All Wales Medicines Strategy Group

Grŵp Strategaeth Meddyginiaethau Cymru Gyfan

# National Prescribing Indicators 2016–2017

## Supporting Information for Prescribers

February 2016

This report has been prepared by a multiprofessional collaborative group, with support from the All Wales Prescribing Advisory Group (AWPAG) and the All Wales Therapeutics and Toxicology Centre (AWTTC), and has subsequently been endorsed by the All Wales Medicines Strategy Group (AWMSG).

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For a full explanation of the evidence supporting the National Prescribing Indicators (NPIs), prescribing data and the terms used in this document, please refer to the National Prescribing Indicators 2016–2017 document on the All Wales Medicines Strategy Group (AWMSG) website.

This document summarises the AWMSG NPIs for 2016–2017 and provides points for consideration and links to supporting materials. The NPIs and supporting resources can be used to:

- Demonstrate quality improvement in therapeutics as part of revalidation (see General Medical Council requirements for revalidation);
- Encourage discussion and collaborative working through locality networks and cluster groups.

## PROTON PUMP INHIBITORS (PPIS)

***Measure:*** Defined daily doses (DDDs) per 1,000 prescribing units (PUs)

This indicator aims to encourage a reduction in the prescribing of PPIs due to the potentially serious adverse effects linked to their long-term use.

**Points for consideration**

- Initial recommendations for people with dyspepsia are to offer lifestyle advice on healthy eating, weight reduction, smoking cessation and avoiding factors associated with dyspepsia (e.g. alcohol, coffee, chocolate and fatty foods).
- Review medications for possible causes of dyspepsia (e.g. calcium antagonists, nitrates, theophyllines, bisphosphonates, corticosteroids and non-steroidal anti-inflammatory drugs [NSAIDs]).
- If medication is required, first-line treatment should be with an alginate either “as required” or regularly. PPIs should only be considered for short courses (4 weeks) where needed. If symptoms continue or recur, a PPI can be continued at the lowest dose possible to control symptoms, or on an “as-required” basis.
- Gastro-protection should be considered for people taking high-risk medicines, e.g. NSAIDs in osteoarthritis and rheumatoid arthritis.
- Adverse effects may be linked with long-term PPI use: *Clostridium difficile* infection, increased risk of bone fractures, community-acquired pneumonia and increased risk of mortality in older people.
- Other possible serious adverse effects include acute intestinal nephritis, hypomagnesaemia, vitamin $B_{12}$ deficiency and rebound hypersecretion syndrome. Although strong evidence is lacking to support the association between these adverse effects and long-term PPI use, the association is biologically plausible and has been shown in observational studies.
- National Institute for Health and Care Excellence (NICE) Clinical Guideline (CG) 184 recommends offering people who need long-term management of dyspepsia symptoms an annual review of their condition.
- Encourage people who need long-term management of dyspepsia symptoms to reduce their use of prescribed medication stepwise: by using the lowest effective dose, by trying “as-needed” use when appropriate, and by returning to self-treatment with antacid and/or alginate therapy.
- The AWMSG PPI and Dyspepsia Resource Pack provides support to review and discontinue PPIs.

## LIPID-REGULATING MEDICINES

***Measure:*** Items of bile acid sequestrants, fibrates, nicotinic acid and omega-3 fatty acid compounds (BNF 2.12 sub-set) as a percentage of total lipid-regulating items.

This indicator encourages prescribers to review and, if appropriate, revise prescribing in line with NICE guidance regarding lipid-regulating medicines: bile acid sequestrants, fibrates, nicotinic acid and omega-3 fatty acid compounds.

**Points for consideration**

- Use a statin of high intensity and low acquisition cost (NICE CG181).
- Offer atorvastatin 20 mg for the primary prevention of cardiovascular disease to people, with or without type 2 diabetes, who have a 10% or greater 10-year risk of developing cardiovascular disease, and to patients with type 1 diabetes in specific circumstances. (NICE CG181).
- If a high-intensity statin is not tolerated, aim to treat with the maximum tolerated dose; other strategies may include changing the statin to a lower intensity group.
- Do not routinely prescribe fibrates, and do not offer nicotinic acid, bile acid sequestrants and omega-3 fatty acid compounds, for the prevention of cardiovascular disease in the following: people who are being treated for primary prevention, people being treated for secondary prevention, people with chronic kidney disease (CKD), people with type 1 diabetes, people with type 2 diabetes, either as monotherapy or in combination with a statin (NICE CG181).

