Factors associated with prescription of opioid analgesics among older persons with colorectal cancer in two district Palliative Care Programs

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Background
Prescription of opioid analgesics, e.g. morphine and hydromorphone, is a key component of pain management among patients with terminal cancer. Access within the community to appropriate analgesics may impact whether patients remain in the community during the weeks prior to death.

Objective
To examine factors associated with use of opioids within the community among older persons with colorectal cancer (CRC) in the 26 weeks prior to death.

Methods
Data source
- Data derived from a retrospective study of persons diagnosed with CRC between January 1, 2001 and April 1, 2005, in Nova Scotia (NS), Canada
- CRC was defined according to ICD-10: C18 (excluding appendix cancer cases, C18.1); C19; and C20
- Excludes diagnosis of CRC based on death certificate only, or on autopsy
- Linked to health administrative databases

Prescriptions from NS Pharmacare Program database
- Includes prescriptions filled in community pharmacies for individuals living in their own homes, and in long term care or assisted-living facilities
- Medications classified according to World Health Organization Anatomical Therapeutic and Chemical Classification system, Canadian version

Analysis
Medications filled in 26 weeks prior to death
- Opioids categorized as: plain opioids (hydromorphone, morphine, oxycodone, fentanyl, meperidine); and opioid compounds, e.g. acetaminophen + codeine
- Frequencies and relative proportions of medication use, and socio-demographic and health characteristics
- Factors associated with opioid use were examined using multivariate logistic regression

Limitations
- Only captures prescription medications that are benefits under NS Pharmacare program
- Excludes individuals covered by other prescription insurance, e.g. Department of Veterans’ Affairs, Non-insured Health Benefits for First Nations, private insurance, and out-of-pocket payment
- Does not capture in-hospital opioid use
- Captures filled prescriptions, not actual use
- No information on level of pain or other symptoms

Results
Factors associated with prescription of at least one plain opioid analgesic in 26 weeks prior to death

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Number of Observations</th>
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<tbody>
<tr>
<td>Male</td>
<td>334 (50.8%)</td>
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<tr>
<td>Age (years)</td>
<td>78.6 (7.3)</td>
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<tr>
<td>At diagnosis</td>
<td>80.5 (7.3)</td>
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<tr>
<td>Urban residence</td>
<td>589 (89.7)</td>
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<tr>
<td>CRC listed as cause of death</td>
<td>747 (71.7)</td>
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<tr>
<td>Stage IV at diagnosis</td>
<td>214 (32.6)</td>
</tr>
<tr>
<td>Elshuaser Comorbidity Index</td>
<td>268 (40.8)</td>
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<tr>
<td>Diabetes</td>
<td>93 (14.2)</td>
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<tr>
<td>Chronic pulmonary disease</td>
<td>70 (10.7)</td>
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</tbody>
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More than half did not fill an opioid prescription during the 26 weeks prior to death

Conclusion
Positive relationship between filling a prescription for an opioid analgesic and referral to palliative care programs highlight their role in enabling access to end of life care within the community.

Some sub-populations may be at risk of inadequate pain management: elderly persons; and those diagnosed at an advanced stage (i.e. less than 26 weeks prior to death).

Need further research that includes all opioid use including in-hospital, younger ages, and paid by private insurance or individuals; measures of pain severity; and detailed information regarding comorbid conditions.