

ADVERSE EFFECTS OF PPIs

Clostridium difficile infection

- 1.4 to 2.75 times higher risk of *C. difficile* infection
- OR 1.7 (incident infection), OR 2.5 (recurrent infection)

Community acquired pneumonia

- OR 1.52 vs 1.37 (high dose vs low dose)
- Meta analysis showed increased risk OR 1.27

Increased risk of hip fractures

- At high PPI doses (adjusted OR 1.53)
- With PPI use longer than 1 year (adjusted OR 1.34)

Hypomagnesemia

- After 1 year of PPI use (25% required replacement + discontinuation of PPI)

OR=Odds Ratio



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THE 5-STEP DEPRESCRIBING PROCESS

Perform a comprehensive patient interview and reconcile medications and indications

Consider overall risk of drug induced harm

Assess each medication for eligibility to be discontinued

Prioritise medications for discontinuation

Implement discontinuation and collaborative monitoring plan

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LET'S START WITH PROTON PUMP INHIBITORS (PPIs)

In 2014, more than **59 million** capsules of PPIs amounting to **S\$19 million** were used in eight local institutions.

COMMON INAPPROPRIATE USES OF PPIs

- Dual antiplatelets **without** risk factors*
- Non-steroidal anti-inflammatory drugs (NSAID) **without** risk factors*
- COX-2 inhibitors
- Short duration of corticosteroids, without concomitant NSAIDs

*refer appropriate indication box for risk factors



Please scan QR code for more information on deprescribing and full list of references or visit <http://tinyurl.com/pwsg2015>

APPROPRIATE INDICATIONS OF PPIs

- Gastro-esophageal reflux disease*
- Peptic ulcer disease (PUD)*
- *Helicobacter pylori* eradication*
- Zollinger-Ellison Syndrome*
- Uninvestigated dyspepsia*
- Patients on dual antiplatelets **with** risk factors#:
 - ✓ History of PUD or GI bleed
 - ✓ Age > 75 years
 - ✓ Concurrent use of anticoagulants or steroids
 - ✓ *H. pylori* infection
- Prevention of NSAID-induced ulcers in patients **with** risk factors#:
 - ✓ Age > 65 years
 - ✓ History of PUD or GI bleed
 - ✓ Concurrent use of low dose aspirin, antiplatelets, anticoagulants or steroids

* Use for less than 12 weeks

Risk factors should be constantly reviewed and PPIs deprescribed when risk factors are resolved

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