Challenges of Evaluating the Impact of the Canadian Opioid Guideline

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CADTH Symposium
St John’s NL
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Disclosures

• Michael Allen
  o No conflicts of interest to disclose

• Norm Buckley
  o Director of the Michael G. DeGroote National Pain Centre, which has as its mission the identification, creation, collation and dissemination of guidelines for pain management
  o Speakers fees, research support from: Purdue, Pfizer, Hamilton Anesthesia Associates, HSFO, CIHR
Disclosures

• Beth Sproule
  o No conflicts of interest to disclose

• Guideline evaluation supported by:
  o Meeting grants from CIHR
  o Administrative support from Michael G. DeGroote National Pain Centre (endowment from Mr. Michael G. DeGroote)
  o Volunteers

• No industry funding
Introductions

- Clinicians
  - MDs
  - Pharmacists
  - Pain professionals
  - Hypertension professionals
  - CHEP

- Policy makers
- Researchers
- Industry
- Guideline developers
- Anyone else?
Why did you come?

• Interested in guidelines
• Interested in hypertension
• Interested in chronic pain
• Had to go somewhere
• Tell you what you did wrong
Objectives

• Describe history and process of guideline development
• Introduce you to the guideline
• Tell you what ‘the College’ thinks
• Solicit ‘next steps’ advice for evaluating impact
Published by the National Opioid Use Guideline Group (NOUGG) a collaboration of:

Federation of Medical Regulatory Authorities of Canada
College of Physicians & Surgeons of British Columbia
College of Physicians & Surgeons of Alberta
College of Physicians and Surgeons of Saskatchewan
College of Physicians & Surgeons of Manitoba
College of Physicians and Surgeons of Ontario
Collège des médecins du Québec
College of Physicians and Surgeons of New Brunswick
College of Physicians and Surgeons of Nova Scotia
College of Physicians and Surgeons of Prince Edward Island
College of Physicians and Surgeons of Newfoundland and Labrador
Government of Nunavut
Yukon Medical Council

April 30 2010 Version 4.5
Principles

• Guideline must be evidence-based, clinically relevant, achievable
• Evidence necessary but not sufficient
• Review and revise as information becomes available
• Get guideline ‘into play’
• Evaluate impact on practice, patient care
No Existing National Guideline

- No previous national guideline
- CPSO 2000 - guidelines for chronic non-cancer pain, including use of opioids (Mailiss, Tunks co-chairs) (methods?)
- Public interest in widespread use of opioids
- Canada 3rd in the world per capita sales
- New evidence - Furlan 2006
Need for Strategy

• Recognized need for both a guideline and a systematic dissemination strategy

• Partnership with academic institution for ‘maintenance’ of guideline and coordination of dissemination strategy

• Creation of ‘National Faculty’ to advise, develop and support the dissemination and evaluation
Congruent Strategy

• Remarkably ambitious vision

• Congruent with other organizations such as Canadian Pain Society national strategy for improvement of pain care and access to care

• May address reluctance of primary care to prescribe opioids, also assist others in appropriate use
Guideline Strength

• Great deal of clinical information in the guideline documents

• Depth varies from simple statement to discussion of the evidence supporting

• References appended

• ‘College approved’
Tools

- Strategy to create the background document (Part A), guideline itself (Part B) plus ‘roadmap’

- Tools for practice

- Website - PDF, web document

- Opioid Manager - charting tool to structure interaction (Centre for Effective Practice, Furlan); 6-month trial, feedback, revised
Contributors

- Contributors: Research group, NOUGG, National Advisory Panel

- Knowledge included Furlan (2006) meta-analysis plus 3 additional searches:
  - Update of Furlan since 2006
  - Management of patients with problematic use of opioids
  - Effect of long term use
National Opioid Use Guideline Group (NOUGG)

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Dr. Patricia DeMaio
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Dr. Robert Young
Research Group

Dr. Andrea Furlan  Dr. Angela Mailis-Gagnon
Ms. Emma Irvin    Dr. Anita Srivastava
Dr. Luis Chaparro  Dr. Meldon Kahan
Process

