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

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Sarah Pointer, PharmD
Clinical Director of the Illinois Prescription Monitoring Program
Bureau of Pharmacy & Clinical Support Services
Sarah.Pointer@illinois.gov

Christopher D. Saffore, PharmD
Department of Pharmacy Systems, Outcomes and Policy
College of Pharmacy, University of Illinois at Chicago
csaffo3@uic.edu

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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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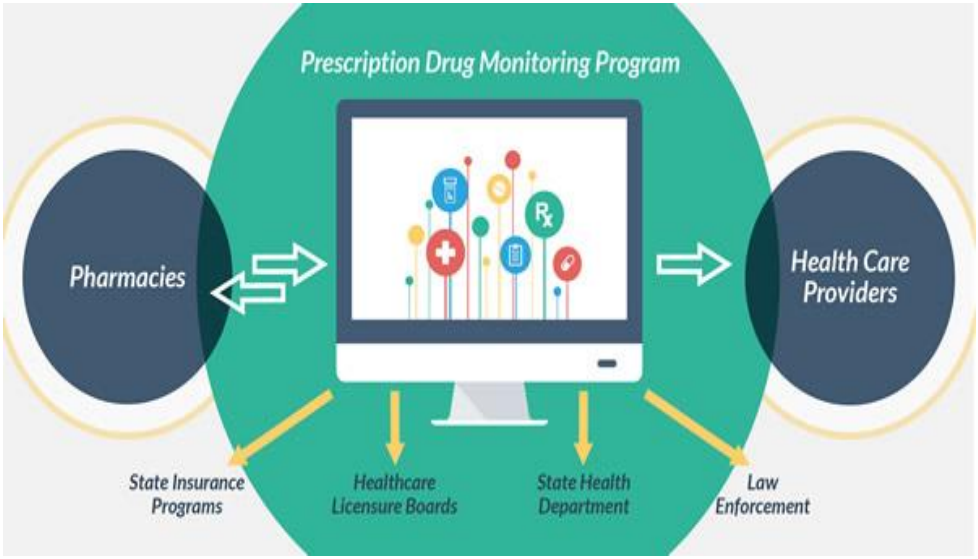
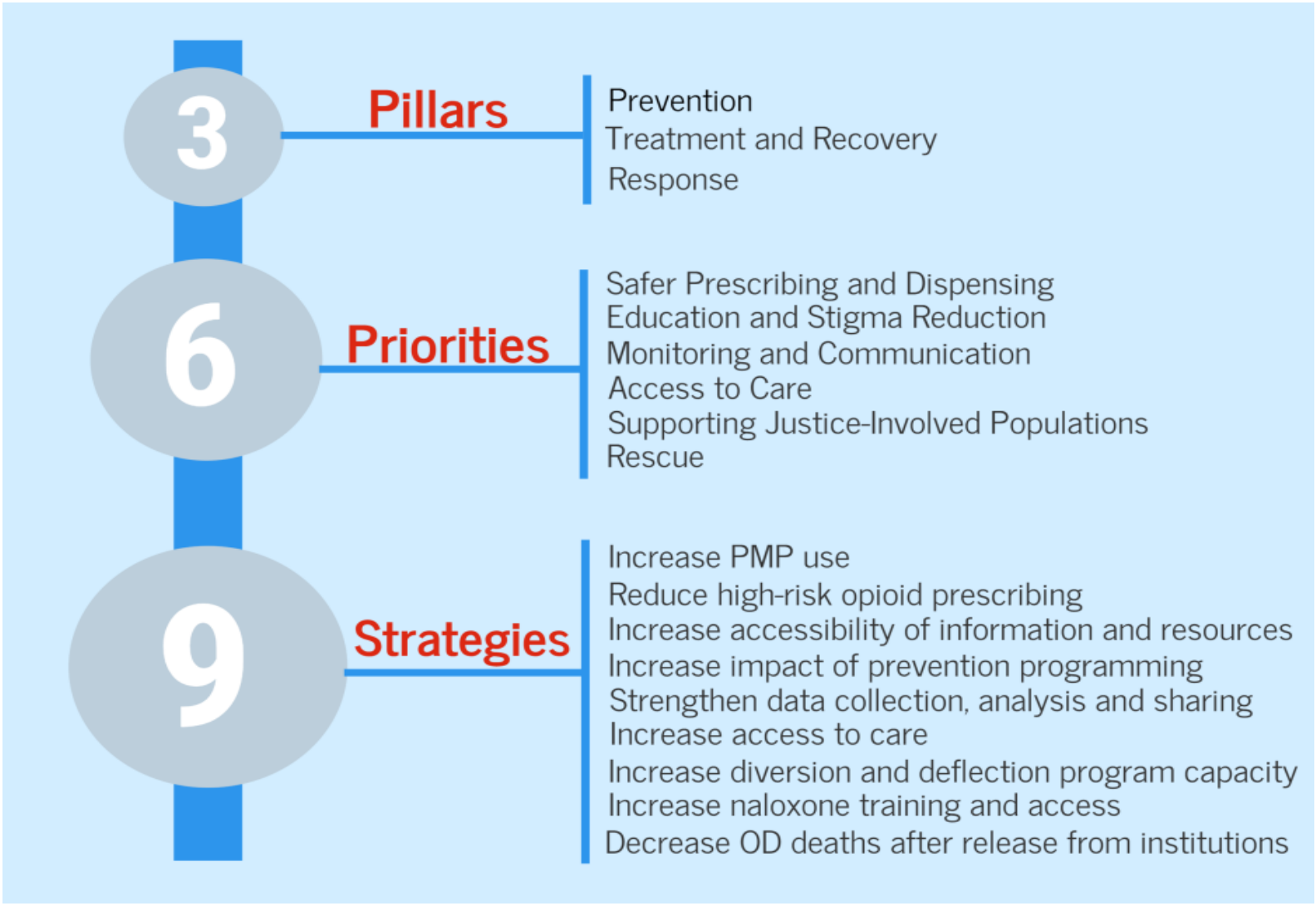
Illinois Prescription Monitoring Program (IL PMP)

