

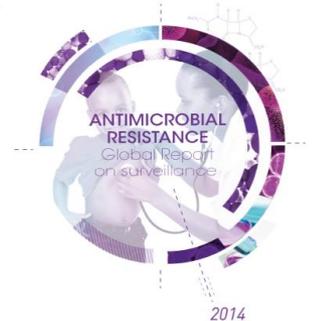
**COMING TO A PRACTICE NEAR YOU!**

**THE WORLD HEALTH ORGANISATION  
PRESENTS**

# Apocalypse Now

15  
CENSORED  
FOR ALL AGES

- **WHO 2014 Says:**
- A post-antibiotic era – in which common infections and minor injuries can kill – **far from being an apocalyptic fantasy**, is instead a very real possibility for the 21st Century.
- Strep Pneumoniae one of 7 bacteria high as greatest risk



# Message: antibiotics are dangerous

- **2011 Chief Medical Officer Dame Sally Davies Says...**
  - ‘The government needs to put antimicrobial resistance on the national risk register (specifically, the ‘National Security Risk Assessment’)’
- **A risk equivalent to a terrorist attack!**



# **Promoting Self Care to Reduce antibiotic Prescribing**

## **Everyone's a winner!**

---

**Dr Peter Smith OBE MBChB**

**Senior Partner, Churchill Medical Centre, Kingston**

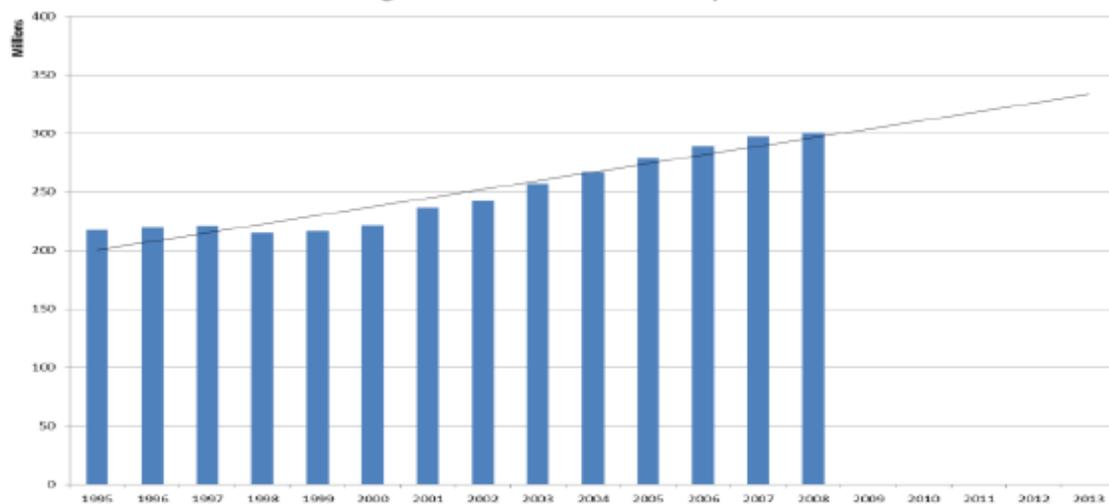
**Co-Chair Self Care Foundation**

**Vice President, National Association of Primary Care**

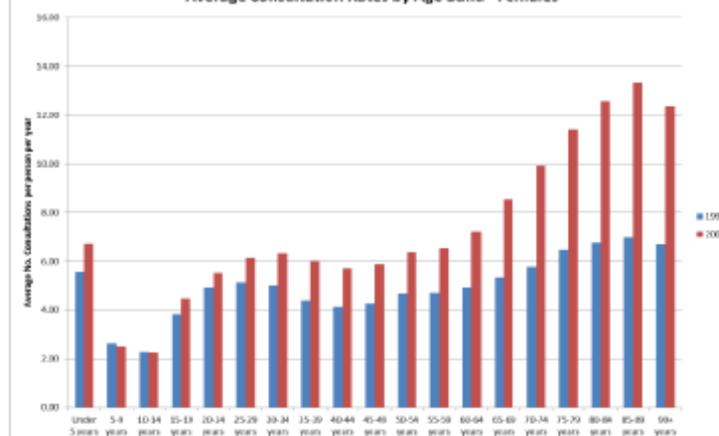
**Kingston Clinical Commissioning Group Board Member**

