Grŵp Strategaeth Meddyginiaethau Cymru Gyfan
All Wales Medicines Strategy Group

National Prescribing Indicators 2025–2028

Supporting Information for Prescribers and Healthcare Professionals

December 2024

This document has been prepared by the All Wales Prescribing Advisory Group (AWPAG) with support from 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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Contents

Glossary

ADQ	Average Daily Quantity
ADRs	Adverse Drug Reactions
AKI	Acute Kidney Injury
AWMSG	All Wales Medicines Strategy Group
AWTTC	All Wales Therapeutics and Toxicology Centre
CEPP	Clinical Effectiveness Prescribing Programme
COPD	Chronic Obstructive Pulmonary Disease
CKD	Chronic Kidney Disease
DDD	Defined daily dose
eGFR	Estimated glomerular filtration rate
HCAI	Healthcare associated infection
MHRA	Medicines and Healthcare products Regulatory Agency
MRSA	Methicillin-resistant *Staphylococcus aureus*
NICE	National Institute for Health and Care Excellence
NPH	Neutral protamine Hagedorn
NPIs	National Prescribing Indicators
NSAIDs	Non-steroidal anti-inflammatory drugs
OME	Oral Morphine Equivalence
PHE	Public Health England
PU	Prescribing unit
RCoA	Royal College of Anaesthetists
RCGP	Royal College of General Practitioners
SABA	Short Acting Beta Agonist
SSRIs	Selective serotonin reuptake inhibitors
STAR-PU	Specific therapeutic group age-sex related prescribing unit
UDG	User-defined group
YCC	Yellow Card Centre

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.

1.0 Priority areas

1.1 Analgesics

1.1.1 Opioid burden

Purpose: To encourage the appropriate use and review of all opioids in primary care, minimising the potential for dependence, diversion, misuse and ADRs.

Units of measure:

- Opioid burden UDG total OME per 1,000 patients
- High strength opioids UDG with a likely daily dose of ≥ 120 mg OME per 1,000 patients

Why is this important?

- Due to a lack of evidence of effectiveness, opioids are not recommended as a treatment option for the management of chronic primary pain (NICE guideline NG193, Chronic pain (primary and secondary) in over 16s: assessment of all chronic pain and management of chronic primary pain).
- Opioid analgesics have well established side effects including constipation, nausea and vomiting, and respiratory depression, and repeated administration may cause tolerance and dependence.
- Concerns have been raised about the prescribing rates of opioids in the UK and the awareness of healthcare professionals and patients have about the risks of dependence and addiction.

How can changes be made?

- NICE guidance (NG193) states that opioids should not be initiated for the management of chronic primary pain.
- Discuss with patients that prolonged use of opioids may lead to drug dependence and addiction, even at therapeutic doses. Counsel patients and caregivers on signs and symptoms of opioid overdose to be aware of. (See MHRA's Opioid medicines and the risk of addiction safety leaflet)
- Before starting treatment with opioids, agree with the patient a treatment strategy and plan for end of treatment.
- Ensure that when prescribing opioids, consideration is given to: the benefits of treatment; the risks of prescribing, including dependency, overdose and diversion; all prescribed and non-prescribed medicines the person is taking, and whether the person may be opioid naïve.
- If it is thought opioid therapy may play a role in a patient's pain management, a trial should be initiated to establish whether the patient achieves a reduction in pain with the use of opioids – if not they should be carefully reduced and stopped.
- Patients prescribed opioids for chronic primary pain should be reviewed as part of shared decision making.
- Provide regular monitoring and support especially to individuals at increased risk, such as those with current or past history of substance use disorder (including alcohol misuse) or mental health disorder.
- Dose escalation should be limited as risk of harm rises as dose increases, especially if there is inadequate relief of pain. Above an oral morphine equivalent daily dose of 120 mg, further benefit is unlikely.

- At the end of treatment, taper dosage slowly to reduce the risk of withdrawal effects associated with sudden cessation of opioids; tapering from a high dose may take weeks or months.
- Consider the possibility of hyperalgesia if a patient on long-term opioid therapy presents with increased sensitivity to pain.
- Use the RCoA Faculty of Pain Medicine checklist to aid discussions regarding opioid treatment with patients.
- Conduct a search to identify patients on an oral morphine equivalent daily dose of ≥ 120 mg in order to undertake reviews.
- Encourage other elements of pain management to support patients move to a better quality of life.

What resources are available?

- AWMSG (2023) Resources for pharmacological management of pain including
  - All Wales Analgesic Stewardship Guidance
  - All Wales Pharmacological Management of Pain Guidance
- Live Well with Pain (2024) Living Well with Pain resources and training for social prescribers, clinicians and other practitioners in supporting pain self-management
- PrescQIPP (2023) Bulletin 336: Reducing opioid prescribing in chronic pain (log in required for access)
- PrescQIPP (2022) Bulletin 284: Chronic pain (log in required for access)
- RCoA Faculty of Pain Medicine (2022) Opioids Aware
- NICE (2021) NG193: Chronic pain (primary and secondary) in over 16s: assessment of all chronic pain and management of chronic primary pain.
- RCoA Faculty of Pain Medicine (2019) Opioids Aware: Tapering and stopping opioids
- RCoA Faculty of Pain Medicine (2019) Checklist for Prescribers
- MHRA Opioids e-learning module
- Health Education and Improvement Wales (undated) Analgesic Stewardship and Pain Management

1.1.2 Tramadol

Purpose: To encourage appropriate use and review of tramadol in primary care, minimising the potential for dependence, diversion, misuse and ADRs.

