

## PPC CARE BUNDLE

# NSAIDs

### Aim

To reduce harm to patients from Non-Steroidal Anti-inflammatory Drugs (NSAIDs) in primary care

### Background

Non-steroidal anti-inflammatory drugs (NSAIDs) are the most frequently prescribed medicines for analgesia in primary care, after paracetamol. There are long-standing and well-recognised serious gastro-intestinal and renal safety concerns with all NSAIDs, and substantial evidence confirming an increased risk of cardiovascular events. Studies have also implicated NSAIDs as being a significant cause of admissions to hospitals due to adverse drug events. The frequency of NSAID use within the community means that the potential for serious NSAID related adverse events is significant. NSAID use requires careful consideration of individual patient risk factors. Most adverse drug events (ADEs) related to these medications are avoidable as vulnerable groups and drug interactions can be predicted.

The NZ Centre for Adverse Reactions Monitoring (CARM) received 119 reports of renal adverse reactions associated with NSAID (including COX-2 inhibitor) use from 1 January 2000 to 31 December 2012. Approximately 70% of reports were serious, including four deaths and 12 that were considered to be life-threatening. The majority of reports (74%) occurred in patients aged 50 years and over.

This module focuses on high-risk use of NSAIDs, including COX-2 inhibitors. High risk NSAID prescribing is common and varies about four-fold between practices. 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 gastro-intestinal bleeding. Similar work in all practices in Scotland has shown reductions of up to 50% in high-risk prescribing of NSAIDs. We know that when GPs specifically review prescribing, they judge a significant proportion to be potentially inappropriate and take steps to improve their prescribing safety.

### Instructions

1. Identify patients in high risk groups who have been prescribed NSAIDs. Searches from Dr Info or your PMS system can be used to assist with this.
2. From the identified list, determine the number of patients who have been prescribed NSAIDs AND also meet the following criteria to target high risk prescribing as per audit questions, and take appropriate action where required
3. Print and complete the NSAID audit paper form - included in the NSAID audit spreadsheet

Updated 18/10/2018

4. Discuss the results with the practice team to understand how the practice can reduce the potential for harm with these patients
  - 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. Re-audit 3 to 4 months after the meeting to see if any changes have been made to prescribing habits.
6. Transfer the data collected to the DMARDs audit spreadsheet. Please make sure the date is entered beside each individual record. The data will automatically be collated and displayed on the run charts, which can be printed as needed
7. Save the spreadsheet
8. Email the completed spreadsheet by or on the 10<sup>th</sup> of each month (i.e. June data is due on 10 July, July data is due on 10 August). The spreadsheet is to be emailed to your PHO facilitator.

### Explanatory Notes

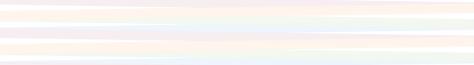
- Practices should decide what actions they want to take for these patients based on where they see the risks are that they need to address
- What practices do with the information is up to them. There is no expectation that every patient is reviewed – that is a practice decision as to what happens next,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

### What about CoX2s?

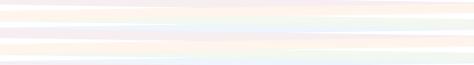
The searches include Cox2s such as celecoxib. Cox2s are classed as NSAIDs and the prescribing guidance is the same as for NSAIDs, i.e. if the patient is over 65 or has a history of peptic ulcer they should receive gastro-protection or consider an alternative analgesic. Patients on a CoX2 are also at 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.

