Intervention Strategies to Address Concerning Prescribing Patterns Related to Medications with High Potential for Misuse

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Prescription drug misuse:
When medications are used for purposes other than the medically legitimate purposes for which they are intended.

Medications prone to misuse/abuse:
• Increased likelihood for addiction/dependency
• Examples are drugs like opioids, benzodiazepines

Examples:
• Intentional overuse (e.g., for recreational purposes)
• Use of medications by someone other than the person for whom the drug was intended
• Acquisition of prescription drugs for resale as street drugs (diversion)

Recent Research on Opioid Utilization in Canada:
• Surpassing use of illicit drugs in most areas across Canada
• High prevalence of use among youth reported in Canadian studies
Prescription Monitoring Programs:
• 5 provinces in Canada
• 37 US states
(http://www.deadiversion.usdoj.gov/faq/rx_monitor.htm#4)


OLDER MEDICAL LITERATURE:
US Activities to Address Prescription Drug Abuse

US Diversion Control Program – established in 1971

WELCOME TO THE RADARS SYSTEM

The Researched Abuse, Diversion and Addiction-Related Surveillance (RADARS®) System is a prescription drug abuse, misuse, and diversion surveillance system that collects timely product- and geographically-specific data.

The RADARS System measures rates of abuse, misuse and diversion throughout the United States, contributing to the understanding of trends and aiding the development of effective interventions. These data assist pharmaceutical companies in fulfillment of their regulatory obligations such as risk evaluation and mitigation strategies (REMS).
Initiating Action

College of Physicians and Surgeons of Alberta (CPSA) newsletter, May 2008:

Prescription drug misuse
“Leaders of several of Alberta’s First Nation communities have recognized the consequences of this problem, and are keen to see it addressed. The College and Health Canada’s First Nations and Inuit Health department are working together to analyze non-identifiable data collected by the Non-Insured Health Benefits Program and the Triplicate Prescription Program, to provide physicians with information about their prescribing for First Nations patients. Project goals are based on quality improvement and patient safety. Following the analysis, the College may ask physicians to provide additional information.”

Full article available: http://www.cpsa.ab.ca/Libraries/Res_Messenger/M142.pdf
FNIHB Deputy Medical Officer of Health and CPSA review of physician prescribing patterns for First Nation communities that raised concerns.

Data Source: Non-Insured Health Benefits
Baseline: 2008-2009

Identification of concerning prescribing:
- Identify physicians prescribing to at least 50 NIHB clients per quarterly period.
- Limit to prescribers with >30% of adult (age 18+) First Nation claimants receiving at least one prescription for an opioid medication on at least 2 of the past 4 quarters.
- Manual review of data for physicians identified in (a) and (b).
2009: CPSA recruit Senior Medical Advisor to the Physician Prescribing Practices Program.

Development of Intervention Strategies
- Physician education material packages
- Triplicate Prescription Program data review
- Development of intervention process
- In collaboration with FNIHB to address specific prescribing concerns of First Nation communities
32 physicians were identified for the intervention:

• 19 physicians prescribed an opioid to at least 50% of First Nation claimants in all 4 quarters.

• 7 prescribed an opioid to 30 to ~50% of First Nation claimants in all 4 quarters.

• 6 prescribed opioids to >30% of First Nation claimants in 2 or 3 quarterly periods.
Initial physician letter including:

- Practice tools: Opioid Risk Tool and literature (Universal Precautions and Difficult Pain Patient articles, meperidine information)
- Letter included a request to contact the Prescribing Practices Physician (CPSA) by phone
- Triplicate prescription data
- NIHB prescribing summary data
% of NIHB Claimants Filling at Least One Opioid Prescription - by Prescriber

[example prescribing data for one community for one quarterly period]
Of the 32 initial physicians identified:

- One physician voluntarily removed themselves from the physician register.


- Positive or negative feedback letters sent after the 15 month prescribing review.
Follow-Up Prescribing Reviews

Follow up review of prescribing habits conducted at 6, 12, 15 months:

- % claimants filling 1+ opioid prescription
- % claimants filling 1+ benzodiazepine prescription
- Average patient oral morphine equivalents (OME)
- Average patient defined daily dose (DDD) for benzodiazepines
15 Month Follow-Up & Assessment

FNIHB and triplicate prescription data reviewed for prescribing changes: Improved prescribing defined as 10% or greater reduction in % of patients on opioids and benzodiazepines.