Unit of measure: Tramadol DDDs per 1,000 patients

Why is this important?

- Tramadol is licensed for the treatment of moderate to severe pain. However, NICE guideline NG193, Chronic pain (primary and secondary) in over 16s: assessment of all chronic pain and management of chronic primary pain, recommends that opioids, including tramadol, are not initiated for chronic primary pain.
- Tramadol produces analgesia by two mechanisms: an opioid effect and an enhancement of the serotonergic and adrenergic pathways. This unique dual-action pharmacological profile of tramadol increases the risk of adverse effects seen in overdose.
- Hallucinations, confusion and convulsions, as well as rare cases of dependence and withdrawal symptoms, have been reported with tramadol at therapeutic doses.
- Tramadol should be used with caution in patients taking concomitant medicines that can lower the seizure threshold, such as tricyclic antidepressants or SSRIs. The use of tramadol is contraindicated in uncontrolled epilepsy and in patients receiving, or who have recently discontinued (within the previous two weeks) monoamine oxidase inhibitors.

How can changes be made?

- Before prescribing tramadol, discuss the risks and features of tolerance, dependence and addiction with the patient, and agree a treatment strategy for the end of treatment.
- Provide regular monitoring and support especially to individuals at increased risk, such as those with current or past history of substance use disorder (including alcohol misuse) or mental health disorder.
- If it is appropriate for a patient's tramadol to be stepped down or stopped, reduce the dose slowly to ensure the patient's safety and to minimise the risk of withdrawal symptoms and/or ADRs. 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.
- To encourage patient engagement and concordance, a suggested approach would be to reduce the dose at each reduction step, e.g. by one 50 mg dose, and to titrate according to how the patient manages, rather than by setting time limits for the next reduction.
- Conduct an audit using the 'Primary care tramadol audit' resource (Appendix 1) as part of the AWMSG Tramadol educational resources package.

What resources are available?

- AWMSG (2023) Resources for pharmacological management of pain including
  - All Wales Analgesic Stewardship Guidance
  - All Wales Pharmacological Management of Pain Guidance
- AWMSG (2021) Tramadol educational resources

1.1.3 Gabapentin and pregabalin

Purpose: To encourage the appropriate use and review of gabapentin and pregabalin in primary care, minimising the potential for dependence, diversion, misuse and ADRs.

Unit of measure: Gabapentin and pregabalin DDDs per 1,000 patients

Why is this important?

- While there is a recognised place in pain management for gabapentin and pregabalin, there are concerns regarding the risks associated with dependence, diversion and misuse.
- Gabapentin and pregabalin have the propensity to cause depression of the central nervous system, resulting in drowsiness, headache, sedation, respiratory depression and in extreme circumstances, death.
- There has been an increase in the number of deaths where pregabalin was mentioned on the death certificate in Wales, from 10 deaths registered in 2019 to 30 deaths registered in 2022.

How can changes be made?

- Review patients prescribed gabapentin and pregabalin with a view to dose reduction/treatment cessation where appropriate via shared decision making.
- Use a pain scale (for example, the Leeds assessment of neuropathic symptoms and signs [LANSS Pain Scale]) to assess whether the patient's pain is neuropathic in nature. This will also assist in determining response to treatment.
- Inform patients that response to drug treatment in neuropathic pain is often inadequate, with no more than 40–60% of people obtaining partial pain relief.
- Once treatment has commenced, NICE recommends early assessment followed by regular reviews to assess and monitor effectiveness including pain control, adverse effects and continued need.
- Reduce and stop the gabapentin or pregabalin if the patient has not shown sufficient benefit within eight weeks of reaching the maximum tolerated dose.
  - Gabapentin can be reduced over a minimum of one week; however, a more gradual dose taper which reduces the daily dose by a maximum of 300 mg every four days allows for observation of emergent symptoms that may have been controlled by gabapentin.
  - Pregabalin can be reduced over a minimum of one week; however, a more gradual dose taper which reduces the daily dose by a maximum of 50–100 mg per week allows for observation of emergent symptoms that may have been controlled by pregabalin.
- Exercise caution in prescribing gabapentin or pregabalin for patients with COPD or a history of substance abuse.
- Morphine can increase the bioavailability of gabapentin. Review co-prescribing of gabapentin or pregabalin with opioids.
- Encourage other elements of pain management to support patients move to a better quality of life.

What resources are available?

