

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Persistent opioid use and opioid-related harm after hospital admissions for surgery and trauma in New Zealand: A Population-based Cohort Study
AUTHORS	Gong, Jiayi; Merry, Alan; Beyene, Kebede; Campbell, Doug; Frampton, Chris; Jones, Peter; McCall, John; Moore, Matthew; Chan, Amy

VERSION 1 – REVIEW

REVIEWER	Hance Clarke Toronto General Hospital / UHN Toronto, Canada
REVIEW RETURNED	03-Nov-2020

GENERAL COMMENTS	<p>The authors propose an impressive study that encompasses the New Zealand population which sits at approx. 5 million as of 2020.</p> <p>I think that the authors a trying to accomplish a complex task, the time frame is vast 2006 to 2019 and this poses several challenges -</p> <ol style="list-style-type: none">1. has the prescription landscape not changed significantly - types of meds being used etc. They may want to narrow this unless they are simultaneously going to try to create a narrative around the types of opioids being prescribed at various time points etc.2. the persistent use definition of 90 days allows for comparisons to the literature to date3. Concomitant medications that are potential predictors for persistent opioid use include non-opioid analgesia, including paracetamol, pregabalin, gabapentin, benzodiazepines, antipsychotics, mood stabilisers and antidepressants. Additionally, information on non-steroidal anti-inflammatories (NSAIDs) dispensing will be collected as these have been shown to predict persistent opioid use. * note they are also indicative of a persistent pain problem....4. A strength is that this group will have data across the all ages and this is certainly unique. <p>I have no strong reservations to the submitted protocol and they have a lot of studies to date from which they have based their analysis plan upon.</p> <p>Good luck with your protocol and I look forward to seeing your results published in the years ahead.</p>
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REVIEWER	Alina Cernasev University of Tennessee Health Science Center, College of Pharmacy. US
REVIEW RETURNED	12-Nov-2020

GENERAL COMMENTS	The study is well designed and very well written. It was a pleasure to review. There is a minor suggestion to be addressed by the authors. In the Study Cohort description, the manuscript could be strengthened by adding a few sentences about the current New Zealand guidelines regarding the usage of opioids post-surgery.
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Hance Clarke

Reviewer: 2

Reviewer Name: Alina Cernasev

Reviewer: 1

Institution and Country: Toronto General Hospital / UHN Toronto, Canada

Reviewer: 2

Institution and Country: University of Tennessee Health Science Center, College of Pharmacy. US

Reviewer: 1

Comments to the Author

The authors propose an impressive study that encompasses the New Zealand population which sits at approx. 5 million as of 2020.

I think that the authors are trying to accomplish a complex task, the time frame is vast 2006 to 2019 and this poses several challenges -

1. has the prescription landscape not changed significantly - types of meds being used etc. They may want to narrow this unless they are simultaneously going to try to create a narrative around the types of opioids being prescribed at various time points etc.

We acknowledge that over the last 15 years that there may be changes to opioid availability and prescribing patterns as well as guidelines. However, New Zealand is unique in this regard whereby there have not been a huge number of significant changes to the opioids available to community and hospital prescribing over the last two decades. The two major changes that have occurred in the last two decades include introduction of oxycodone in 2005 and topical fentanyl patch in 2010.¹

We aim to capture both the effect of introducing these two products to the New Zealand market and how it may affect the prescribing of other opioids e.g. Morphine. We did not opt for a time frame starting in 2005, as the data for pharmacy dispensing and hospital admission is less reliable.

We have added Additionally we will adjust for the year of cohort entry in multivariable model assessing the relationship between explanatory variables and outcomes of interest to account for various changes over time such as opioid availability and prescribing guidelines.

2. the persistent use definition of 90 days allows for comparisons to the literature to date

Thank you very much, we appreciate your comment.

3. Concomitant medications that are potential predictors for persistent opioid use include non-opioid analgesia, including paracetamol, pregabalin, gabapentin, benzodiazepines, antipsychotics, mood stabilisers and antidepressants. Additionally, information on non-steroidal anti-inflammatories (NSAIDs) dispensing will be collected as these have been shown to predict persistent opioid use.

* note they are also indicative of a persistent pain problem....

Thank you very much, we acknowledge these concurrent medications may indicate persistent pain problems and will consider this in the context of our discussion when we analyse the data.

4. A strength is that this group will have data across the all ages and this is certainly unique.

I have no strong reservations to the submitted protocol and they have a lot of studies to date from which they have based their analysis plan upon.

Good luck with your protocol and I look forward to seeing your results published in the years ahead.

Thank you very much for this positive feedback and your time during this challenging year.

Reviewer: 2

Comments to the Author

The study is well designed and very well written. It was a pleasure to review.

There is a minor suggestion to be addressed by the authors. In the Study Cohort description, the manuscript could be strengthened by adding a few sentences about the current New Zealand guidelines regarding the usage of opioids post-surgery.

Thank you for your kind words, the Australian and New Zealand College of Anaesthetists (ANZCA) guidelines recommends, Multimodal analgesia is utilised instead of mainly opioid-based analgesia to improve pain control and reduce opioid consumption and adverse effects.²

We have added this to the study cohort description in the revised manuscript.

Reviewer: 1

Competing interests 1: None declared

Reviewer: 2

Competing interests 1: None Declared