PostScriptAcute

NHS Greater Glasgow and Clyde

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In this issue:

Information included is specific to the use of medicines in the **adult** setting.

Clozapine, depot antipsychotics & Medicines Reconciliation

Clozapine is a second generation (atypical) antipsychotic used for treatment-resistant schizophrenia. As it has the potential to cause agranulocytosis and neutropenia, there are mandatory registration, monitoring, prescribing and dispensing requirements which restricts the supply to secondary care.

Antipsychotic information on ECS

As GPs do not issue prescriptions for clozapine, it is unlikely that the medicine will appear on the Emergency Care Summary (ECS). This may have been a contributory factor in reports where patients did not get their clozapine prescribed on admission to hospital; resulting in unnecessary admissions to a mental health hospital.

A GGC Good Practice guide has recently been issued to GPs on how to record medicines that they are not prescribing or supplying; consequently the number of 'hospital' medicines (such as clozapine) recorded on ECS is expected to increase.

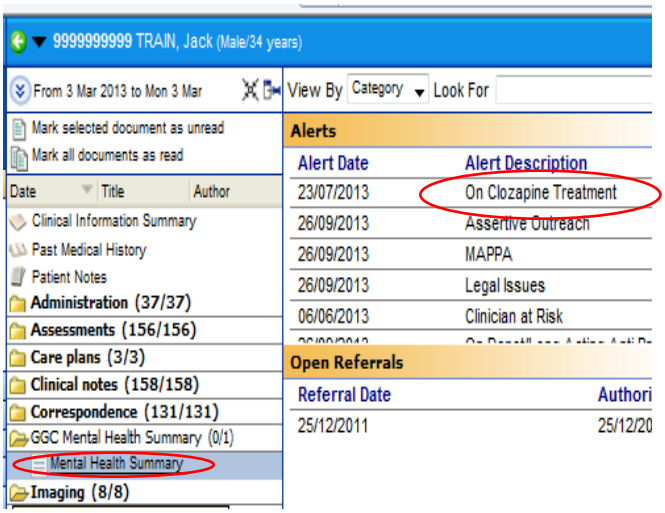
Antipsychotic information on Clinical Portal

To further improve Medicines Reconciliation for Mental Health patients, two medicines related alerts ('on clozapine treatment' and 'on depot antipsychotic treatment') are being added to the NHSGGC Mental Health Summary on Clinical Portal. The clozapine alerts are already active and the antipsychotic depot alerts will be available from May 2014.

If there is reason to suspect that a patient is prescribed either clozapine or an antipsychotic depot, follow the advice below:

1. Access their record on Clinical Portal.
2. Open the NHSGGC Mental Health Summary

   Please note: A 'highly sensitive information' warning will appear; Health Care Professionals, involved in the care of the patient, should click 'continue'.
3. Check for the presence of an alert that indicates they are either on clozapine (see below) or an antipsychotic depot.



4. If a clozapine alert is present, contact Leverndale Pharmacy (0141 211 6525) during week day working hours for confirmation of dose and patient status. Out of hours contact the Mental Health On Call Pharmacy Team via Leverndale switchboard (0141 211 8300).
5. If an *antipsychotic* depot alert is present, contact the relevant Community Mental Health Team (detailed in the Mental Health Summary) to confirm the drug, dose and next due date.
6. Please note that the absence of an alert **does not** confirm the absence of an antipsychotic

prescription. It may be possible to clarify by contacting Mental Health Services.

REMEMBER

If you admit a patient with a diagnosis of schizophrenia but their ECS has no record of any antipsychotic prescription, this may indicate a specialist prescribed medicine such as clozapine or an antipsychotic depot.

Suggested action:

-Check the Mental Health Summary on Clinical Portal for an alert.

-If no alert is present contact Mental Health Services who may help establish whether the ECS/Clinical Portal Medicines Reconciliation information is complete.

Voriconazole Safety message

Voriconazole is a broad spectrum, triazole antifungal agent indicated primarily in immunocompromised patients with progressive, possibly life-threatening infections, e.g. invasive aspergillosis. Treatment of candidaemia in non-neutropenic patients is restricted to those who cannot tolerate or are at increased risk of side effects of amphotericin B. The NHSGGC Formulary restricts its use to specialist prescribers only.

As the duration of treatment may be a number of months, prescribers in the acute setting may encounter patients taking this medicine and should be aware of the key prescribing messages below:

KEY MESSAGES

- There are a number of clinically significant drug interactions to be considered when prescribing for patients on voriconazole.
- Voriconazole had been associated with QT interval prolongation and rare cases of torsades de pointes.
- Voriconazole can (rarely) cause serious hepatic toxicity.

A more detailed discussion of voriconazole interactions and adverse effect profile may be found here.