- AWMSG (2023) Resources for pharmacological management of pain
- The Leeds Assessment of Neuropathic Symptoms and Signs (LANSS) Pain Scale
- PrescQIPP (2022) Bulletin 216: Neuropathic pain (log in required for access)
- Public Health England (2014) Advice for prescribers on the risk of the misuse of pregabalin and gabapentin
- SIGN (2019) SIGN 136. Management of chronic pain

1.2 Antimicrobial stewardship

1.2.1 Total antibacterial prescribing

Purpose: To encourage the appropriate prescribing of all antibiotics in primary care.

Units of measure:

- Total antibacterial DDDs per 1,000 STAR-PUs
- Total antibacterial items per 1,000 STAR-PUs

Why is this important?

- The widespread and often excessive usage of antimicrobials is one of the main factors contributing to the increasing emergence of antimicrobial resistance.
- Optimising antimicrobial prescribing will reduce the risk of acquiring an antimicrobial resistant organism and healthcare associated infections.

How can changes be made?

- Follow local or national guidelines, prescribing antibiotics for the shortest effective course at the most appropriate dose.
- Consider the risk of antimicrobial resistance for individual patients and the population as a whole.
- Document the clinical diagnosis (READ/SNOMED code to aid audit) and reason for prescribing, or not prescribing, an antimicrobial.
- Where appropriate, consider a back-up prescription.
- Provide patients with leaflets/resources so they are aware of how long they can expect their condition to last and how they can self-care. Resources, including the 'Managing common infection (self-care) leaflet' for patients, are available in the TARGET Antibiotics toolkit.
- Carry out the AWMSG CEPP National Audit: Focus on Antibiotic Prescribing.

What resources are available?

- AWMSG (2024) Primary Care Antimicrobial Guidelines
- AWMSG (2024) Back-up antibiotic prescribing: Good practice guide
- AWMSG (2023) CEPP National Audit: Focus on Antibiotic Prescribing
- RCGP TARGET Antibiotics toolkit

1.2.2 4C antimicrobials

Purpose: To reduce the prevalence of HCAI including *Clostridioides difficile* infection and *Staphylococcus aureus* bacteraemia caused by MRSA by encouraging a reduction in variation and reduce overall prescribing of the 4C antimicrobials (co-amoxiclav, cephalosporins, fluoroquinolones and clindamycin) in primary care.

Units of measure:

- 4C DDDs combined, per 1,000 patients
- 4C items combined, per 1,000 patients

Why is this important?

- The use of simple generic antibiotics, avoiding broad-spectrum antibiotics (e.g. co-amoxiclav, cephalosporins, fluoroquinolones and clindamycin), preserves them from resistance and reduces the risk of *C. difficile*, MRSA and resistant urinary tract infections.
- Compared with narrow-spectrum antibiotics, broad-spectrum antibiotics are more likely to significantly change the gut flora, potentially allowing other bacteria, such as *C. difficile*, to become established.
- The most commonly implicated antibiotics in *C. difficile* infection include clindamycin, cephalosporins (in particular second and third generation cephalosporins), fluoroquinolones and co-amoxiclav.

How can changes be made?

- Follow local or national guidelines, prescribing 4C antibiotics for the shortest effective course at the most appropriate dose.
- Consider the risk of antimicrobial resistance for individual patients and the population as a whole.
- Document the clinical diagnosis (READ/SNOMED code to aid audit) and reason for prescribing, or not prescribing, a 4C antimicrobial.
- Provide patients with leaflets/resources so they are aware of how long they can expect their condition to last and how they can self-care. Resources, including the 'Managing common infection (self-care) leaflet' for patients, are available in the TARGET Antibiotics toolkit.
- Carry out the AWMSG CEPP National Audit: Focus on Antibiotic Prescribing.

What resources are available?

- AWMSG (2024) Primary Care Antimicrobial Guidelines
- AWMSG (2023) CEPP National Audit: Focus on Antibiotic Prescribing
- RCGP TARGET Antibiotics toolkit

1.2.3 Course duration for respiratory tract infection (RTI) antibiotics

Purpose: To increase the proportion of antibiotics prescribed for an appropriate duration when prescribing for RTIs to reduce the risk of antimicrobial resistance and adverse effects.

Units of measure:

- Proportion of amoxicillin 500 mg capsules prescribed for 5-day duration
- Proportion of doxycycline 100 mg capsules prescribed for 5-day duration
- Proportion of clarithromycin 500 mg tablets prescribed for 5-day duration

Why is this important?

- Antimicrobial overuse is a driver of antimicrobial resistance which threatens the effectiveness of antibiotics now and in the future.
- Research increasingly demonstrates that short courses of antibiotics are as effective as longer courses in treating patients with uncomplicated infection.
- Welsh primary care prescribing data suggests that the shortest effective courses of antibiotics are not consistently prescribed and there is considerable variation in the proportion of short and long course prescriptions.

How can changes be made?

- When prescribing antibiotics for acute respiratory tract infection, follow local or national guidelines and prescribe for the shortest effective course at the most appropriate dose to reduce the risk of antimicrobial resistance and adverse effects (typically a 5-day course for sinusitis, sore throat, COPD infective exacerbation, cough (acute) and community acquired pneumonia).
- Document the clinical diagnosis (READ/SNOMED code to aid audit) and reason for prescribing, or not prescribing, an antimicrobial as well as the planned duration of treatment.
- Provide patients with leaflets/resources so they are aware of how long they can expect their condition to last and how they can self-care. Resources are available in the TARGET Antibiotics toolkit.
- Carry out the AWMSG CEPP National Audit: Focus on Antibiotic Prescribing.