• Research group drafted initial guideline with 49 recommendations

• Modified Delphi process (electronic) over 4 rounds; 80% agreement required

• Final web teleconference

• 24 recommendations
National Advisory Panel (NAP)

Ms Lori Adler
Dr. John F. Anderson
Ms Catherine Biggs
Dr. Aline Boulanger
Dr. Robert James Boyd
Dr. Norman Buckley
Dr. Peter Butt
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Dr. R. Keith Phillips
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Mr. Loren Regier
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Dr. Chris Spanswick
Dr. Paul Taenzer
Dr. Eldon Tunks
Dr. Preston Zuliani
Canadian Opioid Guideline 2010

- Updating responsibility accepted by the Michael G. DeGroote National Pain Centre (NPC) at McMaster University

- Guideline housed on NPC website, accessible in PDF format under Creative Commons License

- NOUGG National Faculty established to support dissemination, evaluation
National Faculty Membership

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Stephen Barron
Victoria Borg Debono
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Janice Sumpton
Erica Weinberg
Wende Wood
National Faculty Working Groups

1. Eyes and Ears in the Field Network
2. Practitioner's Tool Kit
3. KT to Physicians and Pharmacists
4. Patient and Public Education
5. Policy-Makers and Health-Payers
Canadian Hypertension Education Program

• Evolving over 35 years
• Amalgam of several groups involved in HT
• 2003 – Outcomes Research Task Force
  o Academia
  o Nongovernmental organizations
  o Provincial governments
  o Public Health Agency of Canada
  o Statistics Canada

Campbell et al Can J Cardiol
2006:22:556
Hypertension Canada’s Annual KT Cycle for developing management recommendations

Canadian Hypertension Education Program (Knowledge Creation)

Monitor Knowledge Use

Annual systematic review and critical appraisal of studies

Synthesis into recommendations

Scientific Manuscripts and Summaries

Identify New Knowledge, Select What is Still Important

Adapt Knowledge To Local/Regional Context

Address Barriers to Knowledge Use

Tailor Tools for Interprofessional Team Members

Evaluate Outcomes

By Combining National and Provincial Administrative Data

Knowledge Gaps, Best Practice Goals

Canadian Hypertension Education Program

• Statistics Canada
  o Canadian Health Measures Survey
    • Annual survey of 5000 people
    • Takes physical measure e.g. measurement of BP
    • Medicine cabinet count
  o Mortality and hospitalization data for HT-related conditions – stroke, heart failure, MI
Canadian Hypertension Education Program

• Public Health Agency of Canada
  ○ Canadian Community Health Survey
    ▪ Prevalence of diagnosed hypertension
    ▪ Prevalence of drug-treated hypertension
• IMS Health – prescribing data
• Conducts needs assessments
Canadian Hypertension Education Program

- Works with Implementation and Recommendation Task Forces to ensure recommendations reach appropriate audiences in appropriate formats
Our Initial Approach

• Looked at CHEP process and reviewed information available from their sources and others
• Reviewed established Canadian surveys to determine if able to identify relevant outcomes
  o Canadian Community Health Survey
  o Canadian Health Measures Survey
  o Survey on Living with Chronic Disease in Canada
  o Canadian Alcohol and Drug Use Monitoring Survey
Unique Issues Identified

- Multiple clinical outcomes as targets
  - improved pain-related outcomes (severity, function)
  - reduced harms (overdose, abuse, addiction)

- Desired prescribing outcomes complex
  - Increase: more people receiving needed pain medication, or more inappropriate prescribing?
  - Decrease: reduced access to medication for treating pain, or reduced inappropriate prescribing?
Unique Issues Identified

• Diagnostic complexity
  o Pain – types, responsiveness to opioids
  o Misuse, abuse, physical dependence, addiction in patients also using/needling therapeutically

• Additional implications
  o Diversion, crime
  o Lack of coverage for non-drug treatments
Establishing Baseline Data

• CIHR submissions for national multidisciplinary survey to establish baseline data
• To build on previous work of opioid prescribing practices and experiences
  o Surveys of family physicians (Allen 2011, Wenghofer 2011)
  o Survey of Ontario physiatrists (Furlan 2010)
  o Survey of Ontario pharmacists (Kahan 2011)
• CIHR grant research questions: barriers to implementing guidelines, awareness of guidelines, current prescribing practices
• Not Funded (x2)
Process to Identify Outcomes

