Leveraging Data from the Illinois Prescription Monitoring Program to Address the Opioid Epidemic Through Academic Detailing

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Outline

• Illinois Prescription Monitoring Program Initiatives
• Overview of Academic Detailing Initiatives
• Preliminary Evaluations and Outcomes
• Implications of Academic Detailing Outcomes
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Illinois Prescription Monitoring Program (IL PMP)

- IL PMP one of oldest PMPs
- Home-grown system
- Captures data from pharmacies on all controlled substance prescriptions as well as naloxone
State of Illinois Opioid Action Plan

3 Pillars
- Prevention
- Treatment and Recovery
- Response

6 Priorities
- Safer Prescribing and Dispensing
- Education and Stigma Reduction
- Monitoring and Communication
- Access to Care
- Supporting Justice-Involved Populations
- Rescue

9 Strategies
- Increase PMP use
- Reduce high-risk opioid prescribing
- Increase accessibility of information and resources
- Increase impact of prevention programming
- Strengthen data collection, analysis and sharing
- Increase access to care
- Increase diversion and deflection program capacity
- Increase naloxone training and access
- Decrease OD deaths after release from institutions
IL PMP Initiatives

Focus in four key areas:
1. Identify High Risk Behaviors
2. Provide Education
3. Increase Utilization of the PMP
4. Prevent Overdose
Strategies to Achieve Initiatives

• Academic detailing (AD) may be used as a strategy to achieve IL PMP initiatives

• AD is a method of educational outreach\(^1,^2\)
  • One-on-one, face-to-face, encounters with clinicians

• Utilizes trained academic detailers to provide current, unbiased evidence-based information

• Aims to improve prescribing behavior

• Most effective when trusting relationship between provider and detailer

Academic Detailing is Not

• Didactic lecture in healthcare provider’s office

• Written materials or emails sent directly to providers

• Focused solely on cost savings or limiting industry influence

• Punitive in nature
Importance of Tailoring Academic Detailing Programs

• Challenges when developing and implementing AD programs
  - Variations in prescribing patterns
  - Establishing partnerships
  - Logistics
  - Educational messages
Establishing Partnerships

- Essential when developing and implementing AD programs
  - State-based prescription monitoring programs (PMP)
  - State departments of health and human services
  - Local academic institutions
  - Provider groups & healthcare systems
  - National Resource Center for Academic Detailing (NaRCAD)
Illinois Opioid AD Program Implementation

- Implemented across two phases

**Phase I:** Urban Providers
  - June 2018 – August 2018

**Phase II:** Rural Providers
  - November 2018 – Present
AD Program Summary

• Complete 2 visits with primary care providers (MD, DO, NP, PA)
  • Visit length between 15 and 30 minutes
  • 2 visits separated by 6 to 8 weeks

• Content development
  • Focused on CDC prescribing guidelines
  • Tailored to needs of providers
  • Prescriber-specific data

• Detailer training
  • NaRCAD train-the-trainer model
  • Quality assurance and troubleshooting

• Evaluation
  • Effect of the AD
  • Development of AD tools
1. Opioids are not first-line therapy
2. Establish goals for pain and function
3. Discuss risks and benefits
4. Use immediate-release opioids when starting
5. **Use the lowest effective dose**
6. Prescribe short durations for acute pain
7. Evaluate benefits and harms frequently
8. **Use strategies to mitigate risk**
9. Review PDMP Data
10. Use urine drug testing
11. **Avoid opioids and benzodiazepine co-prescribing**
12. **Offer treatment for opioid use disorder**

**Red** = Key messages covered
Provider-specific Information

• Audit and feedback is a widely used strategy to motivate behavior change

• Feedback on provider clinical performance was provided via opioid prescribing information

• Provider-specific opioid prescribing information was obtained from the IL PMP

• Detailers shared this information with providers at each visit
Illinois Prescription Monitoring Program
Dashboard Metrics

Below is a 6-month comparison (Nov 2017-Apr 2018) of your number of opioid prescriptions: morphine milligram equivalents (MME) per day, average number of monthly opioid prescriptions, number of monthly PMP queries along with the average for all AMITA Health primary care providers from Cook County.