What resources are available?

- AWMSG (2024) Primary Care Antimicrobial Guidelines
- AWMSG (2024) Back-up antibiotic prescribing: Good practice guide
- NHS Futures Antimicrobial Resistance Programme (log in required for access)
- NICE (2023) Acute respiratory infection in over 16s: initial assessment and management including virtual wards (hospital at home)
- PrescQIPP Bulletin 313: Antimicrobial stewardship

1.3 Respiratory

1.3.1 Decarbonisation of inhalers

Purpose: To encourage an increase in the use of low Global Warming Potential (GWP) inhalers (dry powder inhalers [DPI] and soft mist inhalers [SMI]), to reduce the carbon footprint of inhaler prescribing in Wales.

Unit of measure: The number of DPIs and SMIs as a percentage of all inhalers prescribed

Why is this important?

- The hydrofluorocarbon (HFC) gases used as propellants in MDIs are estimated to be responsible for 4% of the entire carbon footprint of the NHS.
- DPIs have a carbon footprint 18 times lower than MDIs.
- SMIs do not contain a propellant, therefore have a lower carbon footprint than MDIs.

How can changes be made?

- Ensure the inhaler with the lowest GWP is considered when a new inhaler is commenced and during respiratory reviews.
- Recommend low GWP alternatives to patients currently using MDIs where clinically appropriate via shared decision-making.
- Rationalise inhaler devices to ensure that patients are not prescribed multiple inhalers that are a mixture of MDI and DPI, i.e. wherever clinically appropriate, ensure patients are solely using DPIs.
- Ensure that changes only take place where the patient is able to use a new device safely.
- Combination inhalers should be used in place of separate inhalers where clinically appropriate.
- Ensure inhalers are prescribed by their brand name to support supply of the lowest GWP inhalers.
- Undertake audits to identify respiratory patients suitable for review to improve clinical outcomes and reduce the inhaler carbon footprint.

What resources are available?

- AWMSG (2024) All Wales Adult Asthma Diagnosis and Management Guideline
- AWMSG (2023) All Wales COPD Management and Prescribing Guideline
- AWMSG (2023) Decarbonisation: inhaler prescribing, use and disposal 2023–2030
- AWTTC (2024) SPIRA – Decarbonisation Dashboard (NHS Wales network connection required)
- NICE (2022) Patient decision aid: Inhalers for asthma
- PrescQIPP (2021) Bulletin 295: Inhaler carbon footprint (log in required for access)

1.3.2 Short Acting Beta Agonist (SABA) inhalers

Purpose: To reduce over reliance on SABA inhalers to improve asthma control in patients and asthma related health outcomes.

Unit of measure: Number of SABA inhalers as a percentage of all inhalers

Why is this important?

- The aims of asthma management are to achieve good symptom control and to minimise the future risk of asthma exacerbations, mortality, persistent airflow obstruction and side effects of treatment.
- SABA inhalers are often used by asthmatics to provide short-term relief of their symptoms. However, SABAs only relax the airway muscle and don't treat the airway inflammation.
- Using ≥ 3 SABA inhalers per year reflects poor asthma control and is associated with a significantly increased risk of asthma attacks, increased A&E visits and hospitalisations.
- SABA use as monotherapy is now outdated and the National Review of Asthma Deaths (NRAD) have highlighted the potential dangers of this practice with underuse of inhaled corticosteroids and over reliance on beta-agonists a contributory factor in a number of deaths.
- The NRAD considers little or no SABA use an indicator of good asthma control.

How can changes be made?

- Follow national guidelines e.g. All Wales Asthma Management and Prescribing Guidelines when prescribing to treat newly diagnosed or existing asthma.
- Do not prescribe SABA as a monotherapy. Asthma is an inflammatory condition and guidelines have highlighted the need to treat all individuals symptomatic of asthma with inhaled corticosteroid (ICS) containing treatment.
- For individuals with mild, intermittent asthma (defined as symptoms less than 4-5 days per week) there is now good evidence for the use of anti-inflammatory reliever therapy (AIR) on an 'if and when required' basis in response to symptoms.
- Using ≥3 SABA inhalers each year is associated with increased risk of exacerbations and these patients should be switched to the 'preferred regimen' (AIR) outlined on the All Wales Adult Asthma Management and Prescribing Guideline.
- Educate patients to recognise the symptoms of SABA overuse. Encourage regular preventer treatment, empower patients by helping them to understand their condition and how their treatments work.
- All individuals with asthma should receive a review at least annually (with more frequent reviews needed if poor control identified). If asthma is considered to be poorly controlled, address the reasons for this (e.g. poor inhaler technique or adherence). If no reversible factors can be identified, stepping up therapy should be considered.
- Undertake an audit of patients with asthma prescribed SABA as a monotherapy, reviewing those who are flagged.

