NSAIDs Change Package – 2017/2018

NSAIDs

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JR-II
Aim: To Reduce harm to patients from Non-Steroidal Anti-inflammatory Drugs (NSAIDs) in primary care

Background

A key aim of the Safety in Practice programme is to reduce the harm experienced by patients from medication use. The medicines most commonly implicated in adverse drug events (ADEs) causing admission to hospital are non-steroidal anti-inflammatory drugs (NSAIDs) and aspirin, which are responsible for 30% of ADE hospital admissions, mainly due to bleeding, myocardial infarction (MI), stroke, and renal damage. Some of this harm is unavoidable. Aspirin after MI is very effective, but an accepted proportion of patients will develop gastrointestinal bleeding as a result. However, much harm can be prevented, for example we know that continuing an NSAID when they are started on aspirin after an MI is predictably much higher risk.

This change package focuses on high-risk use of NSAIDs. High risk NSAID prescribing is common and varies about four-fold between practices\(^1\)\(^ -\)\(^5\). Evidence shows that when practices review NSAID prescribing, high-risk prescribing is reduced by at least a third. This improvement is associated with reductions in related emergency hospital admissions with adverse events such as gastrointestinal bleeding\(^3\)\(^\text{-}^\text{iv}\). Similar work in all practices in Scotland has shown reductions of up to 50% in high-risk prescribing of NSAID.

We know that when GPs specifically review this prescribing, they judge a significant proportion of it to be potentially inappropriate and take steps to improve their prescribing safety.

Specific Areas of Focus

The specific areas of focus for the NSAIDs change package are as follows:

<table>
<thead>
<tr>
<th>Targeted high-risk prescribing</th>
<th>What’s the risk?</th>
<th>Recommended Action</th>
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<tbody>
<tr>
<td>1. Patient aged ≥65 years who is prescribed an NSAID without gastrointestinal protective medicine</td>
<td>Gastrointestinal bleeding</td>
<td>Review need for NSAID OR Prescribe a gastrointestinal protective medicine</td>
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<td>2. Patients with Peptic Ulcer prescribed NSAID and not prescribed a gastrointestinal protective medicine</td>
<td>Gastrointestinal bleeding</td>
<td>Review need for NSAID OR Prescribe a gastrointestinal protective medicine</td>
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<tr>
<td>3. Patients with CKD 3, 4 or 5 and Acute kidney injury when unwell</td>
<td></td>
<td>Consider stopping NSAID</td>
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prescribed NSAID for another reason AND
Prescribe alternative analgesia

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<th>4. Patient with CKD 3, 4 or 5 who is prescribed an ACE inhibitor/angiotensin receptor blocker, a diuretic, and an NSAID (the ‘triple whammy’)</th>
<th>Acute kidney injury when unwell for another reason</th>
<th>Consider stopping NSAID AND Prescribe alternative analgesia</th>
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<td>5. Patient with Heart Failure and prescribed an NSAID</td>
<td>NSAIDs can cause an exacerbation of heart failure and acute kidney injury when unwell for another reason and</td>
<td>Consider stopping NSAID AND Prescribe alternative analgesia</td>
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</table>

What about CoX2s?
The searches include Cox2s such as celecoxib. Cox2s are classed as NSAIDs and the prescribing guidance is the same as for NSAIDs, i.e. if the patient is over 65 or has a history of peptic ulcer they should receive gastro-protection or consider an alternative analgesic. Patients on a CoX2 are also at greater risk of acute kidney injury with the triple whammy or if they have existing kidney disease and should be managed that same as patient’s on a normal NSAID. If this guidance changes we will let practices know.