# GP consultation rates have grown year on year, adding to demands on general practice

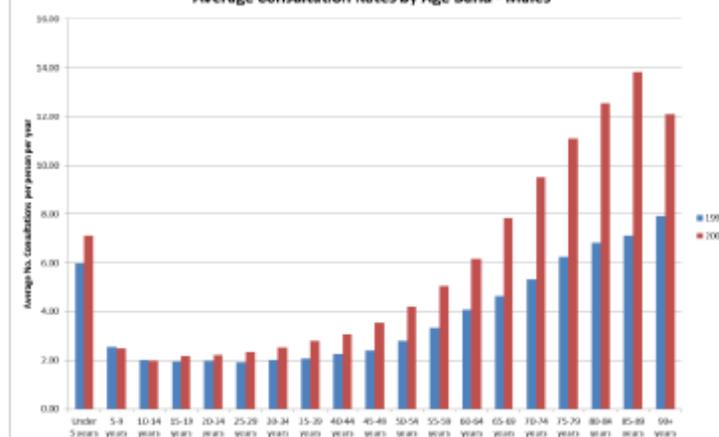
**Average Number of Consultations per Year**



**Average Consultation Rates by Age Band - Females**



**Average Consultation Rates by Age Band - Males**



- Since 1995 consultation rates within general practice have grown steadily.
- Data was last collected in 2008, at that time the average number of consultations per year was estimated to be 300 million.
- Simple straight line extrapolation suggests the number could now stand at around 340 million.
- In addition, consultation rates at different age bands has also changed over time, with significant increases in consultation rates for older people.

# The Problem

<b>October 2012</b>	<i>Antibiotics Given</i>	<i>Antibiotics Not Given</i>	<i>Total</i>	<i>Percentage given antibiotic</i>
<b>Cough</b>	<b>78</b>	<b>65</b>	<b>143</b>	<b>54.5</b>
<b>URTI</b>	<b>60</b>	<b>124</b>	<b>184</b>	<b>32.6</b>
<b>TOTAL</b>	<b>148</b>	<b>207</b>	<b>355</b>	<b>41.7</b>

# What's the Evidence?

---

# Evidence from 1965

## **Antibiotics don't work with uncomplicated bronchitis**

**Elmes, PC et al *Value of ampicillin in the hospital treatment of exacerbations of chronic bronchitis.***

- **BMJ 11/1965;2(5467):904-8**

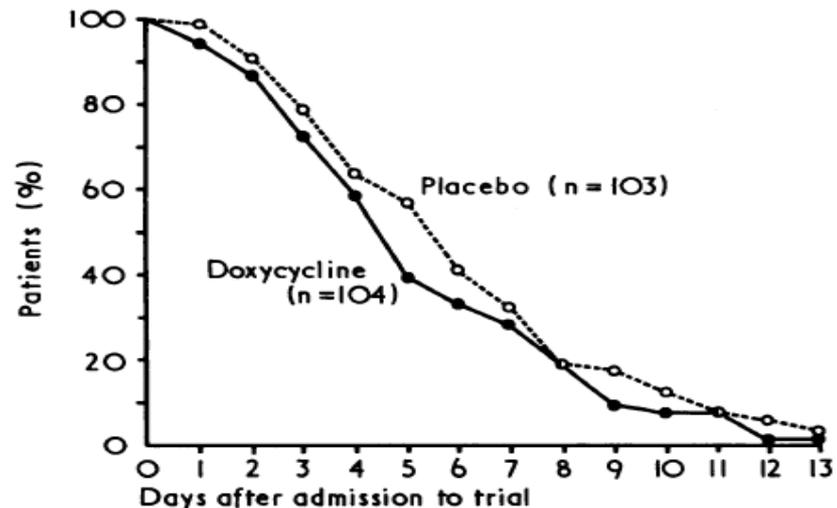


BRAD PITT

WORLD WAR  
**Z**

# CARDIFF 1976

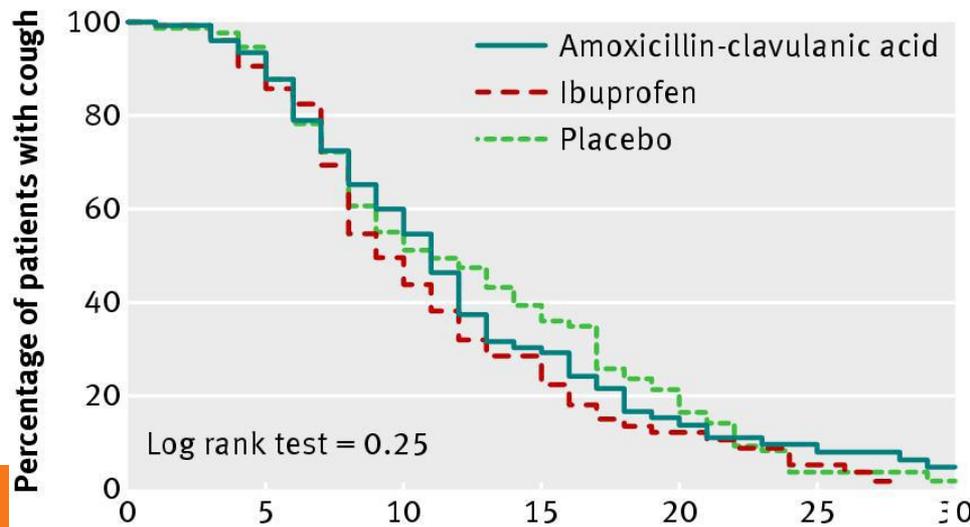
- Cardiff 1976
- Stott NCH, West R. *Randomised controlled trial of antibiotics in patients with a cough and purulent sputum. BMJ 1976; 2: 556-559*
- Antibiotics don't work for cough even with purulent sputum – don't use them.