• Established a *Definitions Outcome Group*
  o Identified and invited individuals from across Canada in the pain and addictions areas, including researchers and clinicians

• Objective: to define outcomes most relevant to assess the impact of the guideline

• Categorized outcomes
  o Practice, Clinical, Process
  o Pain, Addiction
# Definitions Outcome Group

<table>
<thead>
<tr>
<th>Practice Outcomes</th>
<th>Pain</th>
<th>Addiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Assess pain with scale</td>
<td>1. Assess risk of addiction</td>
</tr>
<tr>
<td>2.</td>
<td>Assess function with scale -</td>
<td>2. Urine drug screening</td>
</tr>
<tr>
<td>3.</td>
<td>Prescribe opioids for appropriate conditions</td>
<td>3. Management agreement</td>
</tr>
<tr>
<td>4.</td>
<td>Watchful dose</td>
<td>4. Calls to prescription monitoring programs</td>
</tr>
<tr>
<td>5.</td>
<td>Discontinue opioids</td>
<td>5. Referrals to addictions services</td>
</tr>
<tr>
<td>6.</td>
<td>Referrals to pain centres</td>
<td>6. Methadone/buprenorphine prescribing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a. Concomitant prescription of other psychotropics eg benzos</td>
</tr>
<tr>
<td>7.</td>
<td>Safe initiation of fentanyl</td>
<td>7. Assessing aberrant drug taking behaviour and how clinician responds</td>
</tr>
<tr>
<td>8.</td>
<td>Use of meperidine, pentazocine</td>
<td>8. Number of patients who get “fired” by clinician b/c of addiction problem – patient abandonment</td>
</tr>
</tbody>
</table>
### Definitions Outcome Group

<table>
<thead>
<tr>
<th>Clinical Outcomes</th>
<th>Pain</th>
<th>Addictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Number of patients with chronic pain – guidelines may not affect prevalence of chronic pain. Or more patients may end up getting treated.</td>
<td>1. Number of patients with addictions</td>
</tr>
<tr>
<td>2.</td>
<td>Non-drug treatments</td>
<td>2. Deaths from overdose</td>
</tr>
<tr>
<td>3.</td>
<td>Amount of opioids prescribed</td>
<td>3. ER visits from overdose</td>
</tr>
<tr>
<td>a. Intervals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Amounts prescribed at one time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Adjuncts prescribed</td>
<td>4. Use of pain relievers for other than pain relief</td>
</tr>
<tr>
<td>5.</td>
<td>Quality of life - Interferences</td>
<td>5. Diversion – difficult to assess – see #8</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>6. Prevalence of patients exhibiting aberrant drug seeking behaviour – double doctoring, tampering, SK, BC, NS, ON, AB, can do this</td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td>7. Concomitant prescription of other psychotropics eg benzos</td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td>8. Proportion of patients suspected of diverting who have legitimate pain, or addiction, SK may be able to do this</td>
</tr>
</tbody>
</table>
# Definitions Outcome Group

<table>
<thead>
<tr>
<th>Process Outcomes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pain</strong></td>
<td><strong>Addictions</strong></td>
</tr>
<tr>
<td>1. Wait times for referral to pain centre</td>
<td>1. Wait times for referral to addictions services</td>
</tr>
</tbody>
</table>
Further Refinement

- Linked outcomes identified to specific guideline recommendations
- Drafted possible measurement indicators for outcomes
- Developed a process to prioritize outcomes
  - Survey of National Faculty
  - Rated outcomes and measures on scale of 1-5
National Faculty Survey

Sample

**Question #3** *(Practice Outcomes - Addiction)* Treatment agreement

R05
Before initiating opioid therapy, ensure informed consent by explaining potential benefits, adverse effects, complications and risks (Grade B). A treatment agreement may be helpful, particularly for patients not well known to the physician or at higher risk for opioid misuse (Grade C).