## Audit Questions

| Measures  | Rationale  | Recommended Action  | Comments  |
|---|--|---|---|
| <p>Patients ≥ 65 years prescribed oral NSAID in the last month, and not prescribed a gastroprotective medicine in the last 4 months</p> | <ul style="list-style-type: none"> <li>Increased risk of GI bleeding x10 compared to NSAID use in middle age</li> </ul>  | <ul style="list-style-type: none"> <li>Review the need for NSAID OR</li> <li>Prescribe a gastrointestinal protective medication</li> </ul>                          | <ul style="list-style-type: none"> <li>NSAIDs should be avoided in the elderly.</li> <li>Full dose paracetamol or topical NSAID should be tried first for non-inflammatory musculoskeletal pain, and will provide adequate analgesia in many NSAID patients</li> <li>If an NSAID is essential, then use ibuprofen (up to 1200 mg per day) and co-prescribe a Proton Pump Inhibitor (PPI) is recommended.</li> <li>The safest course is always to avoid NSAIDs in the elderly where possible.</li> </ul> |
| <p>Patients with Peptic Ulcer prescribed NSAID and not prescribed a gastrointestinal protective medicine</p>                            | <ul style="list-style-type: none"> <li>Increased risk of GI bleeding</li> </ul>  | <ul style="list-style-type: none"> <li>Review the need for NSAID OR</li> <li>Prescribe a gastrointestinal protective medication</li> </ul>                          | <ul style="list-style-type: none"> <li>A Cochrane review found that both PPIs and H2 antagonists were effective at preventing chronic NSAID-related gastric and duodenal ulcers.</li> </ul>   |
| <p>Patients with CKD 3, 4 or 5 and prescribed NSAID (eGFR&lt;60ml/min).</p>   | <ul style="list-style-type: none"> <li>Increased risk of acute kidney injury, especially if unwell or hypovolaemic.</li> <li>The risk is greatest at the start of treatment: even short</li> </ul> | <ul style="list-style-type: none"> <li>Consider stopping NSAID and prescribe alternative analgesia</li> <li>Advise patients to discontinue NSAID if they</li> </ul> | <ul style="list-style-type: none"> <li>See patient information hand-outs Health Navigator for those are risk of acute kidney injury.</li> <li>The safest course of action is always to</li> </ul>   |