Percentage of patients recording yellow sputum each day after admission to trial.

# CARDIFF 2013

- Cardiff 2013
- Llor et al *Efficacy of anti-inflammatory or antibiotic treatment in patients with non-complicated acute bronchitis and discoloured sputum: randomised placebo controlled trial* *BMJ* 2013;347:f5762
- Antibiotics don't work for cough even with purulent sputum – don't use them.



# CARDIFF 2013

- It doesn't matter whether it's viral or bacterial – they still don't work.

# Mythbusting

---

# Myths

- Everyone goes to their GP for the slightest symptom
- General practice is not very evidence based so it's dangerous to refuse antibiotics
- It takes too long to encourage self care

**Everyone goes to their  
GP for the slightest  
thing**

---

# Symptoms experienced over a 2 week period

75% had 1-22 symptoms

40m in England

Ascertaining the size of the symptom iceberg in a UK-wide community-based survey

*Philip C Hannaford, Anne McAteer and Alison M Elliott*  
British Journal of General Practice, January 2011

	%
Feeling tired/run down	41
Headaches	38
Joint pain	31
Back pain	30
Difficulty sleeping	28
Sore throat	19
Nervousness/anxiety	18
Indigestion/heartburn	18
Cough	18
Cold or flu symptoms	17
Feeling depressed	16
Stomach/abdominal pain	15
Diarrhoea	12
Nausea/feeling sick	11
Constipation	9
Dizziness	9
Shortness of breath	8
Wheezy chest	7
Loss of appetite	5
Chest pain	5
Vomiting	4
Blood in stool	2
Unintentional weight loss	2
Fainting	1
Coughing up blood	0



# Symptom Iceberg

Nurse  
NHS Direct  
Pharmacist  
Complementary Medicine

GP

Talk to friend  
See no one

OTC Medication

Do Nothing

**BUSTED**

Only 8% will visit their GP

75% of patients will have a symptom of some kind within any 2 week period

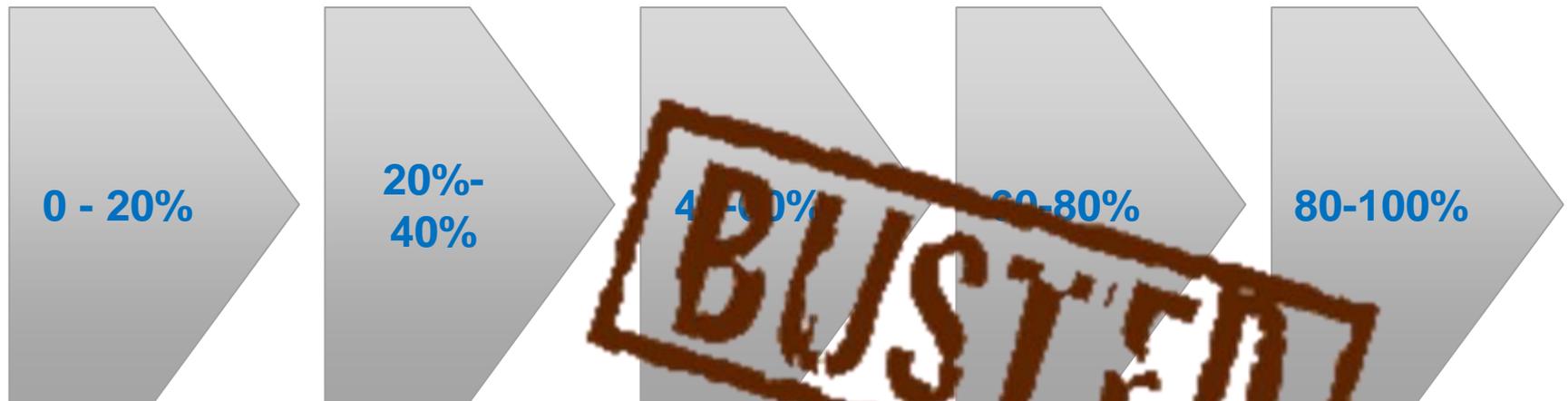
Question 2

# **General Practice Evidence Base**

---

# What percentage of GP interventions are evidence based?

## Question 3



**1963** Forsyth – half a century ago, 20% evidence based prescriptions

**1995** Gill, - 81% interventions in GP evidence based

**Self care takes too long**

---

# Tweetment

- 90% of coughs last up to 3 weeks and will not be helped by antibiotics unless you are elderly, very ill or have another health condition
- 138 characters