## INHALED CORTICOSTEROIDS (ICS)

***Measure:*** Low strength ICS items as a percentage of all ICS prescribing.

This indicator aims to encourage the routine review of ICS in people with asthma, particularly those on high doses, encouraging step down of the dose when clinically appropriate.

**Points for consideration**

- Potentially serious systemic side effects, such as adrenal suppression, growth failure, decrease in bone mineral density, cataracts and glaucoma, may be associated with ICS, particularly at high doses.
- To minimise side effects from ICS in people with asthma, the British Thoracic Society (BTS)/Scottish Intercollegiate Guidelines Network (SIGN) *British guideline on the management of asthma* recommends that the dose of ICS should be titrated to the lowest dose at which effective control of asthma is maintained. For information on equivalent doses of ICS relative to beclometasone see the *BTS/SIGN* guidance, and for dose equivalences of combination inhalers, this comparison table may be helpful.
- ICS dose reduction should be considered every three months, decreasing the dose by approximately 25–50% each time.
- NICE CG101 recommends that ICS should only be considered in combination with a long-acting beta-2 agonist in patients with stable chronic obstructive pulmonary disease who remain breathless or have exacerbations despite using short-acting bronchodilators.
- Where it is essential that a patient remains on the same device, prescribe by brand or refer to the BNF, MHRA and/or local guidance.

## HYPNOTICS AND ANXIOLYTICS

***Measure:*** Hypnotic and anxiolytic average daily quantities (ADQs) per 1,000 specific therapeutic group age–sex related prescribing units (STAR-PUs).

This indicator aims to encourage a reduction in the inappropriate prescribing of hypnotics and anxiolytics in Wales, which has been higher than that in England since before 2008.

**Points for consideration**

- The long-term use of benzodiazepine hypnotics and anxiolytics has been associated with an increased risk of Alzheimer's disease, dementia and a significantly increased risk of falls. Falls risk assessment tools advise reviewing benzodiazepines in patients at high risk of falling.
- Hypnotics should only be considered after non-drug therapies have been explored. Hypnotics should be used in the lowest dose possible, for the shortest duration possible and in strict accordance with their licensed indications: no more than 4 weeks with benzodiazepines, a maximum of 2 weeks with zaleplon and 4 weeks with zopiclone and zolpidem.
- Practice policy – Appendices 11 and 12 of the AWMSG Hypnotics and Anxiolytics Educational Pack provide examples of practice protocols to allow clinicians to agree a consistent approach for the prescribing and review of hypnotics and anxiolytics.
- The AWMSG Hypnotics and Anxiolytics Educational Pack also provides materials to support the review and discontinuation of hypnotic and anxiolytic treatment. This may be via consultation or by letter; both have been used successfully in practices within Wales.
- Discharge summaries, and psychiatric and pain management plans should provide clear guidance on review or discontinuation of these medicines.

## ANALGESICS

***Measures:*** 1) Tramadol DDDs per 1,000 patients; 2) Gabapentin and pregabalin DDDs per 1,000 patients.

This indicator aims to encourage the appropriate use and review of tramadol, gabapentin and pregabalin, minimising the potential for diversion and misuse. Monitoring of trends in total analgesic prescribing and other analgesics should be undertaken alongside these NPIs in order to assess the overall picture of analgesia prescribing in Wales.

