

- **Antimicrobials**
- **LES's**
- **Hydroxycarbamide 500mg/5ml Suspension**
- **Tenofovir**
- **Snippets**

## Antimicrobials - What is the Scale of the Problem?

Antimicrobial resistance, and the lack of new antibiotics, has been described by the World Health Organisation as one of the top 3 threats to humankind. The Chief Medical Officer in England, Dame Sally Davies also recently described it to be **'as big a threat as terrorism'**. Unintended consequences of antimicrobial use include toxicity, the selection of pathogenic organisms (e.g. *Clostridium difficile*) and the emergence of antimicrobial resistance. The development of resistance could mean that common infections become untreatable and that procedures such as chemotherapy and surgery become much higher risk, or not possible due to lack of prophylaxis and treatment options.

This article relates the story so far in the crusade to improve Antimicrobial Stewardship within NHSGGC, and highlights the key role Community Pharmacists can play to help.

### What is Antimicrobial Stewardship?

**Antimicrobial Stewardship** aims to optimise clinical outcomes whilst minimising the unintended consequences of antimicrobial use for both individual patients and society as a whole.

### How is Antimicrobial Stewardship Promoted within NHSGGC?

The main driving force behind Antimicrobial Stewardship is the **Antimicrobial Management Team** which consists of doctors; specialist pharmacists; microbiologists; and infection control staff. Key activities relate to prescribing and include limiting the use of broad spectrum agents, and avoiding unnecessary antimicrobial use.

Within primary care one of the main interventions to date has been the introduction of Infection Management Guidance (2009) – see link. A number of electronic prescribing aids have been deployed to aid adherence including GP e-formularies; infection shortcodes linked to treatment choices (synonyms); Scriptswitch® prescribing decision software; and more recently an Android and i-Phone app of the guidelines, 'GP Antibiotics' (free to download).

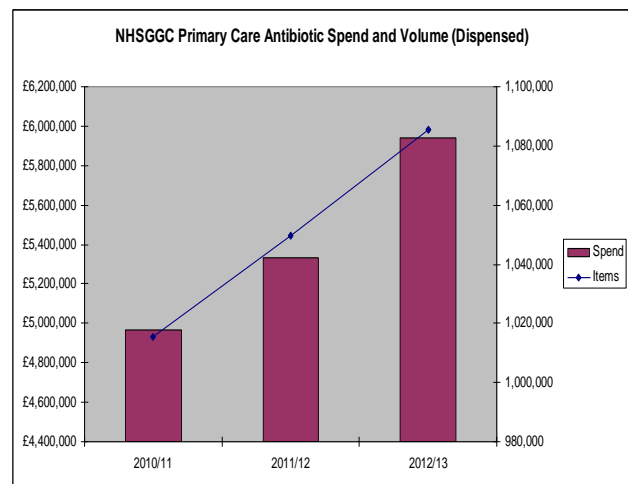
<http://www.staffnet.ggc.scot.nhs.uk/Info%20Centre/PoliciesProcedures/GGCClinicalGuidelines/Pages/CGDirectoryList.aspx?View={57ACBC31-8081-4E33-8FF7-8C93C5633CBC}&FilterField1=Guideline%5Fx0020%5FClassification&FilterValue1=Infections>

Local and national prescribing indicators have been in place for several years to encourage GP Practice prescribing review. In June 2013, the Scottish Government launched a HEAT target level 3 prescribing indicator focused on reducing overall GP antibiotic use. To support this, NES have developed the 'Scottish Reduction of Antibiotic Prescribing Programme (ScRAP)'. This aids Prescribing Support Teams in facilitating GP practice discussion, and aims to reduce inappropriate antibiotic use for self limiting lower respiratory tract infections. [http://www.nes.scot.nhs.uk/education-and-training/by-discipline/pharmacy/about-nes-pharmacy/educational-resources/resources-by-topic/infectious-diseases/antibiotics/scottish-reduction-in-antimicrobial-prescribing-\(scrap\)-programme.aspx](http://www.nes.scot.nhs.uk/education-and-training/by-discipline/pharmacy/about-nes-pharmacy/educational-resources/resources-by-topic/infectious-diseases/antibiotics/scottish-reduction-in-antimicrobial-prescribing-(scrap)-programme.aspx)

### Has Antimicrobial Stewardship been effective?

Whilst we have successfully reduced the use of broad spectrum antibiotics such as quinolones (ciprofloxacin), co-amoxiclav, cephalosporins, and clindamycin (4Cs) since 2009, the total volume of antibiotic prescriptions has increased (Figure 1). This has led to recognition nationally that focus should be on avoidance of unnecessary prescribing.