**BUSTED**

# Taking the Temperature

---

**Feverish Illness in Children**

# Quiz - Temperature – best method?

Which is most sensitive at picking up whether a child has a temperature? (NICE)

**Match the evidence to the method**

**Good**

**Evidence Range: 25% - 98%**

**Better**

**Evidence Range: 51% - 97%**

**Best**

**Evidence Range: 74% - 97%**

**Question 6**

Infrared  
tympanometry



Feeling the  
forehead



Axillary  
temperature



# Taking the temperature

## Question 7

- *Thermometers and the detection of fever*
- Under 4 weeks – by electronic thermometer in axilla
- Children aged 4 weeks to 5 years, measure by:
  - electronic thermometer in the axilla
  - chemical dot thermometer in the axilla
  - infra-red tympanic thermometer.
- Reported parental perception of a fever should be considered valid and taken seriously by healthcare professionals.

**Traffic light system for identifying risk of serious illness\***

	Green – low risk	Amber – intermediate risk	Red – high risk
Colour (of skin, lips or tongue)	<ul style="list-style-type: none"> <li>Normal colour</li> </ul>	<ul style="list-style-type: none"> <li>Pallor reported by parent/carer</li> </ul>	<ul style="list-style-type: none"> <li>Pale/mottled/ashen/blue</li> </ul>
Activity	<ul style="list-style-type: none"> <li>Responds normally to social cues</li> <li>Content/smiles</li> <li>Stays awake or awakens quickly</li> <li>Strong normal cry/ hot crying</li> </ul>	<ul style="list-style-type: none"> <li>Not responding normally to social cues</li> <li>No smile</li> <li>Wakes only with prolonged stimulation</li> <li>Decreased activity</li> </ul>	<ul style="list-style-type: none"> <li>No response to social cues</li> <li>Appears ill to a healthcare professional</li> <li>Does not wake or if roused does not stay awake</li> <li>Weak, high-pitched or continuous cry</li> </ul>
Respiratory		<ul style="list-style-type: none"> <li>Nasal flaring</li> <li>Tachypnoea:                             <ul style="list-style-type: none"> <li>RR &gt;60 breaths/minute, age 6–12 months</li> <li>RR &gt;40 breaths/minute, age &gt;12 months</li> </ul> </li> <li>Oxygen saturation <math>\leq 95\%</math> in air</li> <li>Crackles in the chest</li> </ul>	<ul style="list-style-type: none"> <li>Grunting</li> <li>Tachypnoea: RR &gt;60 breaths/minute</li> <li>Moderate or severe chest indrawing</li> </ul>
Circulation and hydration	<ul style="list-style-type: none"> <li>Normal skin and eyes</li> <li>Moist mucous membranes</li> </ul>	<ul style="list-style-type: none"> <li>Tachycardia:                             <ul style="list-style-type: none"> <li>&gt;160 beats/minute, age &lt;12 months</li> <li>&gt;150 beats/minute, age 12–24 months</li> <li>&gt;140 beats/minute, age 2–5 years</li> </ul> </li> <li>CRT <math>\geq 3</math> seconds</li> <li>Dry mucous membranes</li> <li>Poor feeding in infants</li> <li>Reduced urine output</li> </ul>	<ul style="list-style-type: none"> <li>Reduced skin turgor</li> </ul>
Other	<ul style="list-style-type: none"> <li>None of the amber or red symptoms or signs</li> </ul>	<ul style="list-style-type: none"> <li>Age 3–6 months, temperature <math>\geq 39^{\circ}\text{C}</math></li> <li>Fever for <math>\geq 5</math> days</li> <li>Rigors</li> <li>Swelling of a limb or joint</li> <li>Non-weight bearing limb/hot using an extremity</li> </ul>	<ul style="list-style-type: none"> <li>Age &lt;3 months, temperature <math>\geq 38^{\circ}\text{C}</math></li> <li>Non-blanching rash</li> <li>Bulging fontanelle</li> <li>Neck stiffness</li> <li>Status epilepticus</li> <li>Focal neurological signs</li> <li>Focal seizures</li> </ul>

CRT, capillary refill time; RR, respiratory rate

\* This traffic light table should be used in conjunction with the recommendations in the guideline on investigations and initial management in children with fever. See <http://guidance.nice.org.uk/CG160> (update of NICE clinical guideline 47).

