Persistent opioid use following surgical discharge: a prescription data linkage study comparing tapentadol and oxycodone as initial discharge opioid type

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Introduction:
There are 2.7 million surgeries conducted each year in Australia, and 3-10% of opioid-naïve patients prescribed postoperative opioids develop longer-term (persistent) opioid use. This study linked hospital-pharmacy and community-pharmacy data to understand whether persistent opioid use is influenced by initial postoperative opioid type (oxycodone or tapentadol).

Methods:
Patients were discharged from one of four large hospitals across three states. Risk-factors for persistence such as opioid experience, addictive disorders, mental disorders, and pain were identified from patient medication history up to 12 months prior to surgery. The primary outcome of persistence was any opioid use at 90 days post-discharge.

Key Findings:
The sample included 125,000 patients who had surgery between 2016–2021. Two-percent of the opioid naïve sample (did not have opioids in the 90 days prior to surgery) and 27% opioid-experienced patients were persistent. Persistence rates across the study period appeared largely stable for the opioid-experienced group, with some decreases in the opioid naïve sample. Patients discharged with tapentadol immediate release (n=21,000) appeared older and with poorer health indicators that those discharged with oxycodone immediate release (n=41,000). A regression will be presented on persistence rates at the time of the conference which controls for these demographic and clinical characteristics.

Discussion:
This study is anticipated to be the largest international sample of patients prescribed tapentadol reporting on the outcome of opioid persistence. Though retrospective prescription data will allow the identification of comorbidities, it may not capture other known risk factors of persistence such as specific surgery type and tobacco use.

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