

NEW INSIGHTS: COLD AND FLU

Introduction

Colds and flu are responsible for more visits to the pharmacy than any other infectious illness. While severity of influenza differs from year to year, the burden of this illness results in stress, fatigue, absenteeism and a general feeling of despondency that lingers long after the flu-like illness has disappeared.

Today, patients are being encouraged to self-help when treating minor illnesses; as a result, they are increasingly going online for advice. Nonetheless, a significant number of people will visit the pharmacy and prowl through the aisles looking for solutions to their key symptoms, speaking to both frontline and pharmacy staff.

Just as patients search online for information, healthcare professionals increasingly use these systems to support clinical knowledge.

This online module seeks to provide new insights of value to pharmacy staff.

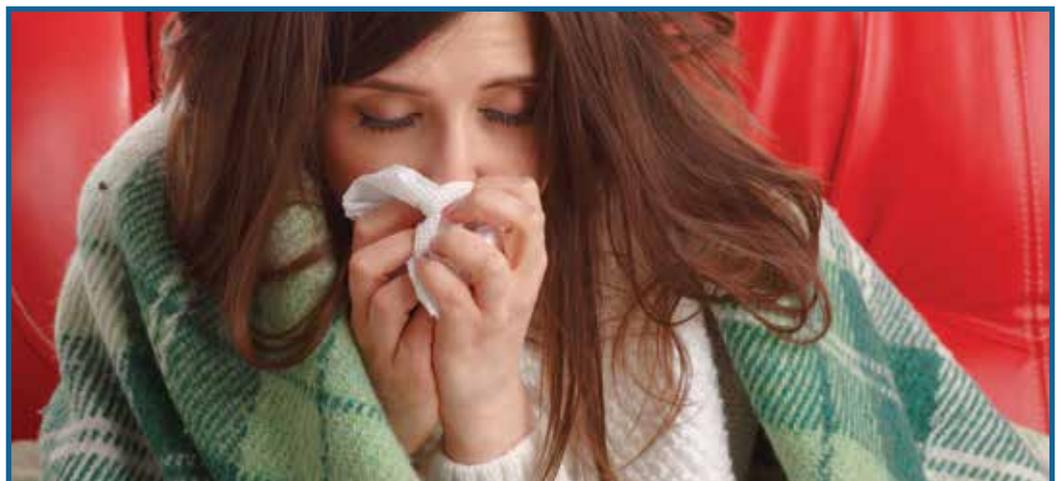
KEY MESSAGES

- Patients' usage of the internet peaks at the same time as the annual influenza season
- Symptom-directed therapy is key to quick relief and recovery from colds and flu
- With low flu vaccine coverage in South Africa, pharmacy advice should target vulnerable patients first
- The influenza virus can infect muscle cells causing myalgia and pain
- The influenza virus is associated with pneumonia in infants under the age of six months.

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What drives consumer choice of cold and flu remedies?

A recent American survey of consumers found that symptoms drive the selection of cold and flu products in 70% of cases.

So, is it just a cold or is it flu?

Cold is caused by members of several families of virus, the most common being rhinoviruses.

A cold is characterised by:

- Discomfort in the eyes, nose and throat and possibly sinuses, sneezing, a runny nose followed by nasal congestion. Mild muscle aches can also occur
- These symptoms develop gradually over one or two days
- Patients mostly recover 4-10 days later, as the infecting virus is cleared by the immune system
- Persistence of human rhinoviruses can occur in immunosuppressed patients, resulting in ongoing symptoms.

Influenza is characterised by:

- Sudden onset of fever, chills, headache, muscle aches and extreme fatigue. There may be sneezing and a stuffy nose, but these are less frequent than with a cold. A dry cough and sore throat may also be present
- Symptoms appear rapidly, with a fever being present in 38-40% of cases
- Severe symptoms last 4-5 days and recovery is usually complete in 7-10 days
- It can be complicated by bronchitis, secondary bacterial pneumonia or otitis media in children

Who is at particular risk of serious illness related to influenza?

- Children under six months
- People over 65 years
- People with respiratory/cardiac disease or diabetes
- Immunosuppressed patients, such as HIV-infected children and adults

A South African study of well-vaccinated

children found that the presence of the influenza virus was strongly associated with pneumonia in infants under six months of age.¹ This supports the in-pharmacy approach that infants with symptoms of flu when other family members have the flu should be referred to a general practitioner for medical care.

Facts about the influenza virus²

Influenza A

Influenza A viruses are implicated in most human influenza infections and can cause serious disease and trigger worldwide pandemics. There are two complex proteins on the surface of each influenza A virus: haemagglutinin and neuraminidase (referred to as H and N) which allow the virus to invade host

cells. Sixteen different types of the H protein and nine of the N protein exist, which means 144 different varieties of influenza A are possible, ranging from H₁N₁ (the swine flu virus) to H₁₆N₉. Not all of these types are known to infect humans.

Influenza B

Influenza B tends to cause less severe disease and smaller outbreaks in the population, except in children, where it

can contribute significantly to the disease burden.