Suggested Process for GP Practices

GP practices are encouraged to:
1. Identify patients in high-risk groups using searches developed for Dr Info or your PMS system on a monthly basis

2. Review these searches as a practice and decide which patients need to be reviewed

3. Review the records of identified patients, and take appropriate action (see Appendix 1 for guidance).
   For example:
   - Stopping the NSAID or adding gastro-protection and may require a clinical review
   - Discussing the benefits and risks with the patient
   - Advising high-risk patient to seek GP or pharmacy advice before purchasing OTC analgesia
   - Using patient information leaflets as appropriate: www.saferx.co.nz/Patient_info_Triple_Whammy.pdf www.saferx.co.nz/Patient_info_ibuprofen.pdf

4. Discuss the results with your clinical team:
   - What insights does the data provide
   - What aspects of safe NSAIDs prescribing in your clinic does it highlight
   - What aspect of NSAID prescribing in your clinic could makes patients more at risk of harm
   - How could your prescribing of NSAIDs be made safer.
5. Decide what actions need to be taken to reduce the risk of harm from NSAID prescribing in the future i.e. develop your own PDSA

6. Collect and Review your data in a month to assess progress and decide on further changes as required

7. Embed systems within practices to reduce high-risk prescribing of NSAIDs on a long-term basis.

Explanatory Notes
- Practices should decide what actions they want to take for these patients based on where they see the risks are that they need to address
- What practices do with the information is up to them. There is no expectation that every patient is reviewed – that is a practice decision as to what happens next, as is who does the review of notes or patients
- Practices decide on which group of patients they want to review first and how.

Suggested Process for Urgent Care Clinics

Urgent care clinics are encouraged to:

1. Each month, identify 20 patients over 65 years who have been prescribed an NSAID in the previous month.

2. Review their clinical and testsafe records and see if they:
   - Are currently taking an ACE inhibitor/Angiotensin Receptor Blocker and a diuretic, and are prescribed an NSAID (the ‘triple whammy’)
   - Are prescribed an NSAID without gastro-protection
   - Are currently taking either aspirin or clopidogrel, and are prescribed an NSAID without gastro-protection
   - Are a current oral anticoagulant user, and are prescribed an NSAID without gastro-protection
   - Have a history of peptic ulceration
   - Have a history of CKD 3, 4 or 5
   - Have a history of heart failure.

3. Complete the data collection sheet and submit by the 10 of each month

4. Discuss the results with your clinical team and discuss:
   - What insights does the data provide
   - What aspects of safe NSAIDS prescribing in your clinic does it highlight
   - What aspect of NSAID prescribing in your clinic could makes patients more at risk of harm
   - How could your prescribing of NSAIDs be made safer.

5. Decide what actions need to be taken to reduce the risk of harm from NSAID prescribing in the future i.e. develop your own PDSA

6. Collect and Review your data in a month to assess progress and decide on further changes as required

7. Embed systems within teams to reduce high-risk prescribing of NSAIDs on a long-term basis.
Resources

Safety in Practice has developed a number of resources including:

Searches and reports for GP practice teams
- Searches and reports to identify high risk patients using Dr Info, Mohio or MedTech and other clinical systems and data extraction tools
- GP practices will be able to easily identify the list of patients on high-risk combinations using the Dr Info reports and MedTech searches. The reports allow patients to be identified by NHI number within each practice.

Finding the patients at risk
Practices are to identify patients in high-risk groups using searches developed for Dr Info or Mohio on a monthly basis. This will only take a few minutes to do using the audits provided by these programmes. Practices do not need to develop any Medtech or MyPractice queries.

Practices do not need to run the audit – they just need to look up the report in Dr Info or Mohio.

Detailed instructions on how to find the audit results and patient lists are included below:

To access your patient lists on DrInfo:

1. Login to DrInfo using your DrInfo key
2. Access the latest audit available, check the word “published” under each folder.

3. Click on the “Safety tab”. This is seen at the bottom of the tabs on the right hand side

4. Select any of the safety patient lists, you are able to access this list by clicking on the patients icon shown below.
5. Once you have the list, you can download to excel, send bulk mail or SMS to all patients or filter the list further using the filter button. If you wish to filter by provider, you can do so by finding any patient where the Provider-Code is your code and click on that Provider-Code.