Check for drug interactions :

- **BNF Appendix 1**
- **Individual Summary of Product Characteristics (SPC)** http://www.medicines.org.uk/emc/
- **Clinical Pharmacist or Medicines Information**

Guideline News

SIGN Clinical Guidelines
Management of lung cancer
NICE Clinical Guidelines*
Osteoarthritis
Psychosis and schizophrenia in adults

GGC Guidelines
Infection
Suspected clostridium difficile infection in adults
Assessment and management of adult patients with hepatitis B infection
Acute ophthalmic presentations
Traumatic hyphaema iridocyclitis management
Open globe injuries and lacerations management
Intraocular foreign body management guidelines
Herpes zoster ophthalmicus management guidelines
Other
Management of hypertension
Chronic non malignant pain opioid guideline
Coming soon
Management of diabetes
Algorithm for the treatment of hypoglycaemia in adults with diabetes in hospital
Use of anti-TNF alpha medications in adult Crohn's disease (update)
Methylnaltrexone for refractory opioid–induced constipation in palliative care adults (update)

**NICE Guidelines are developed for prescribers in NHS England and Wales and as such may not always follow NHS Scotland prescribing policy e.g. SMC advice. They should always be used in conjunction with relevant NHSGGC Formulary and Clinical Guideline.*

Iron and antibiotic interactions

A clinically significant interaction can occur between both quinolones (e.g. ciprofloxacin) and tetracyclines (e.g. doxycycline) and the following products containing multivalent cations:

Examples of multivalent cation products
Aluminium or magnesium-containing antacids
Multivitamins
Preparations containing calcium
Preparations containing iron
Preparations containing zinc
Sucralfate
Milk and dairy products

The interaction is caused by the formation of insoluble chelation complexes in the gastrointestinal tract that inhibit antibiotic absorption. Serum antimicrobial levels can fall below the minimum inhibitory concentration, become sub-therapeutic (particularly against organisms such as staphylococci and Pseudomonas aeruginosa) and result in treatment failure; this may also contribute to the development of antimicrobial resistance.

The case below demonstrates the clinical significance of the interaction:

EXAMPLE CASE

- An elderly male patient was treated for an infective exacerbation of COPD with oral doxycycline.
- The patient's symptoms didn't improve within the first 24-48 hours of antibiotic therapy and escalation of empirical therapy was considered.
- It was noted that the patient was receiving concomitant ferrous fumarate.
- Iron treatment was withheld and symptoms improved significantly over the next 24-48 hours without the need to escalate antimicrobial therapy.

If a patient is prescribed a multivalent cation product and requires a quinolone or tetracycline antibiotic, follow the advice below:

- Whenever possible, products containing multivalent cations should be stopped for the duration of the quinolone or tetracycline course.
- If the combination cannot be avoided then ensure that the antibiotics are not administered for at least 2 hours before or after the multivalent cation product.

Learning from incidents: Gentamicin dose frequency errors

Recent figures suggest that approximately 16% of medication incidents reported in GGC were associated with antimicrobials and of these 40% were attributed to gentamicin. A third of the gentamicin related incidents were categorised as 'wrong prescription frequency'. A large proportion of such errors relate to gentamicin being **prescribed 48hrly** but inadvertently **administered 24hrly**.

Gentamicin is excreted via the kidneys therefore the dose and frequency is calculated according to the patient's renal function. According to NHSGGC guidelines there are three possible options for gentamicin frequency when the initial dose is prescribed:

Creatinine clearance	Gentamicin frequency
> 50 ml/minute	24 hourly dosing
20 - 50 ml/minute	48 hourly dosing
< 20ml/minute	Determined by measured concentrations

Serious gentamicin associated toxicity (including nephrotoxicity and ototoxicity) may result from doses given more frequently than intended. Awareness of the key prescribing and administration messages (see next page) should reduce the risk of gentamicin frequency errors.

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Key messages – Prescribers

- Ensure the frequency of gentamicin is clearly indicated on the gentamicin prescription chart as demonstrated below
- ALWAYS document action taken in response to measured levels. Tick dose frequency in 'Action/Comments' Section of the gentamicin prescription chart (see below)
- Take care to complete dates correctly on individual doses and do not prescribe >24 hours in advance
- Communicate gentamicin dosing plan (and any changes to it) at handovers and with nursing staff

Key messages – Nursing staff

- ALWAYS double check the intended frequency of gentamicin dosing before administration
- The predicted frequency should be indicated at the top right hand side of the gentamicin prescription chart and any changes to frequency in response to measured levels should be indicated in the Action/Comments section (see below)
- The kardex **should not be used** to determine frequency
- For individual doses - check the ***date*** the dose is prescribed for
- IF IN DOUBT - ASK: question any ambiguous prescriptions with prescriber