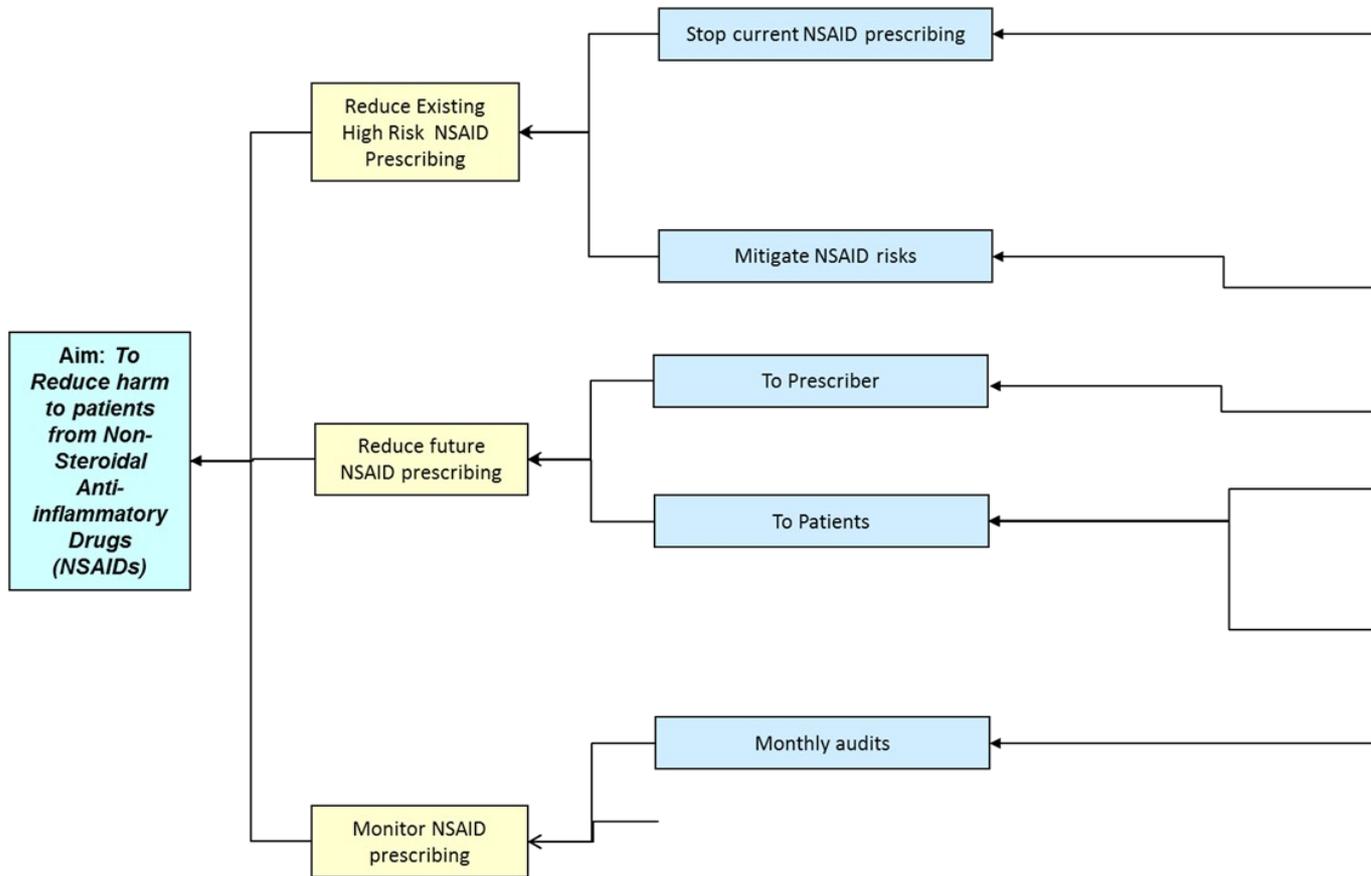
|   |  |  |  |
|---|--|--|--|
|   | <p>courses are associated with risk</p>  | <p>become unwell or dehydrated.</p> <ul style="list-style-type: none"> <li>• Measure renal function 1-2 weeks after treatment and then monitoring regularly</li> </ul>                           | <p>avoid the NSAID where possible.</p>   |
| <p>Patient with CKD 3, 4 or 5 who is prescribed an ACE inhibitor/angiotensin receptor blocker, a diuretic, and an NSAID (the 'triple whammy')</p> | <ul style="list-style-type: none"> <li>• Substantially increased risk of acute renal failure and death.</li> <li>• Patients with pre-existing CKD have an increased risk of acute renal failure with the triple whammy.</li> <li>• Patients with heart failure have additional risks of heart failure exacerbation.</li> <li>• These risks are greatest in the first 30 days of use</li> </ul> | <ul style="list-style-type: none"> <li>• Review the need for NSAID at all, particularly in those with CKD or heart failure and try to use alternative treatment.</li> </ul>                      | <ul style="list-style-type: none"> <li>• 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.</li> <li>• The safest course of action is always to avoid the NSAID where possible</li> </ul> |
| <p>Patient with Heart Failure and prescribed an NSAID</p>   | <ul style="list-style-type: none"> <li>• Exacerbation of heart failure</li> <li>• NSAID use approximately doubles the risk of hospital admission due to heart failure and increases systolic BP by an average of 2-3 mmHg</li> </ul>   | <ul style="list-style-type: none"> <li>• Review the need for NSAID.</li> <li>• Monitor BP and heart failure more closely within the first month,</li> <li>• The lowest risk NSAIDs in</li> </ul> | <ul style="list-style-type: none"> <li>• Patients with heart failure are recognised to be at high risk of cardiovascular events.</li> <li>• The safest course of action is always to avoid the NSAID where possible</li> </ul>   |



- This effect may be more dramatic in patients with pre-existing hypertension or taking BP medications
  - If previous MI then increased risk of further MI or death by at least 1.45 during first 7 days of treatment and persisted throughout treatment
- this area are naproxen up to 1000mg per day or ibuprofen up to 1200mg per day 15
- Full information on risks needs to be given to patients.