March 2011
- All physicians were sent positive or negative feedback letters.
- 17 physicians were sent negative feedback letters.
  - Requested to provide written response regarding practice approach to prescribing medications with high abuse potential.
    - All 17 physicians responded.
    - One had retired.
Prescribing review of 16 physicians* who received negative feedback letters – at 6 months after 2nd letter:

<table>
<thead>
<tr>
<th>Number of Parameters Indicating Improvement</th>
<th>Number of Physicians*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
</tr>
</tbody>
</table>

*One physician retired during final follow up, with improvement on 2 other parameters.
*based on a 10% reduction in proportion of claimants receiving opioids (and benzodiazepine prescribing review).

**physician exhibited improvement on 2 parameters.
Changes in Average Patient Oral Morphine Equivalents

Post Intervention Analyses

All Physicians (N=31)

High Risk Prescribers (N=19)

OME = oral morphine equivalents
Post Intervention Analyses

*Physicians prescribing benzodiazepines to at least 30% of patients.

DDD = Defined Daily Dose

Changes in Average Patient DDD for Benzodiazepines

High Benzodiazepine Prescribers* (N=17)

- Average DDD/Day/Patient (Follow Up/Baseline)

- Apr-June/2010
- Oct-Dec/2010
- Jan-Mar/2011
## Opioid Prescribing at 15 Months

<table>
<thead>
<tr>
<th>Opioid Prescribing Measures*</th>
<th>High Prescribers (N=19)</th>
<th>Moderate Prescribers (N=12)</th>
<th>Total (N=31)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (n)</td>
<td>% (n)</td>
<td>% (n)</td>
</tr>
<tr>
<td>OME Reduction**</td>
<td>52.6 (10)</td>
<td>58.3 (7)</td>
<td>54.8 (17)</td>
</tr>
<tr>
<td>Reduction in % Patients Prescribed Opioids***</td>
<td>42.1 (8)</td>
<td>58.3 (7)</td>
<td>48.4 (15)</td>
</tr>
</tbody>
</table>

*October-December 2009 (baseline) to January-March 2011.

**Reduction in average patient OME (oral morphine equivalents) per day (t2/t1; 10% reduction for high prescribers, 5% for moderate prescribers).

***Absolute change in % of patients receiving opioids (t2-t1; 10% reduction for high prescribers, 5% for moderate prescribers).
Benzodiazepine Prescribing at 15 Months

Data for 17 physicians prescribing benzodiazepines to at least 30% of claimants (all but one also identified as high risk opioid prescriber):

<table>
<thead>
<tr>
<th>Benzodiazepine Prescribing Measures*</th>
<th>Benzodiazepine Prescriber Subgroup* (N=17)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (n)</td>
</tr>
<tr>
<td>Reduction in Average Benzodiazepine DDD** (t2/t1; change at least 10%)</td>
<td>64.7 (11)</td>
</tr>
<tr>
<td>Reduction in % Patients Prescribed Benzodiazepines (t2-t1; at least 10%)</td>
<td>52.9 (9)</td>
</tr>
</tbody>
</table>

*October-December 2009 (baseline) to January-March 2011.

**DDD = Defined Daily Dose (see: http://www.whocc.no/atc_ddd_index/)
Summary of Changes in Prescribing at 15 months

<table>
<thead>
<tr>
<th>Number of Parameters Indicating Improvement</th>
<th>Number of Physicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>6 (19.4%)</td>
</tr>
<tr>
<td>3</td>
<td>1 (3.2%)</td>
</tr>
<tr>
<td>2</td>
<td>9 (29.0%)</td>
</tr>
<tr>
<td>1</td>
<td>7 (22.6%)</td>
</tr>
<tr>
<td>0</td>
<td>8 (25.8%)</td>
</tr>
<tr>
<td>Total</td>
<td>31 (100%)</td>
</tr>
</tbody>
</table>

Summary of prescribing changes using additional measures of dose exposure and modified cut-offs for high and moderate risk prescribing profiles.
• Although many physicians did not meet the pre-defined criteria for improved prescribing, a reduction in at least one prescribing measure was observed for approximately 75% of physicians in the 15 months after the initial intervention letter, and for over 80% after the second follow up.

• Educational intervention strategies and/or oversight from regulatory bodies can impact physician prescribing practices.

• Intervention strategies may need to be tailored for moderate versus high risk prescriber groups.

• Long term follow up and monitoring is needed to determine appropriate interventions for physicians that appear resistant to change with respect to prescribing habits.
Next Steps

- CPSA follow-up with physicians with unchanged practice habits.
- Patient follow-up to determine if patients are switching physicians.
- Integration of additional measures of patient-specific dose exposure in prescribing evaluations.
- Ongoing public health interventions to address population-based risk factors and social determinants of health associated with prescription drugs and other substance abuse.
Thank You

QUESTIONS?