# The Traffic Light Table

- Tool for identifying the likelihood of serious illness
- Children with only symptoms and signs in the 'green' column are at low risk
- Children with one or more symptom or sign in the 'amber' column are at intermediate risk
- Children with one or more symptom or sign in the 'red' column are at high risk

# Clinical Assessment Points

- A **capillary refill time** of 3 seconds or longer is an intermediate risk group marker for serious illness ('amber' sign).
- **The Sternum is the recommended test region**
- Children with **tachycardia** are in at least an intermediate-risk group for serious illness.
- **Age Heart rate (bpm)**

<12 months

>160

12–24 months

>150

2–5 years

>140

**Question 9**

# Temperature assessment points

- Children younger than 3 months with a temperature of 38°C or higher are in a high-risk group for serious illness.
- Children aged 3–6 months with a temperature of 39°C or higher are in at least an intermediate-risk group for serious illness.
- Do not use duration of fever to predict the likelihood of serious illness, but children with a fever lasting more than 5 days should be assessed for Kawasaki disease.

# Antipyretic interventions

- Antipyretic agents do not prevent febrile convulsions and should not be used specifically for this purpose. **[2007]**
- When using paracetamol or ibuprofen in children with fever;
  - **continue only as long as the child appears distressed**
  - consider changing to the other agent if the child's distress is not alleviated
  - do not give both agents simultaneously
  - only consider alternating these agents if the distress persists or recurs before the next dose is due. **[new 2013]**

**Question 10**

# Clinical Assessment Points

## Question 8

- Children with any 'red' features but who are not considered to have an immediately lifethreatening illness should be urgently assessed by a healthcare professional in a face-to face setting within 2 hours or referred urgently
- If any 'amber' features are present and no diagnosis has been reached, provide parents or carers with a 'safety net' or refer to specialist paediatric care for further assessment.
- The safety net should be 1 or more of the following:
  - providing the parent or carer with verbal and/or written information on warning
  - symptoms and how further healthcare can be accessed (see section 1.7.2)
  - arranging further follow-up at a specified time and place
  - liaising with other healthcare professionals, including out-of-hours providers, to ensure
  - direct access for the child if further assessment is required.

# Summary of traffic light messages

- Children who are assessed as low risk ‘green’ can be cared for at home with appropriate advice
- If any ‘amber’ features are present and no diagnosis has been reached, provide parents or carers with a ‘safety net’ or refer to specialist paediatric care for further assessment
- Children assessed remotely with ‘red’ features should be sent for urgent referral
- Antipyretics should not be used with the sole aim of reducing fever

**Reducing antibiotic  
prescribing by 15%  
through  
implementation of  
Guideline 069**

---

Issue date: July 2008

## **Respiratory tract infections – antibiotic prescribing**

**Prescribing of antibiotics for  
self-limiting respiratory tract  
infections in adults and children  
in primary care**

# NICE 2008

## Duration of symptoms

- acute otitis media: 4 days
- Acute sore throat/acute pharyngitis: 1 week
- common cold: 1½ weeks
- acute rhinosinusitis: 2½ weeks
- acute cough/acute bronchitis: 3 weeks
  
- Most infections will not respond to antibiotics but 15% or more will have adverse effects from them
- Use Delayed Prescriptions if necessary – 70% will not be dispensed

**Question 5**

# Bite sized challenge for winter

- Multidisciplinary team – everyone involved
- Start with respiratory illnesses
- Consistent messages
- Evidence based literature
- Positive messages
- Delayed/no prescribing strategy

# Cough – simply the evidence

1. 90% of coughs last up to three weeks (whether or not treated with antibiotics or chest signs present) (Cochrane)
2. The same number reattend even if given antibiotics (Cochrane)
3. Delayed or no prescribing strategy if not at an increased risk of developing complications (NICE)
4. Antibiotic may sometimes be given if
  - suggestion of complications or
  - at risk of complications elderly, very ill, have comorbidities and or significant history (NICE)

**Question 1**

## National Institute for Health and Clinical Excellence care pathway for respiratory tract infections

At the first face-to-face contact in primary care, including walk-in centres and emergency departments, offer a clinical assessment, including:

- history (presenting symptoms, use of over-the-counter or self medication, previous medical history, relevant risk factors, relevant comorbidities)
- examination as needed to establish diagnosis.

Address patients' or parents'/carers' concerns and expectations when agreeing the use of the three antibiotic strategies (no prescribing, delayed prescribing and immediate prescribing)

Agree a no antibiotic or delayed antibiotic prescribing strategy for patients with acute otitis media, acute sore throat/pharyngitis/acute tonsillitis, common cold, acute rhinosinusitis or acute cough/acute bronchitis.

However, also consider an immediate prescribing strategy for the following subgroups, depending on the severity of the RTI.

The patient is at risk of developing complications.

### No antibiotic prescribing

Offer patients:

- reassurance that antibiotics are not needed immediately because they will make little difference to symptoms and may have side effects, for example, diarrhoea, vomiting and rash
- a clinical review if the RTI worsens or becomes prolonged.

### Delayed antibiotic prescribing

Offer patients:

- reassurance that antibiotics are not needed immediately because they will make little difference to symptoms and may have side effects, for example, diarrhoea, vomiting and rash
  - advice about using the delayed prescription if symptoms do not settle or get significantly worse
  - advice about re-consulting if symptoms get significantly worse despite using the delayed prescription.
- The delayed prescription with instructions can either be given to the patient or collected at a later date.

