



Partners in improving local health

# Medicines Optimisation Update

## Proton Pump Inhibitors



### What this includes:

Ensuring that Proton Pump Inhibitors (PPIs) are appropriately prescribed and reviewed.

### Identifying the problem:

- Prescqiipp PPI audit: <https://www.prescqiipp.info/safety-of-long-term-ppis/category/166-safety-of-long-term-ppis>
- A care bundle to support this update is available on the NECS medicines optimisation website: <http://medicines.necu.nhs.uk/guidelines/cumbria-guidelines/>

### Suggested actions:

- Offer lifestyle advice to manage dyspepsia, e.g. healthy eating, weight reduction and smoking cessation, and avoiding known causes e.g. certain foods, eating late at night.
- Review medication for possible causes of dyspepsia. These include calcium channel blockers, nitrates, theophyllines, bisphosphonates, corticosteroids, or non-steroidal anti-inflammatory drugs (NSAIDs). In people needing referral for endoscopy, suspend NSAID use.
- Review long term PPI prescribing to reduce the potential risk of *Clostridium difficile*, bone fractures, higher mortality in older patients, acute interstitial nephritis, community acquired pneumonia, hypomagnesaemia, vitamin B12 deficiency and rebound acid hypersecretion.
- Offer an annual review to people needing long term management of dyspepsia to reduce potential risk of adverse effects above. Encourage them to try stepping down to the lowest effective dose needed to control symptoms, or 'as needed'/'on demand' to manage their own symptoms, or stopping treatment completely where appropriate. (There may be indications where the benefits of long term PPI use outweigh the risks e.g. Barrett's Oesophagus, oesophageal stricture dilation, and gastroprotection for NSAID treatment- assess on an individual basis and review regularly).
- BE ALERT to patients taking PPIs who present with a decline in renal function, particularly at the outset of treatment.
- When stopping a PPI, advise returning to self-treatment with antacid and/or alginate therapy where required, either prescribed or purchased over-the-counter (OTC), especially if rebound symptoms occur. (Antacids should be used for at least 2 weeks when withdrawing PPI treatment to help with rebound secretions).
- Avoid long term, frequent dose, continuous antacid therapy in functional dyspepsia (it only relieves symptoms in the short term rather than preventing them).
- Adults with dyspepsia or reflux symptoms should have a 2 week washout period before a test for *Helicobacter pylori* or endoscopy, if they are receiving proton pump inhibitor therapy.
- Refer adults presenting with dyspepsia or reflux symptoms for urgent direct access endoscopy to take place within 2 weeks if they have dysphagia, or are aged 55 and over with weight loss.
- Adults aged 55 and over with dyspepsia or reflux symptoms that have not responded to PPI treatment should have a discussion with their GP about referral for non-urgent direct access endoscopy.

NECS medicines optimisation website. Available at <http://medicines.necu.nhs.uk/guidelines/cumbria-guidelines/>

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**Author:** Heather Atkinson

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### Suggested actions:

#### Choice of PPI:

- Prescribe low acquisition cost PPIs in preference to high acquisition cost PPIs, for the shortest duration (and clearly documented indications). There is no evidence that any PPI is more effective than another. Offer histamine H<sub>2</sub>-receptor antagonist (H<sub>2</sub>RA) therapy (e.g. ranitidine) if the response to the PPI is inadequate.
- PPI first line Lothian choices are:
  - ADULT – Omeprazole or Lansoprazole , CHILD – Omeprazole
- Do not prescribe esomeprazole unless on specialist advice or for use via gastric tubes.
- Lansoprazole and Omeprazole dispersible TABLETS should be reserved for patients with swallowing difficulties or gastric tubes – please refer to prescribing advice in Cumbria guideline: A practice guide to reviewing requests for liquid Proton Pump Inhibitor (PPI) Specials (unlicensed preparations).
- Review any requests for PPI liquid specials.
- Advise patients to take Lansoprazole preparations at least half an hour BEFORE food for best effect (intake of food slows the absorption rate of lansoprazole and reduces bioavailability by 50%).
- If the patient currently taking clopidogrel, do not prescribe Omeprazole or Esomeprazole.

#### Resources:

- PrescQIPP Bulletin 92 May 2015: <https://www.prescqipp.info/safety-of-long-term-ppis/category/166-safety-of-long-term-ppis>
- All Wales Therapeutics and Toxicology Centre. All Wales Proton Pump Inhibitor and dyspepsia resource pack. Material to support appropriate prescribing of Proton Pump Inhibitors across Wales. April 2013. [www.awmsg.org/docs/awmsg/medman/All%20Wales%20Proton%20Pump%20Inhibitor%20and%20Dyspepsia%20Resource%20Pack.pdf](http://www.awmsg.org/docs/awmsg/medman/All%20Wales%20Proton%20Pump%20Inhibitor%20and%20Dyspepsia%20Resource%20Pack.pdf)
- NECS Medicines Optimisation Website: A practice guide to reviewing requests for liquid Proton Pump Inhibitor (PPI) Specials (unlicensed preparations). <http://medicines.necsu.nhs.uk/guidelines/cumbria-guidelines/>
- Treatment pathways for: Gastric Ulcer, Interventions for functional dyspepsia, Interventions for gastroesophageal reflux disease (GORD), Interventions for uninvestigated dyspepsia. Available at: <http://medicines.necsu.nhs.uk/guidelines/cumbria-guidelines/>

#### References:

- NICE Eyes on Evidence. Use of proton pump inhibitors (PPIs) on discharge from hospital and 1-year mortality in older patients. 2013, Issue 52, p7-9. [www.evidence.nhs.uk/](http://www.evidence.nhs.uk/)
- Proton pump inhibitors and the risk of acute kidney injury in older patients ( CMAJ OPEN 2015 ; 3 : E166-E171)
- Drug Safety Update. Proton pump inhibitors in long-term use: reports of hypomagnesaemia. <https://www.gov.uk/drug-safety-update/proton-pump-inhibitors-in-long-term-use-reports-of-hypomagnesaemia>
- Drug Safety Update. Proton pump inhibitors in long term use. 2012 <https://www.gov.uk/drug-safety-update/proton-pump-inhibitors-in-long-term-use-increased-risk-of-fracture>
- NICE Clinical Guideline 184. Dyspepsia and gastro-oesophageal reflux disease. September 2014. <https://www.nice.org.uk/Guidance/CG184>
  - Lothian Joint Formularies (Adult) Gastrointestinal:1.3 <http://www.lif.scot.nhs.uk/LothianJointFormularies/Adult/1.0/1.3/Pages/default.aspx>
- NICE QS96 – Dyspepsia and Gastro-oesophageal reflux disease in adults: Investigation and Management <https://www.nice.org.uk/guidance/qs96/chapter/list-of-quality-statements>
- Drug Safety Update. Clopidogrel and proton pump inhibitors: interaction—updated advice: <https://www.gov.uk/drug-safety-update/clopidogrel-and-proton-pump-inhibitors-interaction-updated-advice>
- NICE Clinical Knowledge summaries (CKS) Dyspepsia –unidentified cause: <http://cks.nice.org.uk/dyspepsia-unidentified-cause>