**Theory of Improvement**

| AIM Measures | Primary Drivers | Secondary Drivers | Change Concepts<br>From IG Appendix A |
|--------------|-----------------|-------------------|---------------------------------------|
|--------------|-----------------|-------------------|---------------------------------------|



### Change Ideas Tested by Previous Practices

|                             |   |
|-----------------------------|---|
| <b>Raising Awareness</b>    | <ul style="list-style-type: none"> <li>Practice managers share audit results monthly with prescribers.</li> <li>Results of audits discussed at partners/clinical meeting.</li> <li>Education session on risk of NSAID prescribing.</li> <li>Sharing GP specific prescribing data across practices.</li> </ul>   |
| <b>Alerts and Reminders</b> | <ul style="list-style-type: none"> <li>Reminders on computer screen to think about NSAID prescribing.</li> <li>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.</li> </ul> |
| <b>Patient Contact</b>      | <ul style="list-style-type: none"> <li>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.</li> <li>SafeRX patient information leaflets on NSAIDs and triple whammy.</li> </ul>   |



## Benefits

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

## Issues

- Some patients on triple whammy searches are no longer at risk as data is retrospective

## Additional Resources

### Searches and Reports

- Practices are to identify patients in high-risk groups using searches developed for Dr Info or Mohio or your practice's audit tool 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 queries.
- Practices do not need to run the audit – they just need to look up the report in Dr Info or Mohio.

### Dr Info

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1. Login to DrInfo using your DrInfo key
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2. Access the latest audit available, check the word "published" under each folder.
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3. Click on the "Safety tab". This is seen at the bottom of the tabs on the right hand side
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4. Select any of the safety patient lists, you are able to access this list by clicking on the "Patients" icon.
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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. You can also filter by ethnicity and 'high needs'.

### Mohio

**Login**

- Log in to Mohio
- Click reports > Clinical Reports > Safety in Practice.

**View report**

- On the right hand side click 'download' this which brings up 'Safety in Practice – Audit Report (Prescribing indicator module name)'.
- There are six tabs along the bottom with a separate spread sheet for each of the six groups of risk prescribing.
- Each sheet is ordered from the top to bottom for the date of the prescription but with Maori patients presented first.
- Practices are able to look at each tab and work out how many fall within the month that they are looking at.

**View patient record**

- Click 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, Ethnicity, Provider and Date of script.

## Patient Resources

- SafeRx® Triple Whammy Patient Information. Available at: [www.SafeRx®.co.nz/triplewhammy-patient-guide.pdf](http://www.SafeRx®.co.nz/triplewhammy-patient-guide.pdf)
- SafeRx® Ibuprofen Patient Information. Available at: [http://www.SafeRx®.co.nz/Patient\\_info\\_ibuprofen.pdf](http://www.SafeRx®.co.nz/Patient_info_ibuprofen.pdf)
- SafeRx® Heart Failure Information. Available in a range of languages at:
  - <http://www.SafeRx®.co.nz/heartfailure-chinese.pdf>
  - <http://www.SafeRx®.co.nz/heartfailure-english.pdf>
  - <http://www.SafeRx®.co.nz/heartfailure-korean.pdf>
  - <http://www.SafeRx®.co.nz/heartfailure-samoan.pdf>

## Prescriber Resources

- BPAC, 2013. NSAIDS. Available at: [www.bpac.org.nz/bpj/2013/october/nsaids.aspx](http://www.bpac.org.nz/bpj/2013/october/nsaids.aspx)
- BPAC, 2018. Triple Whammy. Available at: <https://bpac.org.nz/2018/triple-whammy.aspx>
- Medsafe Information, 2013. NSAIDs and Acute Kidney Injury and Triple Whammy. Available at: [www.medsafe.govt.nz/profs/PUArticles/June2013NSAIDS.htm](http://www.medsafe.govt.nz/profs/PUArticles/June2013NSAIDS.htm)
- New Zealand Formulary [www.nzf.org.nz](http://www.nzf.org.nz)
- SafeRx® Sick Day Rules – Prescriber info. Available at: [www.SafeRx®.co.nz/triplewhammy.pdf](http://www.SafeRx®.co.nz/triplewhammy.pdf)

## Resources

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