PROMOTING PRUDENT ANTIBIOTIC PRESCRIBING IN NHSGGC HOSPITALS:

The Antimicrobial Management Team

Within Scottish Health Boards, Antimicrobial Management Teams (AMTs) have been established to promote this goal through the development of local antimicrobial prescribing policy and practice frameworks including the development, review and audit of antibiotic policy and guidance. In the NHSGGC, the AMT consists of a physician, microbiologist and pharmacist and it is advised by a multi-disciplinary sub-committee of the ADTC, the antimicrobial utilisation committee (AUC). The following article has been contributed by Dr Andrew Seaton (lead doctor), Dr Brian Jones (lead microbiologist), Ysobel Gourlay (lead pharmacist) and Scott Bryson (NHSGGC Pharmaceutical Adviser). For full details of the guidelines mentioned below and further information on cost comparisons, see NHSGGC Guidelines on our website.

Antimicrobial use is associated with a complex mix of individual patient benefits and risks as well as broader ecological effects on micro-organisms and the environment. Antimicrobial resistance and healthcare-associated infection, including Clostridium difficile and MRSA, are consequences of growing prescribing pressure in hospitals. More than ever, it is now incumbent on all prescribers to use antimicrobials appropriately and prudently.

A number of guidelines and policy documents have been developed and are available in poster form in clinical areas and via the internet and, from August 2008, via the GGC 'therapeutics handbook'. To date, the following documents have been approved by the ADTC for widespread use in GGC hospitals;

• Infection Management Guideline
Developed for the empirical management of most bacterial infections in adults encountered in hospitals.
• Intravenous to Oral Switch Therapy (IVOST) Guideline
Developed to encourage timely and safe switch from IV to oral antibiotic therapy.
• Alert Antimicrobial Policy
Developed to limit the use of broad spectrum or expensive agents. This policy document provides a list of agents whose use is limited to specific indications and/or on the advice of a clinical microbiologist or infectious diseases physician.

Infection management guidance in adults
These are empiric management guidelines for adult patients with suspected bacterial infection in hospital. Guidance is given based on the anatomical site of infection and potential infecting organisms. The severity of the infection often determines the route or choice in the agent. The guidance defines the criteria for sepsis and the British Thoracic Society community acquired pneumonia severity criteria.

PostScRipt
from the
NHSGGC Area Drug & Therapeutics Committee
Issue 44 March 2008

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Website
http://www.ggcformulary.scot.nhs.uk

Prescribers are encouraged to use 'simple' (narrow spectrum) therapy whenever possible, to 'switch' to oral therapy when appropriate and to 'stop' when appropriate (limit the duration of therapy).

Particular emphasis is given within the guidance to reducing cephalosporins, co-amoxiclav and fluoroquinolones which are particularly associated with C difficile and MRSA. Standardised dosing is also given. It is estimated that these guidelines will encompass about 90% of infections treated empirically in hospitals but will not replace advice from infection specialists, particularly when an organism has been isolated in the laboratory or the clinical condition evolves unexpectedly.

IV-Oral antibiotic switch therapy (IVOST) guideline
IV therapy is often unnecessarily prolonged in hospital. This may be due to improving clinical status and anxiety over changing a successful therapy or lack of awareness of suitable oral options. Prolonged IV therapy risks IV site infections and bacteraemia, prolonged admission and unnecessary antibiotic expenditure. The IVOST criteria in the box below have been developed to empower prescribers to switch early and appropriately. Previous audits of this approach have shown it to be associated with significant reduction in duration of therapy, hospital stay and expenditure.

Specific indications for intravenous therapy

- **Oral route compromised** - vomiting, nil by mouth, reduced absorption, mechanical swallowing disorder, unconscious
- **Continuing sepsis** (see sepsis criteria)
- **Deteriorating clinical condition**
- **Specific indication:** meningitis, endocarditis, immuno-suppression, bone/joint infection, deep abscess, bronchiectasis
- **Skin and soft tissue infection,** heat, erythema and induration or sepsis
- **No oral formulation of the antibiotic available**

If none of these criteria are present, switch to oral therapy and use a narrow spectrum agent whenever possible.