What resources are available?

- AWMSG (2024) All Wales Adult Asthma Management and Prescribing Guideline

- RCP (2024) Green physician toolkit
- AWMSG (2023) All Wales Paediatric Asthma Management and Prescribing Guidelines
- NICE (2022) Asthma. Patient decision aid on asthma inhalers

1.4 SGLT-2 Inhibitors

1.4.1 Patients with type 2 diabetes and chronic heart failure

Purpose: To improve cardiovascular outcomes in patients with type 2 diabetes mellitus (T2DM) and chronic heart failure.

Unit of measure: Number of patients with T2DM and chronic heart failure who are prescribed a sodium-glucose co-transporter-2 (SGLT-2) inhibitor

Why is this important?

- SGLT-2 inhibitors, developed as a treatment for T2DM, have since been shown to promote protective mechanisms that may contribute to the slowing of related cardiovascular, renal and metabolic complications.
- People with heart failure and T2DM are at a higher risk of adverse outcomes and cardiovascular mortality. Treatment with an SGLT-2 inhibitor has been shown to improve cardiovascular outcomes for this patient group.

How can changes be made?

- Patients with T2DM should be assessed for cardiovascular status and risk to determine whether they also have chronic heart failure.
- For patients with T2DM and chronic heart failure, an SGLT-2 inhibitor with proven cardiovascular benefit should be offered in addition to metformin as first-line treatment unless contraindicated. Dapagliflozin (Forxiga®) and empagliflozin (Jardiance®) are currently licensed in adults for the treatment of both symptomatic chronic heart failure and T2DM.
- When starting patients with T2DM on dual therapy with metformin and an SGLT-2 inhibitor as first-line treatment, introduce the drugs sequentially, starting with metformin and checking tolerability. This enables any side effects and intolerances from metformin to be identified before the SGLT-2 inhibitor is introduced.
- When reviewing patients with T2DM, make a shared decision about switching treatments or adding an SGLT-2 inhibitor if they have or develop chronic heart failure.
- Only stop the SGLT-2 inhibitor if the patient's circumstances have changed and the SGLT-2 inhibitor is no longer appropriate.

What resources are available?

- NICE (2023) Type 2 diabetes in adults. Quality statement 5: Treatment with an SGLT-2 inhibitor (QS209)
- NICE (2022) Type 2 diabetes in adults: management (NG208)
- AWMSG (2021) All Wales advice on sodium-glucose cotransporter-2 (SGLT-2) inhibitors in type 2 diabetes and cardiovascular disease

1.4.2 Patients with type 2 diabetes and chronic kidney disease

Purpose: To reduce the risk of chronic kidney disease (CKD) progression and mortality and risk of cardiovascular events in patients with CKD and type 2 diabetes (T2DM).

Unit of measure: Number of patients with type 2 diabetes and CKD who are currently treated with an angiotensin-receptor blocker (ARB) or an angiotensin-converting enzyme (ACE) inhibitor prescribed an SGLT-2 inhibitor.

Why is this important?

- CKD is a serious public health problem associated with significant morbidity, premature mortality and high healthcare costs.
- Strong evidence from well-conducted randomised controlled trials showed that SGLT-2 inhibitors reduced the risk of CKD progression, mortality and cardiovascular events in patients with T2DM and CKD.

How can changes be made?

- Perform serum creatinine, eGFR and urine albumin-to-creatinine ratio (ACR) yearly to diagnose and monitor kidney damage in patients with T2DM. Urine ACR is the most reliable screening test for CKD. Early identification of patients with CKD guides monitoring and clinical decision making, and is critical to ensuring patients receive appropriate treatment.
- Patients with T2DM and CKD who are currently treated with an ARB or an ACE inhibitor (titrated to the highest licensed dose that they can tolerate), should be offered an SGLT-2 inhibitor unless contraindicated. This balances elements of NICE guidance alongside more recently published UK Kidney Association (UKKA) and Kidney Disease: Improving Global Outcomes (KDIGO) guidance which is more broadly inclusive and reflective of the evidence base.
- Canagliflozin (Invokana®), dapagliflozin (Forxiga®) and empagliflozin (Jardiance®) are the SGLT-2 inhibitors approved for the treatment of CKD in patients with T2DM.
- Use of an SGLT-2 inhibitor for CKD is different to its use for diabetes, but hypoglycaemic effects and their side effect profile (including risk of diabetic ketoacidosis [DKA] in diabetes) should be taken into account when prescribing.

What resources are available?

- KDIGO (2024) Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease
- Kidney Care UK (2024) Let's talk kidneys. Opportunities for early intervention in chronic kidney disease
- UKKA (2023) UK Kidney Association Clinical Practice Guideline: Sodium-Glucose Co-transporter-2 (SGLT-2) Inhibition in Adults with Kidney Disease 2023 Update
- NICE (2023) Type 2 diabetes in adults. Quality statement 5: Treatment with an SGLT-2 inhibitor (QS209)
- NICE (2022) Type 2 diabetes in adults: management (NG208)

1.4.3 Patients with non-diabetic chronic kidney disease

Purpose: To reduce the risk of CKD progression and mortality and risk of cardiovascular events in patients with non-diabetic CKD.