**Points for consideration**

- The Medicines and Healthcare Products Regulatory Agency (MHRA) has developed an Opioids Learning Module, which identifies the most important hazards of opioids and informs on actions that health professionals can take in order to anticipate, minimise and manage the risks.
- Tramadol is subject to abuse and dependence. Deaths related to the misuse of tramadol in England and Wales increased from 83 in 2008 to 240 in 2014. In June 2014, tramadol was placed within Schedule III to the Misuse of Drugs Regulations but with exemptions from safe custody.
- AWMSG Tramadol Educational Resource Materials have been developed to support the review of tramadol.
- Tramadol reduces the seizure threshold. Patients with a history of epilepsy should be prescribed tramadol only if there are compelling reasons to do so. Tramadol should be used with caution in patients taking concomitant drugs that can lower the seizure threshold (tricyclic antidepressants, selective serotonin reuptake inhibitors [SSRIs]).
- Dizziness and nausea are the most commonly reported adverse effects of tramadol. Headache, drowsiness, vomiting, constipation, dry mouth, fatigue and sweating are other common side effects. Hallucinations, confusion and convulsions, as well as rare cases of dependence and withdrawal symptoms, have been reported with tramadol at therapeutic doses.
- Tramadol enhances the anticoagulant effect of warfarin, increasing the risk of bleeding.
- Concomitant administration of tramadol with other centrally depressant medicinal products, including alcohol, may potentiate the central nervous system effect. Concomitant therapeutic use of tramadol and serotonergic drugs, such as SSRIs, serotonin-norepinephrine reuptake inhibitors, tricyclic antidepressants and mirtazapine, may cause serotonin toxicity. Signs of serotonin syndrome may include confusion, agitation, fever, sweating, ataxia, hyperreflexia, myoclonus and diarrhoea.
- Avoid abrupt withdrawal after long-term tramadol treatment. Where physical dependence to tramadol develops, the withdrawal syndrome can be severe, with symptoms typical of opiate withdrawal sometimes accompanied by seizures, hallucinations and anxiety.
- NICE CG173 recommends amitriptyline, duloxetine, gabapentin and pregabalin as first-line treatment options for neuropathic pain[*].
- Gabapentin and pregabalin should be reduced gradually over a minimum of one week and stopped if the patient has not shown sufficient benefit within eight weeks of reaching the maximum tolerated dose, except when moving to

[*] Amitriptyline does not have a UK marketing authorisation for this indication, duloxetine is licensed for diabetic peripheral neuropathic pain only, and gabapentin is licensed for peripheral neuropathic pain only, so use for other conditions would be off-label. In addition, the Lyrica (Pfizer) brand of pregabalin has patent protection until July 2017 for its licensed indication of treatment of peripheral and central neuropathic pain; until such time as this patent expires generic pregabalin products will not be licensed for this indication and their use for this condition would be off-label and may infringe the patent.

combination therapies.
- Both gabapentin and pregabalin have known psychiatric side effects.
- While there is a recognised place in pain management for tramadol, pregabalin and gabapentin, there are concerns regarding the risks associated with misuse and diversion. It must be noted that pain management is often complex and prescribers need to make evidence-based, informed decisions based on the individual needs of the patient.
- These NPIs promote a prudent approach to prescribing tramadol, pregabalin and gabapentin, taking into account the risks and benefits of these medicines and encouraging timely review.

## ANTIBIOTICS

***Measures:*** 1) Total antibacterials per 1,000 STAR-PUs; 2) Co-amoxiclav items per 1,000 patients and as a percentage of total antibacterials; 3) Cephalosporin items per 1,000 patients and as a percentage of total antibacterials; 4) Fluoroquinolone items per 1,000 patients and as a percentage of total antibacterials.

These indicators support one of the core elements of the Welsh Antimicrobial Resistance Programme: to inform, support and promote the prudent use of antimicrobials. They also aim to reduce the prescribing of medicines associated with an increased risk of *C. difficile*, methicillin-resistant *Staphylococcus aureus* (MRSA) and resistant urinary tract infections (UTIs).

**Points for consideration**

- 'Start smart – then focus' (Public Health Wales: Antimicrobial Stewardship):
  - Do not start antibiotics in the absence of clinical evidence of bacterial infection.
  - If there is evidence of bacterial infection, prescribe according to national or local guidelines.
  - Document in medical notes and on drug chart: clinical indication, duration or review date, route and dose.
  - For surgical prophylaxis, prescribe single dose where antibiotics have been shown to be effective.
  - In the hospital setting, review the clinical diagnosis and the continuing need for antibiotics by 48 hours and make a clear plan of action.
- Resistance and *C. difficile:* The use of simple generic antibiotics and the avoidance of broad-spectrum antibiotics (e.g. co-amoxiclav, fluoroquinolones and cephalosporins) preserve these from resistance and reduce the risk of *C. difficile*, MRSA and resistant UTIs.
- Resources are available to support appropriate antibiotic prescribing:
  - Welsh Medicines Resource Centre bulletin: Appropriate Antibiotic Use – Whose Responsibility?;
  - Royal College of General Practitioners: TARGET Antibiotics Toolkit;
  - AWMSG CEPP National Audit: Focus on Antibiotic Prescribing – this audit consists of stand-alone bite-size components (sore throat, acute rhinosinusitis, UTI in females, acute cough or bronchitis, quinolone prescribing, cephalosporin prescribing, co-amoxiclav prescribing, hospital prescribing of antibiotics, delayed prescriptions, and read coding to identify healthcare-acquired infections [HCAI]);
  - AWMSG (2015) Primary care antimicrobial guidelines [*link to follow*].

