise them on what to do next

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The Global Respiratory Infection Partnership (GRIP) is an international group of healthcare professionals committed to reducing inappropriate antibiotic use for respiratory tract infections in primary care and the wider community, helping to counteract antibiotic resistance.