- 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



IL PMP Initiatives

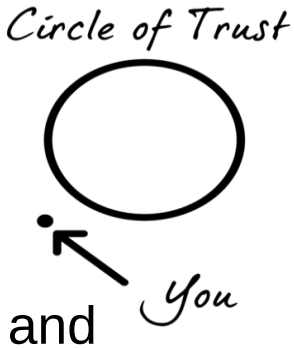
Focus in four key areas:

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

1. Avorn J, Soumerai SB. Improving drug-therapy decisions through educational outreach. A randomized controlled trial of academically based "detailing". *N Engl J Med*. 1983;308(24):1457-63.
2. Soumerai SB, Avorn J. Principles of educational outreach ('academic detailing') to improve clinical decision making. *JAMA*. 1990;263(4):549-56.

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

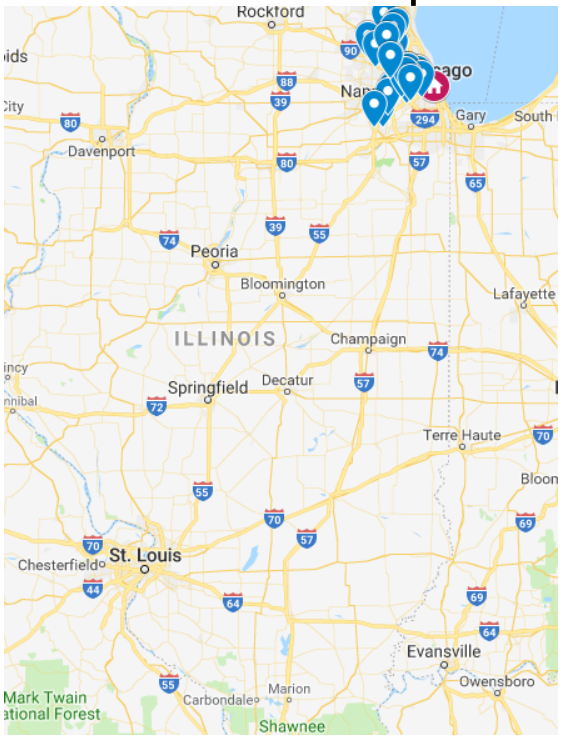
Establishing Partnerships

- 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

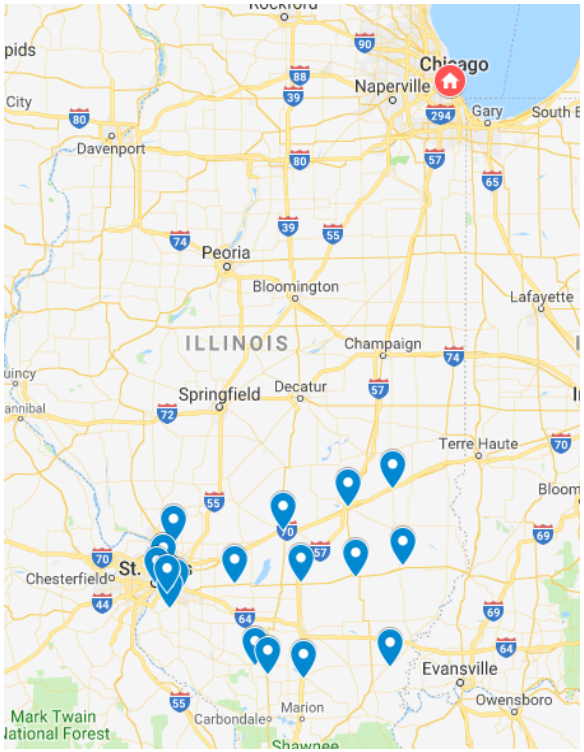
- Implemented across two phases

Phase I:
Urban Providers



June 2018 – August 2018

Phase II:
Rural Providers



November 2018 – Present

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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

CDC Guidelines Key Messages

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

GUIDELINES FOR PRIMARY CARE PROVIDERS

Primary care providers account for approximately **50%** of prescription opioids dispensed

Nearly **2 Million** Americans, aged 12 or older, either abused or were dependent on prescription opioids in 2014

- An estimated 11% of adults experience daily pain
- Millions of Americans are treated with prescription opioids for chronic pain
- Primary care providers are concerned about patient addiction and report insufficient training in prescribing opioids

MYTH vs TRUTH

1. Opioids are effective long-term treatments for chronic pain
2. There is no unsafe dose of opioids as long as opioids are titrated slowly
3. The risk of addiction is minimal

While evidence supports short-term effectiveness of opioids, there is evidence that opioids control chronic pain effectively over the long t evidence that other treatments can be effective with less harm.

Daily opioid dosages close to or greater than 90 MME/day are associ with significant risks, and lower dosages are safer.

