Opioid Prescribing After Hospital Discharge Among Elderly Chronic Opioid Users Admitted To Intensive Care Units In Ontario

Han Ting Wang, MD, MSc
Hopital Maisonneuve-Rosemont Centre hospitalier de l’Universite de Montreal
Background

• Chronic opioid use in the general population has increased
• It is unknown how many are admitted to ICUs
• Most ICU stays = exposure to increased amounts of opioids
• Our hypothesis: exposure to ICU increases the use of opioids after hospital discharge for chronic opioid users
Study Design

• Population based retrospective cohort study
  – Ontario healthcare database (ICES)

• Cohort: all index ICU admissions 2002–14, >65 years who survived to 180 days after hospital discharge who met criteria for chronic opioid use before hospitalization:
  – at least one filled opioid prescription overlapping day of hospital admission and
  – 10 or more prescriptions in the year prior or
  – At least 120 cumulative day supply

n = 28,570 admitted to ICU (5.7% of all ICU admissions)
n = 19,584 survived 180 days after hospitalization
Outcomes

• Primary outcome: opioid prescription filled with a duration overlapping day 180 after hospital discharge

• Secondary outcomes: (1) opioid prescriptions filled at days 7 & 30 (2) changes in amount and type of opioids prescribed compared with prior to hospitalization

• Subgroup analyses: medical vs. surgical; mechanical ventilation

• Sensitivity analyses: (1) varied definition of chronic opioid use (2) varied overlap period around day 180
Results: opioid prescriptions filled at 180 days

<table>
<thead>
<tr>
<th>Change in daily MEQ dose compared with before hospitalization, n (%)</th>
<th>Days after hospital discharge</th>
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</thead>
<tbody>
<tr>
<td>Higher</td>
<td>4,308 (22.0)</td>
</tr>
<tr>
<td>Same</td>
<td>3,879 (19.8)</td>
</tr>
<tr>
<td>Lower</td>
<td>4,216 (21.5)</td>
</tr>
<tr>
<td>No prescription</td>
<td>7,181 (36.6)</td>
</tr>
</tbody>
</table>
Results: type of opioid prescription filled

- Codeine
- Oxycodone
- Hydromorphone
- Morphine
- Fentanyl

Greatest decrease: oxycodone and codeine

- On Admission Day
- Day 7
- Day 30
- Day 180
Limitations

- Included only first episode of ICU admission
- Included only patients older than 65 years old
- Prescriptions filled and not taken
- Lack of information on in-hospital and in-ICU opioid use
Conclusions

• 5.7% of elderly ICU admissions are chronic opioid users
• By 6 months after discharge, more than half were either off opioids or on a lower dose
• Approximately 20% were on a higher dose
• Future studies should focus on factors associated with each pattern and its association to opioid dependency and patient outcomes.

• Collaborators: Hannah Wunsch, Damon Scales, Rob Fowler, Andrea Hill, Ruxandra Pinto, Tara Gomes, Duminda Wijeysundera