Unit of measure: Number of patients with non-diabetic CKD who are currently treated with an angiotensin-receptor blocker (ARB) or an angiotensin-converting enzyme (ACE) inhibitor and have an albumin creatinine ratio (ACR) ≥ 22.6 mg/mmol prescribed an SGLT-2 inhibitor.

Why is this important?

- Renal benefits of SGLT-2 inhibitors have been demonstrated for people with CKD and albuminuria, irrespective of diabetes status, in large randomised clinical trials and meta-analyses.
- Increasing the proportion of people with non-diabetic CKD on SGLT-2 inhibitors is anticipated to slow CKD progression and reduce the number of cardiovascular and end-stage renal events.

How can changes be made?

- Perform serum creatinine, eGFR and urine ACR yearly to monitor kidney disease in non-diabetic patients with CKD. Proteinuria is a useful marker of kidney damage and complication of risk. Urine ACR is the recommended method for assessing proteinuria and measurement is critical to ensuring patients receive appropriate treatment.
- Non-diabetic patients with CKD who are currently treated with an ARB or an ACE inhibitor (titrated to the highest licensed dose that they can tolerate), and have an ACR ≥ 22.6 mg/mmol, should be offered an SGLT-2 inhibitor unless contraindicated.

What resources are available?

- KDIGO (2024) Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease
- Kidney Care UK (2024) Let's talk kidneys. Opportunities for early intervention in chronic kidney disease
- UKKA (2023) UK Kidney Association Clinical Practice Guideline: Sodium-Glucose Co-transporter-2 (SGLT-2) Inhibition in Adults with Kidney Disease 2023 Update

2.0 Supporting domains

2.1 Safety

2.1.1 Prescribing Safety Indicators

Purpose: To identify patients at high risk of adverse drug reactions and medicines-related harm in primary care.

Units of measure:
Prescribing Safety Indicators related to Acute Kidney Injury (AKI)

- Number of patients on the CKD register (CKD stage 3–5) who have received a repeat prescription for an NSAID within the last 3 months.
- Number of patients who are not on the CKD register but have an eGFR of < 59 ml/min and have received a repeat prescription for an NSAID within the last 3 months.
- Number of patients with concurrent prescriptions of an NSAID, renin-angiotensin system (RAS) drug and a diuretic.
- Number of patients aged 75 and over with a current prescription for an ACE Inhibitor or loop diuretic without a check of renal function and electrolytes in the previous 15 months.

Prescribing Safety Indicators related to antimicrobial stewardship

- Number of patients with recurrent prescriptions for nitrofurantoin, with an eGFR of < 45 ml/min.
- Number of trimethoprim items prescribed to patients aged ≥ 65 years, per 1,000 patient list size aged ≥ 65 years.

Prescribing Safety Indicators related to bleeds

- Number of patients with a peptic ulcer who have been prescribed NSAIDs without a PPI.
- Number of patients with concurrent prescriptions of warfarin and an oral NSAID.
- Number of patients with concurrent prescriptions for a DOAC and an oral NSAID.
- Number of patients aged 65 years or over prescribed an NSAID plus aspirin and/or clopidogrel but without gastroprotection (PPI or H_2 receptor antagonist).
- Number of patients with concurrent prescriptions of an oral anticoagulant (warfarin or DOAC) and an SSRI.

Prescribing Safety Indicators related to cognition

- Number of patients aged 65 years or over prescribed an antipsychotic.
- Number of patients aged 75 and over with an Anticholinergic Effect on Cognition (AEC) score of 3 or more for items on active repeat.

Prescribing Safety Indicators specific to females

- Number of female patients with a past medical history of venous or arterial thrombosis who have been prescribed combined hormonal contraceptives.
- Number of female patients aged 14–55 with a prescription for oral retinoids.
- Number of female patients aged 14-55 with a prescription for topiramate.

Prescribing Safety Indicators related to ‘other’

- Number of patients under 16 with a current prescription of aspirin.

- Number of patients with asthma who have been prescribed a non-cardioselective beta-blocker.
- Number of patients with concurrent prescriptions of verapamil and a beta-blocker.
- Number of female patients aged ≤ 55 years with a prescription for sodium valproate.
- Number of male patients who have been prescribed sodium valproate.

Why is this important?

- This NPI facilitates a move towards a more patient-focussed approach when considering whether the right patients are getting the right medicines. It is intended to reduce the number of ADRs experienced by patients.
- In the UK, it is estimated that up to around 16.5% of hospital admissions in adults are related to ADRs.
- ADRs can often be predictable, making it possible to identify their potential causes and address them before actual patient harm occurs. Therefore, an electronic process of identifying patients susceptible to ADRs could enable intervention and help avoid harm.
- The PINCER study, which involved searching GP clinical systems to identify patients at risk of potentially hazardous prescribing alongside delivery of educational outreach interventions to practice staff (including GPs) to minimise future risk, demonstrated that such an approach is an effective method for reducing the frequency of a range of medication errors in primary care.