To find the NSAID/COX2 audits on Mohio, practices should:

- Log in to Mohio Reports
- Clinical Reports
- Safety in Practice

On the right hand side is action to ‘download’ – click on this which brings up:
Safety in Practice – Audit Report (NSAID/COX2)
There are five tabs along the bottom with a separate spreadsheet for each of the five groups of risk prescribing
Each sheet is ordered from the top to bottom for the date of the prescription of NSAID/COX2 (oldest to most recent within last 3/12)
Hyperlink on the NHI which takes you directly through to that patient’s notes in Medtech
Information shown includes NHI, Surname, First name, Generic NSAID, Brand-name, Provider and Date of script.
Practices are able to look at each tab and work out how many fall within the month that they are looking at.

Guidance and patient leaflets
- Guidance on safe prescribing of NSAIDs (see Appendix 1)
- SafeRx® leaflets on NSAIDs and the Triple Whammy:
  www.saferx.co.nz/triplewhammy.pdf
Theory of Improvement

**Aim Measures**
- Reduce Existing High Risk NSAID Prescribing
- Reduce future NSAID prescribing
- Monitor NSAID prescribing

**Primary Drivers**
- Stop current NSAID prescribing
- Mitigate NSAID risks
- To Prescriber
- To Patients
- Monthly audits

**Secondary Drivers**
- Stop NSAID
- Start gastro-protection
- Advice re alternative analgesics and self care
- Access test safe in Urgent care clinics
- Sick day Rules cards
- NSAID Leaflets on side effects when to take medicines etc

**Change Concepts**
- From IG Appendix A

**Change Idea**
- Standardised letters to patients to stop NSAID
- Start gastro-protection Triple Whammy leaflet NSAID leaflet
- Advice re alternative analgesics and self care
- Access test safe in Urgent care clinics
- Sick day Rules cards
- NSAID Leaflets on side effects when to take medicines etc

- Give comparative data to prescribers
**Change Ideas Tested**

- Results of audits discussed at partners meeting
- Practices decide which groups of patients to focus on first
- Clinicians review patients notes and decide if medication needs discussed or changed – patients informed by telephone letter or to make a face to face appointment
- Dr Info can alerts to let practices know when a patient identified from the searches as being at greater risk form NSAID prescribing is attending the surgery. The system can also send out text messages or letters to patients to ask then to make contact with the practice to discuss their NSAID medication
- Practice managers share audit results monthly with prescribers
- Education session on risk of NSAID prescribing
- Practices use SafeRX patient information leaflets on NSAIDs and triple whammy
- Reminders on computer screen to think about NSAID prescribing

**Benefits/Positives**

- Reducing risks to patients
- Better informed patients about their medications
- Reducing NSAID prescribing overall
- Pay more attention to prescribing alerts

**Issues/Negatives**

- Some patients on triple whammy searches are no longer at risk as data is retrospective
**Appendix 1**
Safe NSAID Prescribing Guidance

