Community Pharmacy NSAID Audit on Gastrointestinal Safety

Introduction

Adverse effects of non-steroidal anti-inflammatory drugs (NSAIDs) including cyclo-oxygenase-2 (COX2) selective inhibitors are a frequent cause of hospital admissions which are potentially preventable. The adverse effects include gastrointestinal bleeds, pro-thrombotic events (e.g. heart attack, stroke) and reduced renal blood flow leading to acute kidney injury.

This audit looks only at gastrointestinal safety. NICE guidance requires all patients prescribed NSAIDs for osteoarthritis or rheumatoid arthritis (no age limit) or for low back pain (if aged over 45) to be co-prescribed gastro-protection (e.g. a proton pump inhibitor). Any patient prescribed prolonged treatment with an NSAID is classed as 'high risk' for gastrointestinal bleeding. The risk is particularly high for elderly patients.

Audit time frame

Under the NHS regulations community pharmacies are expected to complete two clinical audits per year which should take up to 5 days work in total. This includes developing the audit, data collection, analysing the data and suggesting improvements.

To collect a useful sample for this audit it is suggested that data is collected over approximately 1 week and includes a minimum of 10 patients.

Audit sample

All patients who present prescriptions for any oral NSAID or COX2 inhibitor.

Audit standards

Standard 1 Gastro-protection
All patients, regularly prescribed an oral NSAID or COX2 inhibitor for more than 2 months are co-prescribed gastro-protection.

Audit standard 90% (Not 100% as some patients may be unable or unwilling to take gastro-protection)
Action points before or after the audit may include speaking to your local GPs to explain the audit and ask what feedback or referral they would like. These might also include offering a targeted MUR to the patient.

Standard 2 Verbal advice
All patients presenting prescriptions for an oral NSAID or COX2 inhibitor, whether regular medication or not, are offered verbal advice about their medicines.

Audit standard 100%
For the purpose of this audit we are trying to identify patients who are not offered verbal advice because someone else collects the medicine or it is delivered to them (including care homes).
For question 2 - **NSAIDs and COX2 inhibitors** (BNF Chapter 10.1.1)

Some brand names have been included for ease of identification but there may be other brands available.

- Aceclofenac (*Preservex*)
- Acemetacin (*Emflex*)
- Celecoxib (*Celebrex*)
- Diclofenac Potassium (*Voltarol Rapid*)
- Diclofenac Sodium (*Voltarol, Diclomax, Motifene, Arthrotec*)
- Etodolac (*Etopan, Lodine*)
- Etoricoxib (*Arcoxia*)
- Fenoprofen (*Fenopro*)
- Ibuprofen (*Brufen, Fenbid*)
- Indomethacin
- Ketoprofen (*Orudis, Oruvail, Axorid*)
- Mefenamic Acid (*Ponstan*)
- Meloxicam (*Mobic*)
- Nabumetone (*Relifex*)
- Naproxen (*Naprosyn, Synflex, Vomovo, Narpratex*)
- Piroxicam (*Brexidol, Feldene*)
- Sulindac
- Tenoxicam (*Mobiflex*)
- Tiaprofenic Acid (*Surgam*)

For question 5 - proton pump inhibitor prescribed at licensed dose for NSAID prophylaxis (BNF Chapter 1.3.5)

Proton pump inhibitors and doses licensed for gastro-protection are listed below

- Esomeprazole 20mg (including Vimovo)
- Lansoprazole 15mg
- Lansoprazole 30mg
- Omeprazole 20mg (including Axorid)
- Pantoprazole 20mg

For question 6 - any other gastro-protection prescribed i.e. H2 agonist, misoprostol, non-licensed proton pump inhibitor (BNF Chapter 1.3)

- Cimetidine 200mg/400mg/800mg
- Esomeprazole 40mg
- Famotidine 20mg/40mg
- Misoprostol 200mcg (included in Arthrotec and Napratec)
- Nizatadine 150mg/300mg
- Omeprazole 10mg
- Omeprazole 40mg
- Pantoprazole 40mg
- Rabeprazole 10mg
- Rabeprazole 20mg
- Ranitidine 150mg/300mg
**NSAID Audit on Gastrointestinal Safety - Data Collection Form** *(print at least 2 copies of this page)*

Complete the form for ALL prescriptions received for any of the oral COX 2 inhibitors or non-steroidal anti-inflammatory drugs (NSAIDS) listed on p2, regardless of patient age or length of treatment.