Up to one quarter of patients receiving prescription opioids long ter care setting struggle with addiction. Certain risk factors increase suc to opioid-associated harms: history of overdose, history of substanc disorder, higher opioid dosages, or concurrent benzodiazepineuse.

WHAT CAN PROVIDERS DO?

First, **do no harm**. Long-term opioid use has uncertain benefits known, serious risks. ***CDC's Guideline for Prescribing Opioids for Pain***[1] will support informed clinical decision making, improved communication between patients and providers, and appropri prescribing.

PRACTICES AND ACTIONS

1. **REVIEW PDMP** — Check prescription drug monitoring program data for high dosages and prescriptions from other providers *(Recommendation #9)*
2. **AVOID CONCURRENT PRESCRIBING** — Avoid prescribing opioids and benzodiazepines concurrently possible *(Recommendation #11)*
3. **USE NON-OPIOID TREATMENT** — Opioids are not first-line or routine therapy for chronic pain *(Recommendation #1)*
4. **START LOW AND GO SL** — When opioids are started, pres at the lowest effective dose *(Recommendation #5)*
5. **STRATEGIES TO MITIGATE RISK** — Incorporate strategies to mitigate risk, including offering naloxone when factors that increase risk for opioid overdose, such as history of overdose, substance use disorder, or higher opioid dosages (≥50 MME/day) are present. *(Recommendation #8)*
6. **OFFER TREATMENT FO USE DISORDER** — Offer or arrange evidence-base (e.g. medication-assisted treatm behavioral therapies) for patien use disorder *(Recommendation #*

All the recommendations mentioned here are **GRADE A** indicating that most patients should receive the recommended course of action

Each patient is different and management involve individualized clinical decisions

U.S. Department of Health and Human Services — Centers for Disease Control and Prevention

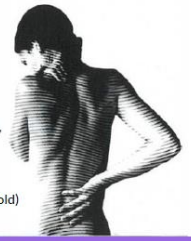
LEARN MORE | www.cdc.gov/drugoverdose/prescribing/g

1 REVIEW PDMP *(Recommendation #9)*

- **Review the patient's history of controlled substance prescriptions** using state prescription drug monitoring program (PDMP) data to determine whether the patient is at high risk for overdose.