## NON-STEROIDAL ANTI-INFLAMMATORY DRUGS

***Measures:*** 1) NSAID ADQs per 1,000 STAR-PUs; 2) Ibuprofen and naproxen as a percentage of total NSAIDs.

The first indicator aims to encourage a reduction in total NSAID prescribing, which has been consistently higher than that seen in England, whilst the second indicator aims to increase the prescribing of ibuprofen and naproxen, because these drugs are associated with a lower risk of cardiovascular adverse events than other NSAIDs.

**Points for consideration**

- NSAIDs are associated with increased risk of:
  - Serious gastro-intestinal toxicity: especially in patients over 75 years. Ibuprofen and COX-2 inhibitors are associated with the lowest gastro-intestinal risk;
  - Renal failure: NSAIDs can cause acute kidney injury, particularly in people with other risk factors, e.g. heart failure, diabetes, liver disease and dehydration;
  - Heart failure: NSAID treatment is contraindicated in severe heart failure;
  - Cardiovascular adverse events: Diclofenac 150mg daily, aceclofenac high-dose ibuprofen (≥ 2400 mg/day) and COX-2 inhibitors are associated with an increased risk of cardiovascular events.
- NSAIDs are not recommended following hip fracture (NICE CG124).
- NSAIDs should be used with caution in uncontrolled hypertension, heart failure, ischaemic heart disease, peripheral artery disease, cerebrovascular disease, and when used long term for people with risk factors for CVD.
- It is recommended that prescribers should:
  - Review their NSAID prescribing using the AWMSG CEPP National Audit: Towards Appropriate NSAID Prescribing;
  - Use acute rather than repeat prescriptions for NSAIDs: prescribing the lowest effective dose, for the shortest duration necessary to control symptoms, in order to minimise adverse effects;
  - Set the default to small quantities (e.g. 1–2 weeks supply) per script;
  - Advise patients about the risks of NSAID therapy;
  - Provide the AWMSG Patient Information Leaflet: Medicines for Mild to Moderate Pain Relief;
  - Prescribe naproxen 250 mg rather than 500 mg to allow patients to make dose adjustments;
  - Promote post-operative pain management reviews;
  - Consider gastroprotection, with a PPI, particularly for patients with osteoarthritis or RA;
  - Consider using Back Book Wales: Link to order.

## YELLOW CARDS

***Measure*:** Number of Yellow Cards submitted per practice and per health board.

**Points for consideration**

- Yellow Card reporting supports the identification and collation of adverse drug reactions (ADRs), which might not have been known about before.
- For established medicines and vaccines, report all suspected ADRs considered to be serious (i.e. fatal, life-threatening, congenital abnormality, disabling or incapacitating, or resulting in prolonged hospitalisation).
- Report all ADRs associated with new medicines and vaccines (see list of black triangle medicines).
- Yellow Card reporting can be used to report suspected ADRs (including those caused by medication errors) to medicines, vaccines, homeopathic or herbal remedies, medical device incidents, defective medicines (i.e. not of acceptable quality or not working as it should) or suspected counterfeit medicines.
- Yellow Card champions are available in each health board to provide training. Contact YCCWales@wales.nhs.uk for more information.
- Yellow Card reports can be completed on-line.

**NOTES**

Implementation of the NPIs does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

The NPIs highlighted constitute guidance only and neither this document in isolation, nor as part of a wider policy, comprise a financial incentive scheme to any medical practices and/or practitioners to prescribe a specific named medicine.