

Development of an NSAID decision tool for perioperative pain management in adult orthopaedic patients: a modified Delphi study

Appendix 3: Likert scores for Delphi rounds 1 and 2, establishing if a short course of NSAIDs ± PPI can be administered with acceptable risk in adult orthopaedic patients with a variety of comorbidities, considering renal adverse events

Patient characteristics		Round 1			Round 2		
		Statement 1	Statement 2	Statement 3	Statement 1	Statement 2	Statement 3
Q1	Normal renal function; eGFR ≥ 90 ml/min	9	3 (3–8)	4 (2–7)	9	3 (3–5)	3 (3–4)
Q2	Mildly decreased renal function; eGFR 60–89 ml/min	7 (5–8)	3 (2–6)	3 (2–6)	7 (6–8)	3 (2–4)	3 (3–4)
Q3	Mildly moderately decreased renal function; eGFR ≤ 59 ml/min	3 (2–5)	3 (2–5)	3 (2–5)	3 (3–5)	3 (2–4)	3
Q4	Intraoperative concern of renal hypoperfusion (e.g. due to > 500 ml blood loss + requiring vasopressor support in an elderly patient)	2 (1–3)	3 (2–5)	3 (2–5)	3 (2–4)	3 (2–4)	3 (3–4)
Q5	Diabetes ± insulin dependent, well controlled (HbA1c ≤ 6.5%)	7 (7–9)	5 (3–7)	5 (3–7)	8 (7–9)	5 (3–5)	5 (3–5)
Q6	Diabetes ± insulin dependent, poorly controlled (HbA1c > 6.5%)	7 (4–7)	3 (2–7)	3 (2–6)	7 (7–8)	3 (2–5)	3 (3–4)

Light blue: Delphi consensus *in support* of a short course of NSAIDs ± PPI; gold: Delphi consensus *against* the use of a short course of NSAIDs ± PPI; grey: Delphi consensus not achieved. Reported as median (IQR). Statement 1: a short course of non-selective NSAIDs can be administered with acceptable risk. Statement 2: A short course of selective COX-2 inhibitors is superior to a short course of non-selective NSAIDs *and* can be administered with acceptable risk. Statement 3: Adding PPIs to a short course of non-selective NSAIDs improves safety of non-selective NSAID administration *and* can be administered with acceptable risk. NSAIDs: non-steroidal anti-inflammatory drugs; PPI: proton pump inhibitor; eGFR: estimated glomerular filtration rate; HbA1c: haemoglobin A1c test

Appendix 4: Likert scores for Delphi rounds 1 and 2, establishing if a short course of NSAIDs ± PPI can be administered with acceptable risk in adult orthopaedic patients with a variety of comorbidities, considering cardiovascular adverse events

Patient characteristics		Round 1			Round 2		
		Statement 1	Statement 2	Statement 3	Statement 1	Statement 2	Statement 3
Q1	Acute coronary syndrome < 3 months ago	4 (2–6)	3 (2–5)	3 (2–6)	3 (3–5)	3 (2–4)	3 (3–4)
Q2	Acute coronary syndrome ≥ 3 months ago	7 (5–7)	3 (2–7)	3 (2–6)	7 (5–7)	3 (2–4)	3
Q3	Percutaneous/surgical coronary revascularisation < 3 months ago	4 (2–6)	4 (2–5)	3 (2–6)	4 (3–4)	3 (2–5)	3 (2–3)
Q4	Percutaneous/surgical coronary revascularisation ≥ 3 months ago	7 (5–7)	3 (2–7)	3 (2–6)	7 (7–7)	3 (2–4)	3
Q5	Chronic stable angina	7 (5–7)	3 (2–7)	3 (2–6)	7 (7–7)	3 (2–4)	3
Q6	Well-controlled hypertension	8 (7–9)	3 (2–5)	3 (2–6)	8 (8–8)	3 (3–4)	3
Q7	Poorly controlled hypertension	6 (3–7)	3 (2–5)	4 (2–6)	7 (4–7)	3 (3–4)	3 (3–4)
Q8	Stroke/TCl < 3 months ago	4 (2–6)	3 (2–5)	3 (2–6)	4 (3–5)	3 (2–4)	3 (2–3)
Q9	Stroke/TCl ≥ 3 months ago	7 (5–7)	3 (2–6)	3 (2–6)	6 (6–7)	3 (2–4)	3
Q10	Heart failure (NYHA I–II)	6 (2–7)	3 (2–5)	3 (2–5)	6 (5–7)	3 (2–3)	3
Q11	Heart failure (NYHA III–IV)	3 (1–6)	3 (2–4)	3 (2–6)	3 (2–3)	3 (2–3)	3

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Appendix 5: Likert scores for Delphi rounds 1 and 2, establishing if a short course of NSAIDs ± PPI can be administered with acceptable risk in adult orthopaedic patients with a variety of comorbidities, considering gastrointestinal adverse events