### No antibiotic, delayed antibiotic or immediate antibiotic prescribing

Depending on clinical assessment of severity, also consider an immediate prescribing strategy for:

- children younger than 2 years with bilateral acute otitis media
- children with otorrhoea who have acute otitis media
- patients with acute sore throat/acute tonsillitis when three or more Centor criteria<sup>1</sup> are present.

<sup>1</sup> Centor criteria are: presence of tonsillar exudate, tender anterior cervical lymphadenopathy or lymphadenitis, history of fever and an absence of cough.

### Immediate antibiotic prescribing or further investigation and/or management

Offer immediate antibiotics or further investigation/management for patients who:

- are systemically very unwell
- have symptoms and signs suggestive of serious illness and/or complications (particularly pneumonia, mastoiditis, peritonsillar abscess, peritonsillar cellulitis, intraorbital or intracranial complications)
- are at high risk of serious complications because of pre-existing comorbidity. This includes patients with significant heart, lung, renal, liver or neuromuscular disease, immunosuppression, cystic fibrosis, and young children who were born prematurely.
- are older than 65 years with acute cough and two or more of the following, or older than 80 years with acute cough and one or more of the following:
  - hospitalisation in previous year
  - type 1 or type 2 diabetes
  - history of congestive heart failure
  - current use of oral glucocorticoids.

Offer all patients:

- advice about the usual natural history of the illness and average total illness length:
  - ♦ acute otitis media: 4 days
  - ♦ acute sore throat/acute pharyngitis/acute tonsillitis: 1 week
  - ♦ common cold: 1½ weeks
  - ♦ acute rhinosinusitis: 2½ weeks
  - ♦ acute cough/acute bronchitis: 3 weeks
- advice about managing symptoms including fever (particularly analgesics and antipyretics). For information about fever in children younger than 5 years, refer to 'Feverish illness in children' (NICE clinical guideline 47).

# Evidence based advice on RTIs

## NORMAL DURATION OF RTIs

- Otitis media: 4 days
- Sore throat/pharyngitis/tonsillitis: 1 week
- Common cold: 1 ½ weeks
- Acute rhinosinusitis: 2 ½ weeks
- Cough: 3 weeks

## NB: CHILDREN UNDER 5 WITH FEVER

- 5 days or more of fever need to be seen: AMBER risk
- 0-3 months: temp over 38 or 3-6 months over 39 need to be seen within 2 hours: RED risk

## ACUTE OTITIS MEDIA

Ear infections are very common in young children; last 4 days; painkillers main treatment unless with a discharge or under 2 years, both ears.

- 3/4 of all children have had an ear infection by age 2
- Commonest between 3-18 months
- Not unusual to have up to 3 attacks a year
- Will usually last 4 days

Nice recommends ONLY consider antibiotics if:

There is a discharge, or under 2 with infection in both ears

### When to seek advice

- High temp not coming down
- New discharge
- Vomiting
- Dizziness
- Floppy
- Lethargy
- Severely unwell
- Irritable
- Unwell and still not clearing after 2-3 days

## COUGH

• 90% cough last up to 3 weeks, whether or not treated with antibiotics even if chest signs present.

### When to seek advice

- Getting worse
- Coughing up blood
- Cough lasts for more than three to four weeks.
- Develop chest and/or shoulder pain.
- Difficult breathing
- Losing weight over a period of six weeks or more
- Voice becomes hoarse.
- Ends of fingers take on a 'club-like' shape.
- New swellings in the neck or above the collar bones.

## DELAYED PRESCRIBING OR NO PRESCRIBING STRATEGY

if not at risk of complications:

- Elderly
- Very ill
- Co-morbidities e.g. COPD
- Significant history

## SORE THROAT

- 90% clear within 1 week, antibiotics or not
- Do not give antibiotics unless 3 or more Centor criteria present:

- Tonsillar exudates
- Cervical lymphadenopathy
- History of fever
- Absence of a cough

### When to seek advice

- Persistent high temperature for more than three days that does not come down with ibuprofen and/or paracetamol.
- Not getting better or that gets worse – after 4 to 5 days
- Hard to breathe in or your throat feels like it's closing up
- Drooling and difficult to swallow.
- Pain is severe and does not respond to over the counter pain killers.
- Voice becomes muffled.
- Difficult to drink enough fluids and become dehydrated
- Symptoms so bad that they prevent you from functioning normally.
- Immunocompromised (including steroids)

# Centor Scores

- Exudate 1
- Cervical Lymph nodes 1
- History of temperature 1
- No cough 1

At least 3 out of 4

= high risk of Strep

= Consider antibiotic

**Question 4**

## Sore Throat

This fact sheet helps you to know what's 'normal' and what you can expect to happen if you develop a sore throat. It also tells you when you should become concerned and seek medical advice from a health professional.