<table>
<thead>
<tr>
<th>Outcome: Use of treatment agreements with patients before initiating opioid therapy for CNCP.</th>
<th>4.5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measurement 1.</strong> Proportion of <strong>patients</strong> who have a treatment agreement with their physician prior to starting opioid therapy.</td>
<td>3.9</td>
</tr>
<tr>
<td><strong>Measurement 2.</strong> Proportion of <strong>physicians</strong> who employ a treatment agreement prior to initiating opioid therapy for CNCP.</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Patient must participate to his treatment.

Results - scores out of 5:
- ≤ 4.0 lower importance = 25% of outcomes
- ≥ 4.1 - 4.4 high importance = 50% of outcomes
- ≥ 4.5 very high importance = 25% of outcomes
Outcome Evaluation

• Each outcome then rated based on the following criteria* by the working group:
  • Feasible
    o data to measure outcome should be available fairly easily and cheaply
  • Credible
    o should be valid and reliable
  • Comparable
    o can be used to compare across geographic areas and across time
  • Understandable
    o should be easy to interpret with no ambiguity as to whether performance has improved or deteriorated

(*adapted from the Dept. of Health, Nova Scotia)
Further Prioritization

• Each member of the working group ranked top 5 outcomes
  o 16 outcomes were picked by at least one member
• These 16 outcomes were sent to National Faculty and other experts for ranking on scale of 1 to 5
  o 78 sent, 45 responses = 57%
Further Evaluation

- Outcome list sent to the original NOUGG National Advisory Panel and Research Group, and the Implementation National Faculty
- Asked for feedback on which outcomes can be easily measured and how, and any potential collaborators
- Feedback
  - Don’t rely on self-reported information
  - Potential collaborators: WCB, Prescription Monitoring Programs, Centre for Effective Practice
### Outcomes

<table>
<thead>
<tr>
<th>Rank</th>
<th>Outcomes</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Effects of opioids on quality of life, pain, and function.</td>
<td>146</td>
</tr>
<tr>
<td>2</td>
<td>Use of tools to screen patients for addiction risk.</td>
<td>138</td>
</tr>
<tr>
<td>3</td>
<td>Monitoring patients for aberrant drug-related behaviours.</td>
<td>78</td>
</tr>
<tr>
<td>4</td>
<td>Opioid prescribing at greater than the watchful dose.</td>
<td>74</td>
</tr>
<tr>
<td>5</td>
<td>Mortality rates associated with prescription opioid overdose.</td>
<td>64</td>
</tr>
<tr>
<td>6</td>
<td>Prevalence and incidence of prescription opioid addiction.</td>
<td>62</td>
</tr>
<tr>
<td>7</td>
<td>Discontinuation or tapering of opioids because of adverse effects or ineffectiveness.</td>
<td>59</td>
</tr>
<tr>
<td>8</td>
<td>Monitoring patients using information from prescription monitoring programs.</td>
<td>42</td>
</tr>
<tr>
<td>9</td>
<td>Use of validated pain scales.</td>
<td>44</td>
</tr>
<tr>
<td>10</td>
<td>Use of treatment agreements.</td>
<td>43</td>
</tr>
<tr>
<td>11</td>
<td>Concomitant prescribing of benzodiazepines and opioids.</td>
<td>29</td>
</tr>
<tr>
<td>12</td>
<td>Amounts of opioids prescribed per patient per unit time (e.g. per month or per year).</td>
<td>29</td>
</tr>
<tr>
<td>13</td>
<td>Type and amounts of adjunctive medications prescribed for CNCP patients taking opioids.</td>
<td>23</td>
</tr>
<tr>
<td>14</td>
<td>Health-care facilities availability of appropriate policies for providing guidance on opioid prescribing.</td>
<td>25</td>
</tr>
<tr>
<td>15</td>
<td>Emergency room visits associated with prescription opioid overdose.</td>
<td>30</td>
</tr>
<tr>
<td>16</td>
<td>Initiation of fentanyl in patients who have not been on 60 MEQ of strong opioid.</td>
<td>14</td>
</tr>
</tbody>
</table>

Originally rated as of very high importance
Questions for Discussion

• Anybody with similar experiences?
• Any other guidelines being evaluated for effectiveness?
• What could we have done better?
• What should we do now?
• Would anyone like to collaborate with us?
Thank you for your participation

http://nationalpaincentre.mcm