<table>
<thead>
<tr>
<th>Patient Description</th>
<th>Risk Identified</th>
<th>Recommendations</th>
<th>Comments</th>
</tr>
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<tr>
<td>Patient aged ≥65 years and currently taking an ACE inhibitor / Angiotensin Receptor Blocker and a diuretic, who is prescribed an NSAID (the ‘triple whammy’)</td>
<td>Substantially increased risk of acute renal failure and death(^1). Patients with pre-existing CKD have an increased risk of acute renal failure with the triple whammy. Patients with heart failure have additional risks of heart failure exacerbation.</td>
<td>This combination should be avoided particularly in those with chronic kidney disease or heart failure( ^{ii, iii} ).</td>
<td>If NSAIDs are essential, then monitor renal function, advise patients to seek professional advice if at risk of dehydration and consider additional renal function monitoring if the patient is at risk of dehydration or unwell. The safest course of action is always to avoid the NSAID where possible.</td>
</tr>
<tr>
<td>Patient aged ≥65 years, who is prescribed an NSAID without gastro-protection</td>
<td>Increases risk of gastro-intestinal (GI) bleeding 10-fold compared to NSAID use in middle age( ^{iv, v} ).</td>
<td>NSAIDs should be avoided in the elderly. Full-dose paracetamol or topical NSAIDs should be tried first for non-inflammatory musculoskeletal pain, and will provide good analgesia in many patients currently taking an NSAID( ^{iv} ).</td>
<td>If an NSAID is essential, then use ibuprofen (up to 1200mg per day) if necessary and co-prescribe a proton pump inhibitor (PPI) like omeprazole or lansoprazole. The safest course of action is always to avoid NSAIDs in the elderly where possible.</td>
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<tr>
<td>Patient aged ≥65 years currently taking either aspirin or clopidogrel, who is prescribed an NSAID without gastro-protection</td>
<td>Increases risk of GI bleeding 8-fold compared to aspirin alone[^1] <strong>Bookmark not defined.</strong></td>
<td>This combination should be avoided[^2]</td>
<td>If an NSAID is essential, then use ibuprofen (up to 1200mg per day) if necessary and co-prescribe a PPI like omeprazole or lansoprazole, but remember to prescribe a PPI other than omeprazole or esomeprazole in clopidogrel users. The safest course of action is always to avoid the NSAID where possible.</td>
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<tr>
<td>Current oral anticoagulant user prescribed an NSAID without gastro-protection</td>
<td>Increases risk of gastrointestinal bleeding by 3 to 8-fold over warfarin alone[^3] <strong>Bookmark not defined.</strong></td>
<td>This combination should be avoided[^4]</td>
<td>If an NSAID is essential, then use ibuprofen (up to 1200mg/day) if necessary, and co-prescribe a PPI like omeprazole or lansoprazole. Since PPIs may increase INR, then if they are used to gastro protect patients on warfarin, regular PPI treatment should be used even if NSAIDs are used intermittently. The safest course of action is always to avoid the NSAID where possible.</td>
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<tr>
<td>Current anticoagulant user prescribed aspirin or clopidogrel without gastro-protection</td>
<td>Increases risk of gastro-intestinal bleeding four to 10-fold over warfarin alone Error! Bookmark not defined.</td>
<td>The combination of antiplatelets and warfarin should be avoided unless clearly recommended by a specialist, ideally with a clear statement of duration of co-prescription iii</td>
<td>Clarify the indication for dual use (if any) with the specialist including the intended duration. If co-prescription is essential, then co-prescribe a PPI to reduce GI bleeding risk, but remember to prescribe a PPI other than omeprazole or esomeprazole in clopidogrel users.</td>
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**What about CoX2s?**

The searches include Cox2s such as celecoxib. Cox2s are classed as NSAIDs and the prescribing guidance is the same as for NSAIDs, i.e. if the patient is over 65 or has a history of peptic ulcer they should receive gastro-protection or consider an alternative analgesic. Patients on a CoX2 are also at greater risk of acute kidney injury with the triple whammy or if they have existing kidney disease and should be managed that same as patient’s on a normal NSAID. If this guidance changes we will let practices know.

We encourage practices to run these searches if they can in their systems – submit the figures, review the search results and decide on what action needs to be taken – for ideas about reviewing patients, suggested actions and educational materials for patients, please look at the change package.
References


ii NHS National Prescribing Centre (2009). Important updates on drug safety from the MHRA/CHM. MeReC Monthly No. 16 http://www.npc.co.uk/merec/cardio/cdhyper/merec_monthly_no16.php

iii British National Formulary (September 2011). London: British Medical Association and The Royal Pharmaceutical Society of Great Britain