Influenza C

Influenza C viruses are typically milder than either A or B; those infected generally do not become very ill. Influenza C

viruses do not cause epidemics.

How to treat colds and flu?

Antibiotics are inappropriate and their use contributes to the development of antibiotic resistance. Current research is, however, investigating how the influenza virus creates the potential for bacterial *Streptococcus pneumoniae* co-infection. A variety of factors are likely to be involved, such as pulmonary epithelial damage, which influences bacterial adherence and triggers the innate immune system. Treating this complex synergy requires characterisation of the bacteria and selection of appropriate

antibiotics. The potential for this co-infection's developing is more likely in vulnerable patients, such as the elderly and those with chronic disease.

In children under six years of age, common cold symptoms should not be treated unless they interfere with sleep, eating or drinking. If medication is required, proper and clear dosing instructions must be given.

In otherwise healthy people, colds and flu are best treated by addressing the symptoms.

Symptom-directed medicines

Antihistamines

Antihistamines may reduce rhinorrhea and sneezing caused by a cold. A recent Cochrane systematic review of 18 randomised clinical trials (these reviews are fully independent reviews of all published studies) has shown that antihistamines given early (in the first day or two) of flu onset reduce the severity of symptoms of nasal congestion, rhinorrhea and sneezing in adults³ during this early period of illness. There is no beneficial effect on symptoms in the later

period of the illness (3-10 days).

Adverse events, such as sedation, were more common with older or first-generation antihistamines, although it should be noted that some cold remedies include antihistamines intentionally and are intended to help patients sleep. The Cochrane review noted that there were insufficient trials available to assess the efficacy of antihistamines in children.

Decongestants

Nasal congestion is often the most distressing symptom of colds and flu. A very recent Cochrane review⁴ showed decongestants to have a positive, but small, effect on adult patients'

evaluation of nasal congestion. There was no increase in adverse events. When patients were given a single dose of a decongestant or placebo (and did not know whether they were getting the

Table 1. Groups recommended for influenza vaccination⁶

<ul style="list-style-type: none"> • Pregnant women, irrespective of stage of pregnancy, as well as postpartum women
<ul style="list-style-type: none"> • Individuals (adults or children) who are at high risk for influenza and its complications because of underlying medical conditions and who are receiving regular medical care for conditions such as chronic pulmonary (including tuberculosis) and cardiac diseases, chronic renal diseases, diabetes mellitus and similar metabolic disorders
<ul style="list-style-type: none"> • Individuals who are immunosuppressed and individuals who are morbidly obese (body mass index ≥ 40 kg/m²)
<ul style="list-style-type: none"> • HIV-infected individuals
<ul style="list-style-type: none"> • Healthcare workers
<ul style="list-style-type: none"> • Residents of old-age homes and chronic care and rehabilitation institutions
<ul style="list-style-type: none"> • Persons aged >65 years
<ul style="list-style-type: none"> • Children aged 6-59 months
<ul style="list-style-type: none"> • Persons aged six months to ≤ 18 years on long-term aspirin therapy
<ul style="list-style-type: none"> • Adults and children who are family contacts of individuals at high risk of severe influenza
<ul style="list-style-type: none"> • Any persons wishing to minimise the risk of influenza infection, especially in workplace settings where large-scale absenteeism could cause significant economic losses.

active ingredient or not), significantly better congestion relief was achieved

with the active ingredient (mainly pseudoephedrine).

Muscle pain in Influenza

Recent evidence has shown that muscle pains associated with influenza, particularly pandemic and seasonal influenza, may not only be due to a systemic cytokine response, but that the muscle

cells themselves can become infected.⁵ The myalgia of influenza is likely therefore to be a real clinical symptom that varies in severity and needs to be addressed.

Vaccination

Groups recommended for influenza vaccination in South Africa are described by the National Institute for Communicable Disease (NICD)⁶ (Table 1). These may differ from the recommendations in the South African Department of Health's programme, but are derived from South African

clinical data.

The use of antiviral agents (oseltamivir and zanamivir) is reserved for high-risk patients with severe immunosuppression. Guidelines on antiviral management and chemoprophylaxis for influenza are available on the NICD website: www.nicd.ac.za.

References

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Tips for your CPD entry to SA Pharmacy Council

1 Reflect

How can I prepare my staff to help patients better over the coming winter to avoid the risk of flu and its consequences? Which patients would benefit most from flu vaccination? How should we assess patients' symptoms and refer from the OTC isles those patients who should be seen by the pharmacist/sister?

2 Plan

This article stresses the symptomology which characterises cold and flu. It relates symptoms to medicinal agents and prepares pharmacy staff for the new environment of internet diagnosis.

3 Action/Implementation

Read this report and evaluation of cold and flu therapy from the latest evidence-based and impartial Cochrane reviews. Read these reviews or their summaries to understand how medicines are assessed by this global initiative.

4 Evaluate

Are you and your staff now confident to advise patients on treatment of cold and flu ensuring optimal utilisation of the medicinal agents selected and available in your pharmacy?

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