Figure 1. NHSGGC Primary Care Antibiotic Cost and Volume Totals



Despite an initial reduction in Healthcare Associated Infection (HAI), rates of *C. difficile* and Staphylococcus Aureus Bacteremias (SAB) are now on the increase in NHSGGC. Community acquired infection now constitutes >50% of cases. Health Boards continue to monitor monthly totals of these, and report these nationally. For local figures see:

[http://www.nhsggc.org.uk/content/default.asp?page=s1209\\_4](http://www.nhsggc.org.uk/content/default.asp?page=s1209_4)

## How can Community Pharmacists contribute to Antimicrobial Stewardship?

### 1. Self Management

- Around 80% of all antibiotics for humans are issued in Primary Care. It has been estimated that a quarter of the population will visit their GP each year for a respiratory tract infection, accounting for 60% of all primary care antibiotic prescriptions.
- Community Pharmacists have an important role to play in educating otherwise healthy patients on the expected duration of self-limiting illness (table 1), and providing reassurance and reinforcement of the message when an antibiotic is not required.
- Appropriate advice on self management including rest and adequate fluid intake should be given. In some cases, the addition of an over the counter (OTC) product may help alleviate presenting symptoms and eligible patients can access suitable products via the Minor Ailments Service (MAS). Patients should be advised of when they should contact their GP or NHS 24.
- It is important that patients understand why they need to avoid unnecessary antibiotic use. In particular that bacterial resistance can affect them personally as well as the wider society, and has the potential to lead to inability to treat infections.
- Patients who are eligible for annual influenza and one off pneumococcal vaccines should be encouraged to get these. <https://www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book>

**Table 1. Average durations for some self limiting illnesses**

Illness	Lasts on Average	Evidence Base (acute infection in otherwise well)
Ear Infection	<b>4 days</b>	Otitis media: 89% resolve spontaneously (Cochrane 2013) Antibiotics greater benefit in children <2 years with bilateral symptoms or with in those with otorrhoea (Rovers et al)
Sore Throat	<b>1 week</b>	Without antibiotics 40% will resolve after 3 days and 90% after 7 days (Cochrane 2006)
Common cold	<b>1 ½ weeks</b>	See also sore throat/ cough/ sinusitis
Sinusitis	<b>2 ½ weeks</b>	80% resolve in 14 days with no antibiotics (Cochrane 2008). Antibiotics do not make a major difference to most people with acute sinusitis in primary care (Cochrane 2011).
Cough/ bronchitis	<b>3 weeks</b>	Antibiotics reduced symptoms by only 1 day in an illness lasting up to 3 weeks (Cochrane 2004). A more recent article suggests no benefit on symptom duration (Llor et al, 2013). As many as 12,255 patients need to be treated with an antibiotic to prevent one admission with pneumonia (Meropol Sb et al 2013)

### 2. No or Delayed Prescribing

- The link below is to a patient information leaflet that has recently been issued to GPs within NHSGG&C. This is intended for use where either a prescription is not required, or delayed prescribing is appropriate, to aid patient understanding. <http://www.rcgp.org.uk/clinical-and-research/target-antibiotics-toolkit/patient-information-leaflets.aspx>
- Delayed prescribing can be a useful way to reduce antibiotic consumption, and GPs are encouraged to consider this in cases where there is no immediate need to prescribe, but the 'safety-net' of a prescription may be required should duration be prolonged, or the patient condition deteriorates. Reducing consumption limits the development of resistance at an individual and societal level and avoids the risk of adverse drug affects and interactions.
- A patient may be advised to only collect a prescription after 'x' days from either the GP surgery or the Pharmacy if any anticipated improvement is not seen. The use of delayed prescribing has been shown to **not** adversely affect outcome (Cochrane 2007).
- Community Pharmacists have an important role to play in educating patients on why an antibiotic may not always be required, and particularly in the concept of delayed prescribing. If presented with a script intended for delayed use, Community Pharmacies may wish to consider holding off dispensing, unless out of hours access to the antibiotic may be required. You may also find the leaflet above useful during patient consultations.

### 3. Safe and Appropriate Use

- Current NHSGG&C Primary Care Infection Management Guidance (link above) supports the use of adequate doses for the minimum number of days required for the infection type and severity (e.g. 3 day course for uncomplicated female UTI; 5 days for acute bronchitis). Prolonged course durations increase antibiotic burden, and in otherwise healthy patients may be worth querying with the prescriber.
- It is important that patients take their antibiotic regime as prescribed, and complete the course. In cases where this is not possible due to tolerability, they should be encouraged to return any unused antibiotics for safe disposal.
- In patients prescribed a quinolone (e.g. ciprofloxacin) or tetracycline (e.g. doxycycline), it is important to check if they are taking any medicines or foods containing cations (e.g. iron, calcium, antacids) which may affect absorption if taken around the same time. See Postscript January 14 for further guidance. <http://www.ggcprescribing.org.uk/blog/postscript-79-january-2014-antibiotic-interactions/>
- Consideration should also be given to the risk of any antibiotic drug-drug interactions <http://www.ggcprescribing.org.uk/blog/postscript-acute-11-june-2013/>