<table>
<thead>
<tr>
<th></th>
<th>You</th>
<th>AMITA Health PCPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50 MME/day (%)</td>
<td>27 (56%)</td>
<td>12,903 (76%)</td>
</tr>
<tr>
<td>50-89 MME/day (%)</td>
<td>14 (29%)</td>
<td>3,568 (22%)</td>
</tr>
<tr>
<td>≥90 MME/day (%)</td>
<td>7 (15%)</td>
<td>312 (2%)</td>
</tr>
<tr>
<td>Average number of monthly opioid prescriptions</td>
<td>8.0</td>
<td>13.5</td>
</tr>
<tr>
<td>Average number of monthly PMP queries</td>
<td>0.0</td>
<td>3.5</td>
</tr>
</tbody>
</table>

1. % = proportion of total opioid prescriptions over the 6-month period
   a. i.e. Your MME/day <50 = 10%, meaning 10% of your total opioid prescriptions over 6 months

Email: info@ilpmp.org | Website: www.ilpmp.org
Quality Assurance Process

- Detailers documented visits in field notes
- Field notes reviewed by program coordinators
- Weekly detailer phone calls
- Provider satisfaction measure
Second Visit Differences in Delivery

- Key difference in delivery of second visit
- In-person vs. technology-based
Providers Visited in Urban and Rural Sites

**Phase I: Urban Providers**

<table>
<thead>
<tr>
<th>Provider characteristics</th>
<th>Total Providers, n</th>
<th>Sex, n (%)</th>
<th>Years of Practice, mean (SD)</th>
<th>Provider Type, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Providers, n</td>
<td>186</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex, n (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>103 (55.4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>83 (44.6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years of Practice, mean (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>14.6 (12.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provider Type, n (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MD/DO</td>
<td>160 (86.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA/NP</td>
<td>26 (14.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Phase II: Rural Providers**

<table>
<thead>
<tr>
<th>Provider characteristics</th>
<th>Total Providers, n</th>
<th>Sex, n (%)</th>
<th>Years of Practice, mean (SD)</th>
<th>Provider Type, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Providers, n</td>
<td>119</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex, n (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>56 (47.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>63 (53.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years of Practice, mean (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>13.8 (11.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provider Type, n (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MD/DO</td>
<td>76 (63.9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA/NP</td>
<td>43 (36.1)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Provider Satisfaction Measure Results

<table>
<thead>
<tr>
<th>Item*</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>This is an important topic</td>
<td>97%</td>
<td>100%</td>
</tr>
<tr>
<td>The detailer was knowledgeable</td>
<td>93%</td>
<td>100%</td>
</tr>
<tr>
<td>The detailer was an effective communicator</td>
<td>96%</td>
<td>100%</td>
</tr>
<tr>
<td>The key messages are feasible to implement in my practice</td>
<td>89%</td>
<td>94%</td>
</tr>
<tr>
<td>My practice is likely to change as a result of this visit</td>
<td>49%</td>
<td>69%</td>
</tr>
<tr>
<td>I would be receptive to future visits</td>
<td>78%</td>
<td>94%</td>
</tr>
</tbody>
</table>

*Response options: “not at all”, “slightly”, “moderately”, “very”, or “extremely”. The results reported are for “very” or “extremely” responses.
Preliminary Evaluations

• Change in mean monthly number of:
  • Total opioid prescriptions
  • High dose opioid prescriptions (>90 MME/day)
  • Patients co-prescribed opioids and benzodiazepines

• Outcomes measured at six months post-AD program implementation (September 2018 to February 2019)

• Comparison groups: Academic detailing vs. No academic detailing

• Used Difference-in-Difference approach to compare two groups before and after AD visits
Table 1. Baseline demographics comparison between AD-Exposed and AD-Unexposed providers in the Urban region

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>AD-Exposed</th>
<th>AD-Unexposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>n (%)</td>
<td>550</td>
<td>151 (27.5%)</td>
<td>399 (72.5%)</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>286</td>
<td>88 (58.3%)</td>
<td>198 (49.6%)</td>
</tr>
<tr>
<td>Male</td>
<td>264</td>
<td>63 (41.7%)</td>
<td>201 (50.4%)</td>
</tr>
<tr>
<td><strong>Years of Practice</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (interquartile range)</td>
<td>19 (17)</td>
<td>18 (15)</td>
<td>19 (17)</td>
</tr>
<tr>
<td><strong>Provider Type</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MD</td>
<td>423</td>
<td>87 (57.6%)</td>
<td>336 (84.2%)</td>
</tr>
<tr>
<td>DO</td>
<td>74</td>
<td>38 (25.2%)</td>
<td>36 (9.0%)</td>
</tr>
<tr>
<td>NP</td>
<td>34</td>
<td>18 (11.9%)</td>
<td>16 (4.0%)</td>
</tr>
<tr>
<td>PA</td>
<td>19</td>
<td>8 (5.3%)</td>
<td>11 (2.8%)</td>
</tr>
<tr>
<td><strong>Provider Specialty</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Medicine</td>
<td>228</td>
<td>115 (76.2%)</td>
<td>113 (28.3%)</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>322</td>
<td>36 (23.8%)</td>
<td>286 (71.7%)</td>
</tr>
</tbody>
</table>
Preliminary Outcomes