### Useful facts

**How common is sore throat?** Sore throats are extremely common. What's causing my sore throat? A sore throat is usually caused by a harmless throat infection that gets better by itself. You may suffer from bacteria 'colonies' if you have pus in your throat. (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)

How long does it take for your throat, painful glands in your neck and fever – but no cough. The Epstein-Barr virus, which causes glandular fever, is responsible for about 1 to 10 out of 100 cases.

### What can I expect to happen?

**How long are my symptoms likely to last?** Your sore throat is likely to get better within 3 to 7 days (and a maximum of 2 weeks), without the need for treatment by a health professional. **Will I need any tests?** You're unlikely to need any tests, such as a throat swab.

**Will I need antibiotics?** You won't normally need antibiotics (which can often cause harm) than good if given unnecessarily.

### What can I do myself to get better – now and in the future?

#### Home remedies

There are some symptoms of sore throat including a sore, red throat and drinking cool or warm drinks, as well as sipping, ice cubes, ice lollies or hard sweets. Gargling with warm, salty water may also help reduce swelling and pain.

#### Pain killers

Painkillers help to reduce symptoms of sore throat, fever, and headaches in adults. Use what suits you best and talk to your pharmacist if you're unsure.

#### Fluids

Drink at least 5-6 glasses of

perks (usually if you're a home

Smoking

Avoid smoking and snuff as

These can irritate your throat

and make your symptoms worse

and make your symptoms worse

and make your symptoms worse

### When should I seek medical help?

Seek medical advice if your symptoms are no better after two weeks or if you have trouble swallowing

#### Warning symptoms and signs include:

##### High fever

You have a persistent high temperature over 38°C for more than three days and it does not come down even if you take paracetamol and/or painkillers.

##### Glandular fever

You have a sore throat that doesn't get better – or it gets worse – after 4 to 5 days (this may suggest glandular fever).

##### Difficulty swallowing

You're finding it hard to breathe, and your throat feels like it's closing up.

##### Swallowing and swallowing

You're finding it hard to swallow.

##### Severely

Your pain is severe and does not respond to painkillers.

##### Voice changes

Your voice becomes muffled.

##### Fluid intake

You find it hard to drink or

eat anything.

You feel unwell and you're

losing weight.

You're feeling unwell and you're

losing weight.

## Coughs

This fact sheet helps you to know what's 'normal' and what you can expect if you develop a cough. It also tells you when you should become concerned and seek advice from a health professional.

### Useful facts

#### Types of cough

Coughing may be acute, lasting less than three weeks, or chronic, when it may last for more than eight weeks. Coughs can also be dry or productive (with phlegm).

#### Frequency

Most of us experience episodes of coughing between two and five times a year, and about one in five people suffer from coughs during the winter months.

#### Rarely serious

Although coughing often impairs people's quality of life, it is usually due to a viral cause and usually gets better by itself.

#### What causes coughs?

Acute coughing is most commonly respiratory infection (URI).

Chronic coughing can sometimes be a problem, but may also be caused by asthma or gastro-oesophageal reflux.

Cough may also arise from taking asthma, environmental factors, job and other of stomach contents at

### What can I do myself to get better – now and in the future?

#### Try not to cough

Although this may sound easier said than done, you may be able to cough less often by trying not to cough, because our desire to cough can be affected by our brain.

#### Home remedies

Try simple home remedies, such as honey and lemon – just add (heavily squeezed) juice from one lemon and a teaspoon of honey to a mug of hot water. Drink at least 6 to 8 glasses of water in a day and suck lozenges.

#### Stop smoking

Smoking is one of the commonest reasons for chronic cough. Stopping

#### Smoking – or just smoking less

your coughing, but also benefits your lungs, heart, stroke, and for

#### Cough medications

There is little evidence to say what are effective for reducing cough by research evidence, you may still go over the counter preparations – 4

#### Paracetamol

Paracetamol can help with relief

of a cough, such as a sore throat

### What can I expect to happen?

Coughs are usually harmless.

Although coughs can be distressing (both for you and others) living or working with you, acute coughs are almost always harmless and usually improve within three weeks.

#### No need for antibiotics

You don't normally need antibiotics, which may do more harm than good.

#### Duration

You may only suffer a dry cough for 3 to 4 weeks after an infection has settled.

#### No need for investigations

You don't normally need any investigations if you suffer from acute

cough.

### When should I see a health professional?

Seek medical advice immediately

your cough, if you've inhaled a lot of the warning symptoms below, or a more serious underlying cause.

You're coughing blood for no obvious reason.

Your cough lasts for more than three to four weeks.

In addition, you have chest and/or shoulder pain.

You're unable to breathe.

You're losing weight for no apparent reason over a period of

weeks or more.