#### 4. Further Learning

Topic	Format	Link
Self Management of Respiratory Tract Infections	2 hours e-learning RCGP module (free via registration)	<a href="http://www.rcgp.org.uk/courses-and-events/online-learning/ole/managing-acute-respiratory-tract-infections.aspx">http://www.rcgp.org.uk/courses-and-events/online-learning/ole/managing-acute-respiratory-tract-infections.aspx</a>
Antibiotic Prescribing for today's practitioner	NES/ HIS e-learning (free via learnpro registration)	<a href="http://www.nes.scot.nhs.uk/education-and-training/by-theme-initiative/healthcare-associated-infections/online-short-courses/antibiotic-prescribing.aspx">http://www.nes.scot.nhs.uk/education-and-training/by-theme-initiative/healthcare-associated-infections/online-short-courses/antibiotic-prescribing.aspx</a>
Bugs and Drugs (Part 1. microbiology; Part 2. spectrum of activity and Part 3. C. difficile)	NES (webinar)	<a href="http://www.nes.scot.nhs.uk/education-and-training/by-discipline/pharmacy/about-nes-pharmacy/educational-resources/resources-by-topic/infection/antibiotics/bugs-and-drugs-summary-of-pharmaceutical-microbiology.aspx">http://www.nes.scot.nhs.uk/education-and-training/by-discipline/pharmacy/about-nes-pharmacy/educational-resources/resources-by-topic/infection/antibiotics/bugs-and-drugs-summary-of-pharmaceutical-microbiology.aspx</a>

### Community Pharmacy Local Enhanced Services (LES's)

The Board has secured additional funding to support the introduction of two new Locally Enhanced Services (LES's) to complement those already in place. From April, all contractors will be invited to subscribe to the Medicine Management, Biphosphonate and Respiratory LES's with the LES on Care Home Returned Medicines Audit only available to those pharmacies contracted to provide this service. Overview details of each LES include.

#### Medicine Management

Continuation of the existing LES incorporating minor modifications to the previous arrangement. This LES seeks to improve the standard of prescribing and pharmaceutical care provided to patients by fostering an enhanced level of communication between the GP and pharmacy practices

#### Biphosphonate

This LES seeks to improve the standard of pharmaceutical care provided to patients on biphosphonate therapy by ensuring patients are counselled, care issues are recorded and resolved and that medication is supplied in appropriate containers

#### Respiratory

Provides an opportunity for community pharmacists to recruit at least 15 targeted patients per pharmacy to receive an enhanced level of pharmaceutical patients considered as 'high risk' because of poor control or poor level of engagement

### Care Home Returned Medicines Audit

Applicable to those pharmacies contracted to provide services to care homes and builds on work undertaken in 2013/14 with a few refinements. The audit aims to identify areas of poor practice in the management of medicines across the network where effort can be applied to improve the service

### Hydroxycarbamide 500mg/5ml Suspension

The Western Pharmacy Production Unit (PPU) has now discontinued the above item with immediate effect. Nova Laboratories can supply a product with a longer 3 month shelf life at a cost to Community Pharmacies of £54.10 for 100ml.

Pharmacies can now order this product from Nova Laboratories on 0116 223 0099 subject to first supplies being authorised in line with the Board's established procedures regarding changes in cost or new supply.

### Tenofovir

Community pharmacists are reminded that Tenofovir has been approved by the Scottish Medicines Consortium (SMC) for the treatment Chronic Hepatitis B and is listed in the GGC Formulary Section 5.3.3 Initiation of therapy is at Specialist level with ongoing supply maintained by a GP10 issued by a GP. Community pharmacies are requested to retain appropriate levels of stock to meet local demand

### SNIPPETS

#### Glasgow Addictions Service - Relocation

From 24 February, the Glasgow Addiction Service Centre Team have relocated from Templeton Business Centre to the new Possilpark Health and Care Centre at 99 Saracen Street, Glasgow, G22 5AP. Until personal contact numbers are allocated, the team can be contacted on the main telephone number at 0141 800 0660 and fax on 0141 336 6321

#### Glasgow Addictions Service – Shared Care Conference 18 March 2014

The next event in the GAS series of Shared Care Conferences is planned for 18 March at Hampden Park Conference Centre. Kick off is with a buffet from 6pm with the conference on Hepatitis C: Update for Shared Care commencing at 19.00. Details have already been circulated but please contact this office should these not be to hand.

#### Seasonal Influenza: Use of Antivirals 2013/14

A CMO Letter issued on 17 February (SGHD/CMO(2014)5) advised that, due to the current prevalence of influenza virus infection in the general population, antiviral drugs can now be prescribed for the prevention or treatment of influenza where this is deemed clinically appropriate. Community pharmacists are recommended to ensure they have access to sufficient stocks to meet local demand.