How can changes be made?

- Review patients identified as being at high risk of ADRs and medicines-related harm ensuring that action taken is clearly documented and coded appropriately.

What resources are available?

- AWMSG (2024) Primary care antimicrobial guidelines
- AWMSG (2023) Polypharmacy in older people: A guide for healthcare professionals
- MHRA (2022) Antipsychotics e-learning module
- PrescQIPP (2020) Bulletin 253: Anticholinergic burden (log in required for access)
- Sanofi (2020) Guide for healthcare professionals: Information on the risks of valproate▼ use in girls (of any age) and women of childbearing potential
- AWMSG (2018) CEPP National Audit: antipsychotics in dementia
- South London and Maudsley NHS Foundation Trust (2017) Medichec: The Anticholinergic Effect on Cognition Tool (Android and iOS Medichec apps available)
- AWMSG (2017) CEPP National Audit: medicines management for CKD
- AWMSG (2015) CEPP All Wales Audit: towards appropriate NSAID prescribing

2.1.2 Hypnotics and anxiolytics

Purpose: To encourage a reduction in the inappropriate prescribing of hypnotics and anxiolytics in primary care.

Unit of measure: Hypnotic and anxiolytic UDG ADQs per 1,000 STAR-PUs

Why is this important?
• There is a high level of hypnotic and anxiolytic prescribing in NHS Wales, compared with England. • The problems associated with benzodiazepines (e.g. tolerance, dependence, withdrawal causing rebound insomnia) are well known, and the number of deaths associated with benzodiazepines has increased. • Hypnotics and anxiolytics are known to significantly increase the risk of falls.
How can changes be made?
• Consider hypnotics and anxiolytics only after non-drug therapies have been explored. • When prescribing hypnotics, use the lowest dose possible, for the shortest duration possible and in strict accordance with their licensed indications: no more than four weeks. • Do not offer benzodiazepines for the treatment of generalised anxiety disorder except as a short-term measure during crises. • Always consider reducing hypnotics and anxiolytics where appropriate. • Use the 'Hypnotic and anxiolytic reduction/withdrawal resources' (Appendix 5) in the AWMSG Educational Pack, 'Material to Support Appropriate Prescribing of Hypnotics and Anxiolytics across Wales'. It includes an example of an anxiolytic and hypnotic audit.
What resources are available?
• AWMSG (2023) Polypharmacy in older people: A guide for healthcare professionals • AWMSG (2021) Material to Support Appropriate Prescribing of Hypnotics and Anxiolytics across Wales • Bruyère Research Institute (2019) Benzodiazepine & Z-Drug (BZRA) Deprescribing Algorithm

2.1.3 Yellow Cards

Purpose: To encourage an increase in the number of Yellow Cards submitted in Wales.

Units of measure:

- Number of Yellow Cards submitted per GP practice, per health board and per hospital
- Number of Yellow Cards submitted by Community Pharmacies, per health board

Why is this important?

- ADRs are a significant clinical problem, and can increase morbidity and mortality.
- The Yellow Card Scheme is vital in helping the MHRA monitor the safety of all healthcare products in the UK to ensure they are acceptably safe for those that use them.
- Yellow Card reporting supports the identification and collation of ADRs, which might not have been known about before.

How can changes be made?

- Yellow Card reports can be completed:
  - Online: www.mhra.gov.uk/yellowcard
  - Using the free Yellow Card app (Android or Apple)
  - Through the clinical systems SystmOne and Vision prescribing system which transmit Yellow Cards directly to the MHRA
  - Through the Medicines Information system, MiDatabank, used by Medicines Information pharmacists throughout the UK
  - By writing to: FREEPOST YELLOW CARD (no other address details necessary)
  - By emailing: yellowcard@mhra.gov.uk
  - By downloading forms from the website
- You only need to suspect that an adverse drug reaction was caused by a medicine to report it.
- Don’t assume someone else will report an adverse drug reaction you witness.
- Reports can be made for all medicines (both new and established) including vaccines, blood factors and immunoglobulins, herbal medicines and homeopathic remedies, and all medical devices available on the UK market.
- Sign up to become a Yellow Card Champion to support colleagues when completing Yellow Card reports as well as running training sessions on ADRs and the Yellow Card Scheme.

What resources are available?

- 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 online – Yellow Card website
- Health Education Improvement Wales (HEIW) e-learning module on Yellow Card Scheme
- The Yellow Card scheme: guidance for healthcare professionals, patients and the public
- YCC Wales website
- MHRA website
- NHS Education for Scotland e-learning modules on ADRs

Download the Yellow Card App:

- Android
- Apple

2.2 Efficiencies

2.2.1 Best value biological medicines

Purpose: To ensure prescribing of biological medicines supports cost-efficient prescribing in primary and secondary care in Wales.

Unit of measure: Quantity of best value biological medicines prescribed as a percentage of total 'biosimilar' plus 'reference' product

Why is this important?