Your voice becomes hoarse.

The ends of your fingers take on a club-like shape.

You notice new swelling, lumps or bumps in the neck or above your

collarbone.

## Ear Infection

This fact sheet helps you to know what's 'normal' and what you can expect to happen if you or your child develops an ear infection. It also tells you when you should become concerned and seek medical advice from a health professional.

### Useful facts

#### How common are ear infections?

Three quarters of children will have had 1-4 ear infections by the age of 2, most commonly between 3-18 months. They occur in the newborn and in older children but are less common after the age of 5.

#### What causes ear infections?

A respiratory infection such as a cold or sore throat can block the tube

(the Eustachian tube) draining the space (the middle ear) behind the eardrum. (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)

Rapid blockage can cause pain and distress as the eardrum is prevented from moving. If the fluid gets infected, the pain is severe and the eardrum can sometimes rupture, leading to a discharge.

### What can I expect to happen?

#### How long are my symptoms likely to last?

The pain of an ear infection usually lasts up to 4 days and this pain is not reduced by antibiotics. If the symptoms should be improving, antibiotics can be a few days longer until they clear.

#### When are antibiotics recommended?

Antibiotics are usually used (NICE) recommend antibiotics only when the ear is discharging or for a child under 2 with an infection in both ears.

#### Delayed prescription

Most ear infections cannot be prevented and will clear by themselves over a day or two.

If it is thought antibiotics might be required, you may be given a

delayed prescription and encouraged to wait a day or two to see

if symptoms improve (they usually do).

### What can I do myself to get me or my child better – now and in the future?

#### Painkillers

Painkillers are the most important treatment of a child's ear infection and ibuprofen can take a small rate of the dose for specific ages given on the outside, particularly with a young child.

#### Home remedy

Some people will find applying a warm flannel to the ear helps.

#### Encouragement

Feeling happy helps the body fight the infection.

#### Stop smoking

Children who smoke their houses suffer from fewer ear infections.

Breast fed children have fewer ear infections.

#### Use of dummy

Although using a dummy increases the likelihood of an infection, it may decrease the likelihood of ear drum if used as the child is going off to sleep.

### When should I seek medical help?

#### Warning symptoms and signs include:

##### High fever

NICE recommends that you call a professional urgently for any child under 5 months with a temperature of 38 degrees or over or aged between 5-5 months with a temperature of 38 degrees or more if your child has a temperature for over 5 days you should also contact a professional.

##### Signs of severe illness

Severely unwell or still not improving after 2-3 days. New discharge or swelling around the ear. Vomiting. Dizziness. Ropiness, redness, or irritability.

When can I find out more? Check out the NICE Clinics website (<http://www.nice.org.uk/clinics>) and NHS Choices website (<http://www.nhs.uk>) for more information on ear infections with medical help from a health professional.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

When can I find out more? Check out the NICE Clinics website (<http://www.nice.org.uk/clinics>) and NHS Choices website (<http://www.nhs.uk>) for more information on ear infections with medical help from a health professional.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

Produced by the Self Care Team ([www.nhs.uk/self-care](http://www.nhs.uk/self-care)) and reviewed on 2 Dec 2012. Please contact [library@nhs.uk](mailto:library@nhs.uk) if you have any comments or suggestions.

# Home care is best

Most common illnesses don't need antibiotics

**This is how long they may last**

Ear infection	4 days
Sore throat	1 week
Common cold	1½ weeks
Sinusitis	2½ weeks
Cough or bronchitis	3 weeks

**Your local pharmacist can recommend medication to help ease symptoms**

# Stats Pre-campaign

October 2012	Antibiotics Given	Antibiotics not Given	Total	Percentage Given Antibiotic
	148	207	355	41.7%

# Stats Post-campaign

January 2013	Antibiotics Given	Antibiotics not Given	Total	Percentage Given Antibiotic
	116	322	438	26.5%

# Issues

- Patient expectations
- Sore throat evidence – SIGN/NICE
- Secondary care
- Did not involve pharmacists
- ?Effect on appointments – wait and see
- Pneumonia guidelines?

# Everyone's a winner!

Results – per month

**15.2%** reduction in use of antibiotics

**67** people per month avoided antibiotics

**804** per year avoid unnecessary antibiotics

**50/1,000** pts on practice list will benefit

Save the country from a microbial apocalypse!

# Winner



**COMING TO A PRACTICE NEAR YOU?**

**THE WORLD HEALTH ORGANISATION**  
PRESENTS

# Apocalypse Now

18

# All on the Self Care Forum website

[http://www.selfcareforum.org/  
resources/case-studies/](http://www.selfcareforum.org/resources/case-studies/)

**Reducing antibiotic prescribing for self-limiting  
respiratory tract infections in primary care: a pilot study.**

Smith P, McQuattie Ki, Hogg K. *SelfCare* 2014;5(5):110-114.