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Paracetamol dose and hospitalisation for chronic obstructive pulmonary disease exacerbation: the case for lowering the starting dose.

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Abstract

Background: Long-term paracetamol treatment has previously been linked to an increased risk of hospitalisation for exacerbation of chronic obstructive pulmonary disease (COPD). The risk was highest at 30 days after initiation and dose dependent.

Aims: This study aims to estimate the cost savings from reduced hospitalisation rates from a lower starting dose of paracetamol in COPD patients who require long-term pain relief.

Methods: Data on hospitalisation rates and costs were published by the Australian Institute of Health and Welfare. Paracetamol initiation rates in COPD patients and risk reduction from lowering the dose were estimated from a previous study which used the weighted cumulative exposure method in a cohort of older Australians. These data were combined and translated into costs savings due to reduced hospitalisation rates from lowering the starting dose by 1g or 2g daily.

Results: Lowering the starting dose of paracetamol by 1g daily resulted in an estimated 435 (95% CI 110-760) fewer hospitalisations with annual cost savings of \$2.9 million (\$2.1-\$3.8 million). A reduction of 2 g daily led to 846 (95% CI 408 – 1283) fewer hospitalisations and \$5.7 million (95% CI \$4.7-6.8 million) in savings.

Conclusions: The findings of this study have potential to reduce hospitalisation costs while maintain adequate pain relief in COPD patients who require long-term treatment with paracetamol.

Impact: The “start low and go slow” principle recommends starting at a low dose, monitoring for effectiveness, and maintaining the lowest effective dose. If lower doses of paracetamol are adequate for chronic pain relief, following this approach may benefit both patients and the Australian health system.