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For all article references, check our website
http://www.ggcformulary.scot.nhs.uk

Alphabetical list of most recent ADTC decisions

For full details of SMC advice, visit www.scottishmedicines.org For NICE advice, visit www.nice.org.uk For previous ADTC decisions, visit www.ggcformulary.scot.nhs.uk

Drug	Indication under consideration (There may be other licensed indications)	Glasgow decision	
Allergen extract of grass pollen (Phleum pratense) (Grazax®)	Grass pollen induced rhinitis and conjunctivitis in adult patients with clinically relevant symptoms and diagnosed with a positive skin prick test and/ or specific IgE test to grass pollen.	Non-*Formulary.*	x
Beclometasone 100mcg, formoterol 6mcg metered dose inhaler (Fostair®)	Asthma, where use of a combination product (inhaled corticosteroid and long beta2-agonist) is appropriate: patients not adequately controlled with inhaled corticosteroids and 'as needed' inhaled short acting beta2-agonist; or patients already adequately controlled on both inhaled corticosteroids and long-acting beta2-agonists.	*Formulary.* (Preferred List). Restricted to use in patients on step 3 or above of the BTS/SIGN asthma guidelines.	✓R
Capecitabine (Xeloda®)	First line treatment of advanced gastric cancer in combination with a platinum-based chemotherapy regimen.	*Formulary.* (Total *Formulary*). Acknowledge new indication. Restricted to specialist use in the treatment of gastric cancer in accordance with regional protocol.	✓R
Clobetasol propionate (Etrivex®)	Moderate scalp psoriasis in adults.	Non-*Formulary.*	x
Colesevelam (Cholestagel®)	Primary hypercholesterolaemia, co-administered with a statin, as adjunctive therapy to diet to provide an additive reduction in LDL-cholesterol levels in patients not adequately controlled with a statin alone. Or as monotherapy as adjunctive therapy to diet for reduction of elevated total and LDL-cholesterol in patients with isolated primary hypercholesterolaemia, in whom a statin is considered inappropriate or is not well tolerated.	Non-*Formulary.*	x
Fondaparinux (Arixtra®)	ST segment elevation myocardial infarction in patients who are managed with thrombolytics or who initially are to receive no other form of reperfusion therapy.	*Formulary.* (Total *Formulary*). Acknowledge new indication. Restricted to use in the treatment of STEMI only in accordance with local protocols.	✓R
Glyceryl trinitrate (Rectogesic®)	Relief of pain associated with chronic anal fissure.	Non-*Formulary.*	x
Latanoprost, timolol (Xalacom®)	Reduction of intraocular pressure in patients with open angle glaucoma and ocular hypertension who are insufficiently responsive to topical beta-blockers or prostaglandin analogues.	*Formulary.* (Total *Formulary*). Acknowledge new indication. Restricted to specialist initiation.	✓R
Levetiracetam (Keppra®)	Adjunctive therapy in the treatment of partial onset seizures with or without secondary generalisation in children from 4 years of age with epilepsy.	*Formulary.* (Total *Formulary*). Acknowledge new indication. Restricted to specialist initiation.	✓R
Levetiracetam (Keppra®)	Adjunctive therapy in the treatment of myoclonic seizures in adults and adolescents from 12 years of age with juvenile myoclonic epilepsy.	*Formulary.* (Total *Formulary*). Acknowledge new indication. Restricted to specialist initiation.	✓R
Levetiracetam (Keppra®)	Adjunctive therapy in the treatment of primary generalised tonic-clonic seizures in adults and adolescents from 12 years of age with generalised idiopathic epilepsy.	*Formulary.* (Total *Formulary*). Acknowledge new indication. Restricted to specialist initiation.	✓R
Levetiracetam (Keppra®)	Monotherapy in the treatment of partial onset seizures with or without secondary generalisation in patients from 16 years of age with newly diagnosed epilepsy.	*Formulary.* (Total *Formulary*). Acknowledge new indication. Restricted to specialist initiation for patients for whom the range of traditional drugs normally used for first line treatment are ineffective or unsuitable.	✓R
Mesalazine (Asacol®)	Moderate acute exacerbations of ulcerative colitis.	*Formulary.* (Preferred List). Acknowledge new strength.	✓
Mesalazine (Asacol®)	Mild acute exacerbations of ulcerative colitis.	*Formulary.* (Preferred List). Acknowledge new strength.	✓
Mesalazine (Asacol®)	Maintenance of remission in ulcerative colitis and Crohn's ileo-colitis.	*Formulary.* (Preferred List). Acknowledge new strength.	✓
Naftidrofuryl	Peripheral vascular disease.	*Formulary.* (Total *Formulary*). Refer to SIGN 89. Treatment effect should be reassessed after three months and discontinued if of no benefit. There is poor evidence supporting the use of vasodilator treatment and it is important that contributory risk factor treatments, eg antiplatelet and cholesterol-lowering therapies, are considered.	✓R
Parathyroid Hormone (Preotact®)	Use in women with severe osteoporosis and at least two prior vertebral fractures or equivalent high risk.	*Formulary.* (Total *Formulary*). Restricted to specialist use for the treatment of osteoporosis following assessment of fracture risk including measurement of bone mineral density.	✓R
Pemetrexed (Alimta®)	Monotherapy for the treatment of patients with locally advanced or metastatic non-small cell lung cancer after prior chemotherapy.	Non-*Formulary* for this indication.	x
Semisodium valproate (Depakote®)	Mania in bipolar disorder.	*Formulary.* (Total *Formulary*). Restricted to specialist initiation.	✓R
Telbivudine (Sebivo®)	Chronic hepatitis B in adult patients with compensated liver disease and evidence of viral replication, persistently elevated serum alanine aminotransferase levels and histological evidence of active inflammation and/or fibrosis.	*Formulary.* (Total *Formulary*). Restricted to specialist initiation in line with Hepatitis MCN protocol.	✓R
Trabectedin (Yondelis®)	Advanced soft tissue sarcoma, after failure of anthracyclines and ifosfamide, or for patients unsuited to receive these agents.	Non-*Formulary.*	x
Vinorelbine oral (Navelbine®)	Advanced breast cancer stage III and IV relapsing after, or refractory to, an anthracycline-containing regimen.	*Formulary.* (Total *Formulary*). Acknowledge new formulation. Restricted to specialist use in accordance with regional protocol.	✓R
Zopiclone	Short term treatment of insomnia.	*Formulary.* (Total *Formulary*). Restricted to use only in patients who require pharmacological treatment where temazepam is not tolerated or appropriate.	✓R