Patient characteristics		Round 1			Round 2		
		Statement 1	Statement 2	Statement 3	Statement 1	Statement 2	Statement 3
Q1	Heartburn caused by gastro-oesophageal reflux disease	6(3–7)	7 (7–8)	7 (7–9)	6 (4–7)	7 (7–8)	7
Q2	Peptic ulcer disease	2(1–3)	7 (7–9)	7 (6–9)	2 (1–3)	7 (7–8)	7 (7–9)
Q3	Gastrointestinal bleeding/perforation	1(1–2)	7 (3–9)	7 (5–9)	1	7 (5–8)	7 (7–8)
Q4	<i>Helicobacter pylori</i> -positive	5(3–7)	7 (5–8)	7 (5–8)	5 (5–7)	7 (6–7)	7 (7–8)
Q5	Concomitant use of low-dose aspirin (≤ 100 mg daily)	7(5–7)	7 (6–7)	7 (6–8)	7 (6–7)	7	7 (7–8)
Q6	Concomitant use of antiplatelet or anticoagulant treatment (other than low-dose aspirin)	4(2–7)	7 (5–7)	6 (5–7)	3 (3–6)	7 (6–7)	7 (6–7)
Q7	Concomitant use of low-dose corticosteroids (≤ 10 mg prednisone daily)	7(6–7)	7 (5–7)	7 (6–7)	7	7	7
Q8	Concomitant use of high-dose corticosteroids (> 10 mg prednisone daily)	6(4–7)	7 (4–7)	7 (6–9)	7 (5–7)	7 (6–7)	7
Q9	Concomitant use of selective serotonin reuptake inhibitors	7(5–7)	5 (4–7)	5 (5–7)	7	5 (5–7)	5 (5–6)
Q10	Severe rheumatoid arthritis disability	7(6–8)	7 (5–7)	6 (5–7)	7	7	6 (6–7)

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Appendix 6: Likert scores for Delphi rounds 1 and 2, establishing if a short course of NSAIDs ± PPI can be administered with acceptable risk in adult orthopaedic patients with a variety of comorbidities, considering miscellaneous adverse events

Patient characteristics		Round 1			Round 2		
		Statement 1	Statement 2	Statement 3	Statement 1	Statement 2	Statement 3
Q1	Aspirin/NSAID-induced asthma or allergic reactions	2 (1–3)	5 (3–6)	3 (1–5)	2 (1–3)	5 (4–5)	3 (2–3)
Q2	Inflammatory bowel disease	5 (5–7)	5 (3–7)	6 (3–7)	6 (5–7)	5 (4–6)	5 (5–7)
Q3	Impaired liver function	5 (4–7)	4 (3–5)	3 (2–3)	6 (5–7)	4 (3–5)	3 (2–3)
Q4	Patients with non-union healing of bone	5 (3–7)	3 (2–5)	3 (2–5)	5 (4–7)	3	3 (2–3)
Q5	Patients with an upper limb fracture	7 (7–8)	3 (2–7)	3 (2–5)	7 (7–8)	3 (3–4)	3 (2–3)
Q6	Patients with a lower limb fracture	7 (7–8)	3 (2–5)	3 (2–5)	8 (7–8)	3 (3–4)	3 (2–3)
Q7	Patients with an acute fracture known with high risk of problem healing (e.g. scaphoid)	6 (4–7)	3 (2–5)	3 (2–5)	6 (5–7)	3 (3–4)	3 (2–3)
Q8	Multiple myeloma	5 (3–7)	4 (3–5)	3 (2–5)	5 (5–7)	4 (3–5)	3
Q9	Bleeding disorders (e.g. haemophilia, von Willebrand disease, qualitative or quantitative platelet defects etc.)	3 (2–6)	5 (3–5)	4 (1–7)	3 (3–3)	5 (3–5)	4 (3–5)
Q10	Neutropenic patients	7 (4–7)	4 (3–5)	3 (2–5)	7 (7–7)	4 (3–5)	3
Q11	Porphyria	5 (4–7)	5 (2–5)	4 (1–5)	5 (5–5)	4 (3–5)	3 (3–4)
Q12	ASA 1 patients (healthy, no systemic comorbidities)	9 (7–9)	3 (2–7)	6 (3–7)	9 (9–9)	3	5 (3–6)
Q13	< 65 years old	9 (7–9)	3 (2–7)	4 (3–8)	9 (9–9)	3	4 (3–5)
Q14	65–75 years old	7 (6–9)	7 (3–7)	6 (3–8)	7 (7–8)	7 (6–7)	6 (6–7)
Q15	> 75 years old	7 (5–7)	6 (3–7)	7 (5–8)	7 (5–7)	7 (6–7)	7 (6–7)

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