<table>
<thead>
<tr>
<th></th>
<th>Patient 1</th>
<th>Patient 2</th>
<th>Patient 3</th>
<th>Patient 4</th>
<th>Patient 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Patient age (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Name and total daily dose of NSAID or COX2 inhibitor prescribed*</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>3. NSAID or COX2 inhibitor prescribed for more than 2 months (from PMR or ask patient)?</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td>4. NSAID or COX2 inhibitor used regularly i.e. taking at least 3 days each week (ask patient if not clear from prescription and PMR)?</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td>5. Proton pump inhibitor prescribed at licensed/recommended dose for NSAID prophylaxis?^</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>6. Any other gastro-protection prescribed i.e. H2 antagonist, misoprostol, non licensed PPI?^</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>7. Was the patient referred back to the prescriber about gastro-protection?</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>8. Advice about medicines offered to patient when prescription collected? #</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>PNC</td>
<td>DNR</td>
<td>PNC</td>
<td>DNR</td>
<td>PNC</td>
<td>DNR</td>
</tr>
<tr>
<td>9. Only if the patient did not collect (i.e. Q7 answered ‘PNC’), please indicate why e.g. carer or representative (CR), delivery (DEL), care home (CH) (this will help identify action required for improvement)</td>
<td>CR</td>
<td>DEL</td>
<td>CR</td>
<td>DEL</td>
<td>CR</td>
</tr>
<tr>
<td>CH</td>
<td>other</td>
<td>CH</td>
<td>other</td>
<td>CH</td>
<td>other</td>
</tr>
</tbody>
</table>

**Notes**

*Q2 Name and total daily dose of NSAID prescribed – e.g. naproxen 1g rather than naproxen 500mg bd

^Q5 & Q6 PPI or gastro-protection - see list p2. There is no need to identify which medicine prescribed, just record yes or no

#Q8 PNC = patient did not collect so unable to speak directly to the patient.

DNR = data not recorded for any reason e.g. forgot, the prescription was not collected during the audit period.
Community Pharmacy NSAID Audit on Gastrointestinal Safety
Data Summary

<table>
<thead>
<tr>
<th>Dates of audit period:</th>
<th>Duration of audit (days):</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Total number of prescriptions received for NSAIDs or COX2 inhibitors during audit period:</td>
</tr>
<tr>
<td>B</td>
<td>Total number of patients presenting prescriptions for NSAIDs or COX2 inhibitors that have been prescribed for more than 2 months and taking regularly (i.e. YES to Q3 AND Q4)</td>
</tr>
<tr>
<td>C</td>
<td>Total number of patients presenting regular prescriptions for NSAIDs or COX2 inhibitors and are co-prescribed PPI or other gastro-protection (i.e. Patients from B above and answer YES to Q5 OR Q6)</td>
</tr>
<tr>
<td>D</td>
<td>Total number of patients aged 75 and over presenting prescriptions for NSAIDs or COX2 inhibitors that have been prescribed for more than 2 months and taking regularly (i.e. Over 75s with YES to Q3 AND Q4)</td>
</tr>
<tr>
<td>E</td>
<td>Total number of patients aged 75 and over presenting regular prescriptions for NSAIDs or COX2 inhibitors and are co-prescribed PPI or other gastro-protection (i.e. Patients from D above and answer YES to Q5 OR Q6)</td>
</tr>
<tr>
<td>F</td>
<td>Total number of patients where advice on medicines was not offered (i.e. NO or PNC to Q8)</td>
</tr>
</tbody>
</table>

**Standard 1** (Standard set: 90%)
All patients regularly prescribed an NSAID for more than 2 months and taking regularly are co-prescribed gastro-protection.

\[
\text{Standard achieved \%} = \frac{C \times 100}{B}
\]

**Standard 2** (Standard set: 100%)
All patients presenting prescriptions for an oral COX2 or NSAID, whether regular medication or not, are offered verbal advice about their medicines.

\[
\text{(A-F) \times A \times 100 = standard achieved \%}
\]

**High risk over 75's**
All patients regularly prescribed an NSAID for more than 2 months and taking regularly are co-prescribed gastro-protection.

*Patients over 75 are at very high risk of a gastrointestinal bleed if prescribed an NSAID or COX2 inhibitor regularly without gastro-protection. This calculation has been included to highlight the extent of the risk to your patients which you will want to feedback to prescribers.*

\[
\text{standard achieved \%} = \frac{E \times 100}{D}
\]
Three possible action points from the audit to improve practice

1. If Standard 1 is below 90% consider talking to the local GPs and asking how they would like feedback or referral. Particularly highlight the over 75’s who are at much higher risk of ulcer bleeds.

2. Standard 2 – consider how you might access the patients who do not receive advice e.g. contact them by phone, put a note on the prescription bag to ask patients to come in for an MUR or arrange to conduct some domiciliary MURs.

3. Consider offering a targeted MUR to all patients taking NSAIDs or COX2 inhibitors regularly to discuss side effects, the risks of also taking OTC NSAIDs (from pharmacies and many other outlets) and adherence to gastro-protection. 

   *CPPE is running a series of workshops on NSAID safety to help you with your targeted MURs. Look out for these on the CPPE website [www.cppe.ac.uk](http://www.cppe.ac.uk) The RPS local practice forum or the local pharmaceutical committee may also be running one of these workshops*

   Don’t forget that if the NSAID is stopped, any associated gastro-protection should be stopped too.

Please record your action points for improvement here

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