✓= *Formulary* ✓R = *Formulary* (restricted) **x** = non-*Formulary* **?** = awaiting final decision

Change to clopidogrel supply arrangements

To promote consistency across NHSGGC, the Managed Clinical Network and Prescribing Management Group have agreed new supply arrangements when combination therapy of aspirin and clopidogrel is initiated within hospital.

- Where the proposed duration is of three months or less, all patients prescribed dual antiplatelet therapy for acute coronary syndrome and percutaneous coronary intervention should have the full course of treatment supplied on discharge. The immediate discharge letter will be annotated to indicate this.
- For those patients prescribed a duration greater than three months, or where the duration of treatment is unknown or indefinite, only a standard supply will be made at discharge. The length of this supply will vary between sites from one week to one month.

The new NHSGGC Antiplatelet Guideline is expected to be reviewed by the ADTC in April. Once agreed, details will be highlighted in a future issue.

PostScript Extra No 11

Angiotensin II Receptor Antagonists (AIIRAs)

The electronic version of this bulletin is now available under the *PostScript Extra* link on the ADTC website. It summarises the evidence for this class of drugs in hypertension, heart failure (including heart failure post-MI) and diabetic renal disease. The bulletin discusses target doses, monitoring, the place in therapy and use in combination with ACE inhibitors. There are three links available on the site; the full bulletin, a summary version and an outline of the main randomised controlled trials.

Promoting prudent antibiotic prescribing
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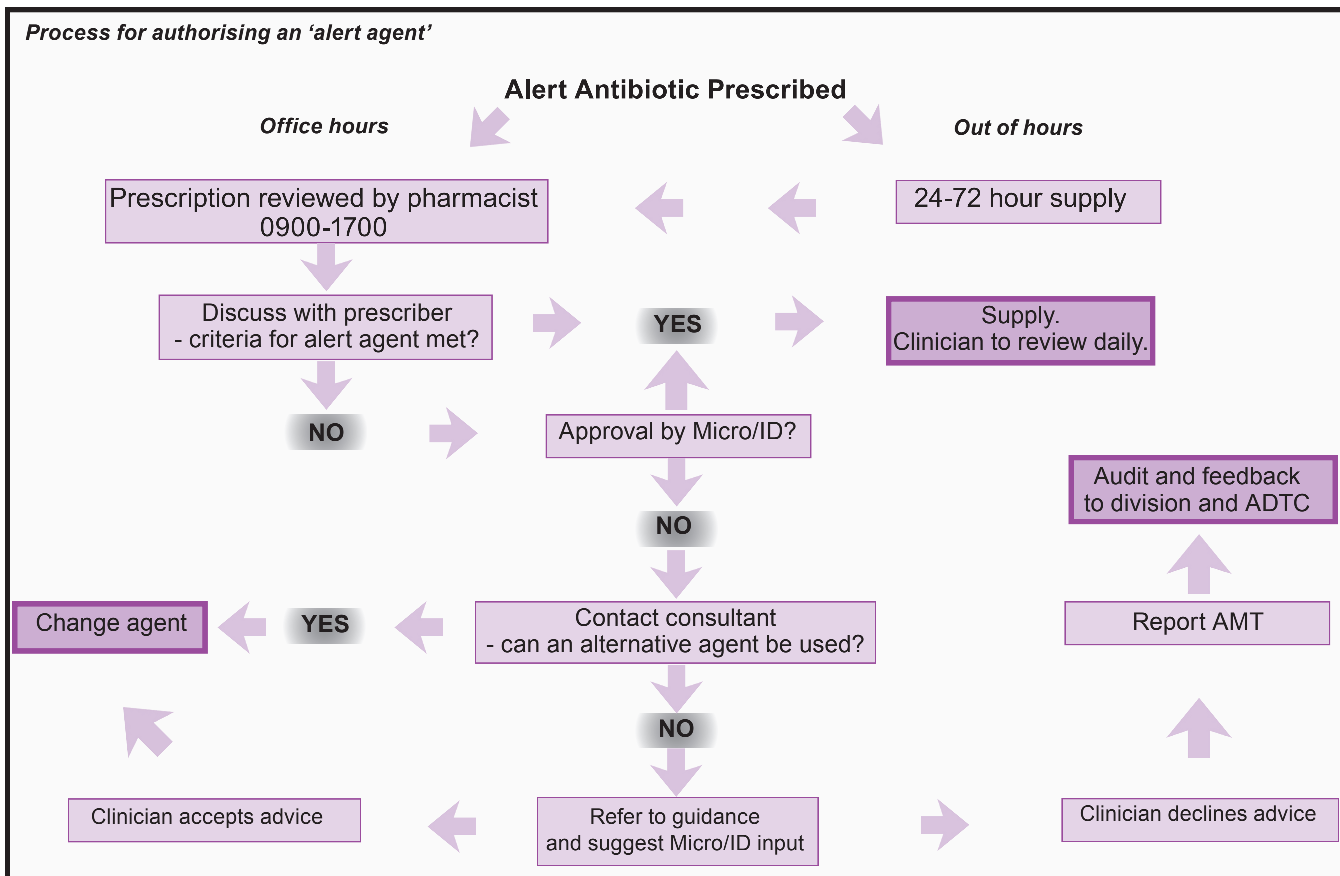