- Biological medicines account for a significant expenditure in NHS Wales.
- Biosimilar medicines are biological medicines that have been developed as highly similar and clinically equivalent to their 'reference' or 'originator' medicine.
- A number of reference biological medicines have recently lost their patent protection, or will lose it within the next five years, creating opportunities for increased commercial competition.
- Although individual health boards' contracting prices, as well as national contracting prices, for biosimilar and reference medicines may vary, there are expected to be significant cost-saving opportunities from the use of the most cost-efficient biological medicine.

How can changes be made?

- Where AWMSG or NICE has recommended the reference medicine, the same guidance will normally apply to the biosimilar.
- At the time of dispensing there must not be automatic substitution of the reference product with a biosimilar medicine. Therefore, the clinician in consultation with the patient should make the decision on whether the reference or biosimilar biological medicine will be prescribed for the patient.
- All biological medicines, including biosimilars, must be prescribed by brand name.
- The list of biological medicines being reported on will be determined by the requirements of the service. For 2025–2028 this will be focused on the biological medicines where a biosimilar version has recently become available however, monitoring of an overall basket of biological medicines will continue.

What resources are available?

- AWMSG (2023) Maximising the opportunity presented by biosimilar medicines – A national strategy for Wales
- AWTTC (2024) SPIRA – Biosimilar Efficiencies (NHS Wales network connection required)
- NHS England (2023) What is a biosimilar medicine?
- SPS (2023) Understanding biological and biosimilar medicines
- MHRA (2014) Drug Safety Update. Biosimilar products
- NICE Position statement for biosimilar medicines

2.2.2 Low value for prescribing

Purpose: To drive a reduction in the prescribing of items considered as not suitable for routine prescribing in Wales.

Unit of measure: Low value for prescribing UDG spend per 1,000 patients

Why is this important?
• Aim of this indicator is to minimise the prescribing of items that offer a limited clinical benefit to patients and where more cost-effective treatments may be available.
How can changes be made?
• The *Low Value for Prescribing in NHS Wales* papers provide guidance to clinicians and health boards in Wales. • Prescribers are expected to have due regard for this advice when deciding whether or not to prescribe any of the included items. • When making changes, these should be part of a shared decision between patients, and where appropriate carers, and the prescriber.
What resources are available?
• AWMSG (2017) Medicines Identified as Low Priority for Funding in NHS Wales – paper 1 • AWMSG (2018) Medicines Identified as Low Priority for Funding in NHS Wales – paper 2 • AWMSG (2020) Items Identified as Low Value for Prescribing in NHS Wales – paper 3 • AWTTC (2024) SPIRA – Low Value for Prescribing Dashboard (NHS Wales network connection required)

Appendix 1. Oral Morphine Equivalence (OME)

BNF Chemical Substance Name	Relative potency to oral morphine*†	References
Buprenorphine sublingual tablet	60	PCG
Buprenorphine transdermal patch	100	PCG
Butorphanol nasal spray	7	PME
Co-codamol (codeine phos/paracetamol) oral	0.1	PCG
Codeine phosphate oral	0.1	PCG
Co-dydramol oral	0.1	PCG
Dextromoramide tartrate	4	OPN
Dextropropoxyphene	0.1	OPN
Diamorphine hydrochloride oral	1	OPN
Dihydrocodeine tartrate oral	0.1	PCG
Dipipanone hydrochloride oral	0.5	CHF
Fentanyl oromucosal lozenge	130	PME
Fentanyl transdermal patch	100	BNF
Fentanyl oromucosal tablet	130	PME
Fentanyl intra-nasal spray	160	PME
Fentanyl oromucosal film	180	PME
Hydromorphone hydrochloride oral	5	BNF
Levorphanol tartrate oral	11	PME
Meptazinol hydrochloride oral	0.04	CHF
Methadone hydrochloride oral	4	CHF
Morphine hydrochloride oral	1	OPN
Morphine hydrochloride suppository	1	PCG
Morphine sulfate oral	1	PCG
Oxycodone hydrochloride oral	1.5	BNF
Papaveretum	1	OPN
Pentazocine hydrochloride oral	0.37	OPN
Pentazocine lactate	0.37	OPN
Pethidine hydrochloride oral	0.125	CHF
Phenazocine hydrobromide	4	OPN
Tapentadol hydrochloride oral	0.4	FPM
Tramadol hydrochloride oral	0.1	PCG
BNF: British National Formulary; CHF: Cheshire Formulary; FPM: Faculty of Pain Medicine of the Royal College of Anaesthetists; PME: Pain Management Education at UCSF; OPN: Open Prescribing; PCG: Palliative Care Guidelines (traditional)		

*Relative potency to oral morphine values have been discussed at Welsh Pharmacy Pain Group. This was set up by Emma Davies and Simon Gill and is an Analgesic Interest Network (PAIN in Wales) for NHS Wales Pharmacists and Pharmacy Technicians.

† There is no universal agreement, or national or internationally recognised consensus, for these values as there is no mechanism by which they can be determined. Values are based on national and international opinion and have been taken from what are believed to be the most robust sources, with an emphasis on UK sources reflective of UK practice where available.