Table 2. Difference-in-Difference Estimates for Mean Monthly Total Opioid Prescriptions per Provider

<table>
<thead>
<tr>
<th></th>
<th>Pre-AD Mean</th>
<th>Post-AD Mean</th>
<th>D-I-D Estimator</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-exposed</td>
<td>15.22</td>
<td>15.51</td>
<td>-0.85</td>
<td>(-1.36, -0.33)</td>
<td>0.001</td>
</tr>
<tr>
<td>AD-unexposed</td>
<td>13.86</td>
<td>15.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interpretation:

- On average, nearly 1 less opioid prescription per month per provider were dispensed among AD-exposed providers relative to AD-unexposed providers.

- This translates to ~1,500 fewer opioid prescriptions dispensed annually (Ex: -0.85 opioid prescriptions x 151 AD-exposed providers x 12 months = ~1,500 fewer opioid prescriptions)
Preliminary Outcomes (Cont’d)

Table 3. Difference-in-Difference Estimates for Mean Monthly High-dose Opioid Prescriptions per Provider

<table>
<thead>
<tr>
<th></th>
<th>Pre-AD Mean</th>
<th>Post-AD Mean</th>
<th>D-I-D Estimator</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-exposed</td>
<td>0.86</td>
<td>0.55</td>
<td>-0.11</td>
<td>(-0.24, 0.01)</td>
<td>0.08</td>
</tr>
<tr>
<td>AD-unexposed</td>
<td>1.10</td>
<td>0.90</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interpretation:
- On average, 0.11 fewer high-dose opioid prescriptions per month per provider were dispensed among AD-exposed providers relative to AD-unexposed providers.
- This translates to ~200 fewer high-dose opioid prescriptions dispensed annually (Ex: -0.11 opioid prescriptions x 151 AD-exposed providers x 12 months = ~ 200 fewer high-dose opioid prescriptions)
Table 4. Difference-in- Difference Estimates for Mean Monthly Patients Co-Prescribed Opioids and Benzodiazepines

<table>
<thead>
<tr>
<th></th>
<th>Pre-AD Mean</th>
<th>Post-AD Mean</th>
<th>D-I-D Estimator</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-exposed</td>
<td>3.68</td>
<td>3.36</td>
<td><strong>-0.22</strong></td>
<td>(-0.41, -0.04)</td>
<td>0.02</td>
</tr>
<tr>
<td>AD-unexposed</td>
<td>3.31</td>
<td>3.21</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interpretation:

- On average, 0.22 fewer patients were co-prescribed benzodiazepines and opioids per month per provider among AD-exposed providers relative to AD-unexposed providers.

- This translates to ~400 fewer patients co-prescribed benzodiazepines and opioids annually (Ex: -0.22 patients co-prescribed benzodiazepines and opioids x 151 AD-exposed providers x 12 months = ~ 400 fewer patients co-prescribed benzodiazepines and opioids)
Implications

- **Establishing partnerships are crucial** for implementation of strategies to achieve initiatives that address the opioid epidemic.

- AD was effective at reducing the number of opioid prescriptions and patients co-prescribed benzodiazepines and opioids among AD-exposed providers relative to AD-unexposed providers.

- Future efforts should include **scaling-up of opioid-related AD programs** for delivery to other relevant providers (surgeons, dentists, etc.) across the state.
Next Steps

• Evaluate AD program in southern Illinois

• Continue evaluating the impact of the AD initiative on changes in opioid prescribing rates, duration of days supply, and accessing the PMP

• Explore opportunities for continuation and expansion of our AD initiatives

• Evaluate additional impacts of AD through endpoints such as naloxone prescribing, opioid-related hospitalizations, opioid-related deaths