'Alert' or restricted antibiotics
These are valuable agents reserved for exceptional circumstances and are rarely justifiable in community acquired infection. The full list is on the website but includes piperacillin-tazobactam (Tazocin®), meropenem and linezolid. They are identified by virtue of their broad spectrum of activity, potential toxicity and/or high cost. In most infections in hospitals, first line therapy is appropriate, with 'alert antibiotics' reserved for complex infections caused by organisms that are resistant to first line antibiotic therapy on the advice of an infection specialist. Pharmacy will only supply these agents if an 'Alert Antibiotic form' is completed. Clinical or antimicrobial pharmacists will complete the form in conjunction with prescribers.

When a clinician wishes to prescribe an alert agent outwith the stated indication, the choice must be discussed with a microbiologist or infectious diseases physician, and indication or reason for use recorded in the patient's medical notes (see diagram above).

...A word on cost effectiveness
We all agree that the appropriate antibiotic should be given to the appropriate patient (taking into account drug interactions, tolerability and contra-indications) for the appropriate reason (defined site and severity of infection), targeting the appropriate organism(s) at the appropriate time, irrespective of cost. Patients should not be denied an antibiotic on the basis of its cost alone. However, in a world of diminishing, shared resources, when equivalent agents exist and cost differentials are apparent, it is important to prescribe prudently, choosing agents that exert the least ecological and financial pressure. For example, teicoplanin is at least four times the price of vancomycin when dosed correctly but the spectrum of activity and efficacy is almost identical. Tazocin® is 14 times the price of ceftriaxone + metronidazole IV. Comparative prices of other antimicrobials can be seen on the website.

For further information about the AMT, please contact:
- Dr Andrew Seaton
andrew.seaton@northglasgow.scot.nhs.uk
- Dr Brian Jones
brian.jones@northglasgow.scot.nhs.uk
- Ysobel Gourlay
ysobel.gourlay@northglasgow.scot.nhs.uk

Area Drug & Therapeutics Committee
Chair: Dr J Fox

Communications Sub-group
Chair: Mrs A Thompson

Published by the Communications Sub-group
to reflect the views of the Area Drug & Therapeutics Committee
but not necessarily those of NHS Greater Glasgow and Clyde.

PostScript Editor: Mrs A Thompson
Prescribing Team, NHS Greater Glasgow & Clyde
Pharmacy & Prescribing Support Unit
Queen's Park House, Victoria Infirmary, Langside Road
Glasgow G42 9TY Tel: 0141 201 5214 Fax: 0141 201 5338
E-mail: audrey.thompson@nhs.net

PostScript Web editor: Dr A Power

© NHSGGC Area Drug & Therapeutics Committee March 2008
Design, layout and production control:
Strathcashel Publications Project Management (01505 850 344)
Printed by: Mackay & Inglis, Glasgow