Problematic use of prescription medication: integrating research findings into practice approaches

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Opioid prescribing in Australia

**Codeine** is the most commonly used opioid

*Not captured in most monitoring systems (existing and planned)*

Shifting pattern: heroin → pharmaceutical opioids

- Heroin only: 30%
- Morphine only: 30%
- Methadone & bup: 70%
- Codeine only: 70%
- Fentanyl only: 30%
- Several opioids: 70%

The graph shows the percentage of users shifting from heroin to pharmaceutical opioids from 2000 to 2011.
Mortality characteristics differ by opioid type

• Oxycodone
  – Majority prescribed (53%), history of chronic pain (52%), minority with a noted history of injecting (27%)

• Fentanyl
  – Two-fifths prescribed (37%), history of chronic pain (38%), majority had a noted history of injecting (55%)

• Codeine
  – Prescription status typically unknown, one-third chronic pain (35%), minority with noted history of injecting (16%)

Pharmaceutical opioid use in different populations

General population (household survey):
- 5% report recent non-medical pharmaceutical use (past 12 months)
- Most commonly over-the-counter pain-killers (78%)

People who inject drugs (IDRS annual surveys)
- ~One in three report recent (past 6 mo) injection of PO
- Oxycodone use is weekly or less on average (occasional/opportunistic)
- *Heroin* main drug injected (*by far*) in terms of frequency

Chronic pain treatment populations (POINT cohort)

- One in four (24%) meet criteria for ‘addiction’ defined by the American Pain Society et al ‘behaviour including one or more of the following: impaired control over drug use, compulsive use, continued use despite harm, and cravings.
- One in five (18.6%) met lifetime criteria for ICD-10 pharmaceutical opioid use disorder.
- Almost one in ten (9%) meet criteria for ICD-10 pharmaceutical opioid dependence (19% meet ICD-11 definition for dependence).

Very *roughly* estimated (based on how many people are prescribed long-term opioids) …150,000 -190,000 people in Australia prescribed opioids meet criteria for addiction or dependence.

Campbell, Nielsen, Larance et al (2015). Pharmaceutical opioid use and dependence among people living with chronic pain: Associations observed within the Pain and Opioids IN Treatment (POINT) cohort. Pain medicine, 16(9), 1745-1758.

Pharmaceutical opioid dependence: Increasing treatment demand

- One in three* people in OST (*where data coded) report a PO as the main drug at treatment entry
- Significant increases over time in non-OST treatment seeking (↑ codeine and oxycodone)
- Estimate (roughly) <5% of those that meet criteria for dependence receive OST
  - OST not appropriate for all people who meet dependence criteria
  - Many may not be interested in OST
  - …. represents a sizable treatment gap

Comparing codeine (n = 53) users to strong opioid users (n = 82) in treatment in NSW

## Consistent patterns across multiple studies

<table>
<thead>
<tr>
<th>Codeine dependence: web survey (n = 800)</th>
<th>Retrospective case series (n = 147)</th>
<th>POUT Cohort study (n = 108)</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most female</td>
<td>Codeine female/ strong PO male</td>
<td>50/50</td>
<td>More females</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td>Mainly employed</td>
<td>Higher amongst codeine</td>
<td>29% overall (higher for codeine)</td>
</tr>
<tr>
<td><strong>Mental health</strong></td>
<td>Poor</td>
<td>High levels of co-morbidity</td>
<td>Most report depression, anxiety, trauma, highly medicated</td>
</tr>
<tr>
<td><strong>Physical Health</strong></td>
<td>Poor physical functioning, Chronic pain</td>
<td>Most report pain as reason for initiation</td>
<td>85% report problematic pain in past year (41% current chronic pain)</td>
</tr>
<tr>
<td><strong>Drug use history</strong></td>
<td>Around 60% ever used an illicit drug (no difference compared with to non-dependent)</td>
<td>Varied by opioid type, multiple opioids and injection history for strong PO</td>
<td>58% ever injected, 17% used heroin in the past year</td>
</tr>
</tbody>
</table>

Nielsen et al 2011 Journal of Opioid Management  
Nielsen et al 2013 Drug and Alcohol Review  
Nielsen et al 2015 APSAD conference
Systematic review: Rates of ‘addiction’ averaged between 8% and 12% (range, 95% CI: 3%-17%)

Pain and Opioids IN Treatment (POINT) Study

- Australian cohort of 1514 chronic pain patients prescribed opioids (community sample)
  - One in ten (10.1%) met criteria ICD-10 criteria for harmful use
  - One in five (18.6%) met lifetime criteria for ICD-10 pharmaceutical opioid use disorder


Those on the highest doses report the most problems AND report *less* pain relief (compared to lower doses).


### Chronic Pain (POINT) Cohort – Other substance use

- **Benzodiazepines**: one third report current use *(half of those use every day)*
- **Alcohol**: one third report lifetime alcohol use disorders
- **Cannabis**: one in ten (12%) meet criteria for a use disorder, one in six had used for pain relief


‘Adverse selection’

- Those with the most complex histories, and therefore with the most risk factors, are prescribed the highest doses
  - Participants with better socio-economic status indicators (income and education, private health insurance, employment) were less likely to be on longer-term opioid analgesic treatment
  - Those with poorer health (smoking, obesity and low physical activity levels) were more likely to receive subsequent opioid analgesic treatment.
  - Those with mental health problems and substance use disorders more likely to receive opioids for pain


Treatment outcomes for PO Dependence

Cochrane review:
- Methadone and buprenorphine equally effective
- Maintenance more effective than detoxification

Comparisons of PO to heroin
- Studies comparing heroin and PO generally find better outcomes for PO

POUT cohort study (NSW cohort of PO in Treatment)
- Leaving treatment associated with employment
- Opioid use associated with heroin use history

High retention, increasing employment

12 month outcomes for NSW PO treatment cohort

* p < 0.05 compared to T1
In summary

• PO dependent people a *growing* and potentially *under-treated* population

• Differ from people who use illicit opioids in important ways (e.g. more severe comorbidity)

• Generally good treatment outcomes (methadone and buprenorphine both good options)

• Challenges:
  • Attracting this population into existing treatment or
  • *how* and *where* to deliver treatment to those that need it