3 USE NON-OPIOID TREATMENT *(Recommendation #1)*

- **Non-pharmacologic therapy** and **non-opioid pharmacologic** therapy are preferred for chronic pain.
- Consider opioid therapy only if expected benefits for both pain and function are anticipated to outweigh risks to the patient.
- If opioids are used, they should be **combined with non-pharmacologic therapy and non-opioid pharmacologic therapy**, as appropriate.



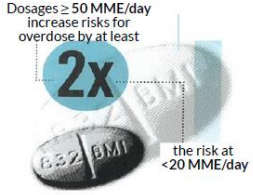
Non-opioids available over the counter for mild pain:[3,4]

- ☐ **IBUPROFEN** (Advil, Motrin): 400 mg every 4-6 hours, as needed for pain
- OR
- ☐ **NAPROXEN** (Aleve): 220 mg every 8-12 hours, as needed for pain
- ☐ **ACETAMINOPHEN** (Tylenol): 325 - 650 mg every 4 - 6 hours, as needed for pain (do not exceed 4,000 mg in a day; or 3,000 mg if over 65 years old)

4 START LOW AND GO SLOW *(Recommendation #5)*

- **Prescribe the lowest effective dosage when starting opioids.**
- **Reassess individual benefits and risks** at dosages ≥ 50 MME/day.
- **Avoid** increasing dosage to ≥90 MME/day.

Dosages ≥ 50 MME/day increase risks for overdose by at least **2x** the risk at <20 MME/day



HOW MUCH IS 50 OR 90 MME/DAY FOR COMMONLY PRESCRIBED OPIOIDS?

50 MME/DAY

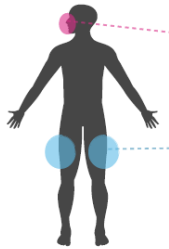
- 50 mg of hydrocodone (10 tablets of hydrocodone/acetaminophen 5/300)
- 33 mg of oxycodone (2 tablets of oxycodone sustained release 15 mg)
- 12 mg of methadone (<3 tablets of methadone 5 mg)

90 MME/DAY

- 90 mg of hydrocodone (9 tablets of hydrocodone/acetaminophen 10/325)
- 60 mg of oxycodone (2 tablets of oxycodone sustained release 30 mg)
- 20 mg of methadone (4 tablets of methadone 5 mg)

5 STRATEGIES TO MITIGATE RISK *(Recommendation #8)*

- Before starting and periodically after, **evaluate risk factors for opioid-related harms.**
- **Consider offering naloxone when there is an increased risk for opioid overdoses** (i.e. history of overdose and/or substance use disorder, higher opioid dosages (≥50 MME/day), or concurrent benzodiazepine use).

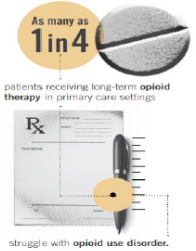


NALOXONE Rx[5]

NARCAN Nasal Spray
4mg Nasal Spray
#1 (two-pack)
Directions: PRN for opioid overdose
(Place and hold tip of nozzle in either nostril. Press plunger firmly to release dose into patient's nose. Repeat with second device into other nostril after 2-3 minutes if no or minimal response)

EVZIO Auto-Injector
2 mg Auto-Injector
#1 (two-pack)
Directions: PRN for opioid overdose
(Inject into outer thigh as directed by English voice-prompt system. Place black end against outer thigh, through clothing, if needed. Press firmly and hold for 5 seconds. Repeat with second device in 2-3 minutes if no or minimal response)

6 OFFER TREATMENT FOR OPIOID USE DISORDER *(Recommendation #12)*



patients receiving long-term **opioid therapy** in primary care settings

struggle with **opioid use disorder.**

- Offer or arrange evidence-based treatment (**usually medication-assisted treatment** with buprenorphine or methadone in combination with behavioral therapies) for patients with opioid use disorder.
- Identify treatment resources for opioid use disorder in the community and ensure sufficient treatment capacity for opioid use disorder at the practice level.

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4. Drug Facts and Comparisons, Facts & Comparisons [database online]. St. Louis, MO: Wolters Kluwer Health, Inc; May 2018. Accessed May 21, 2018.
5. Prescribe To Prevent. Naloxone Product Comparison. In: Naloxone-product-chart.17 04 14. cd. pdf: PrescribeToPrevent.org; 2017.

For more information please visit
www.cdc.gov/drugoverdose/prescribing/guideline.html

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Provider-specific Information

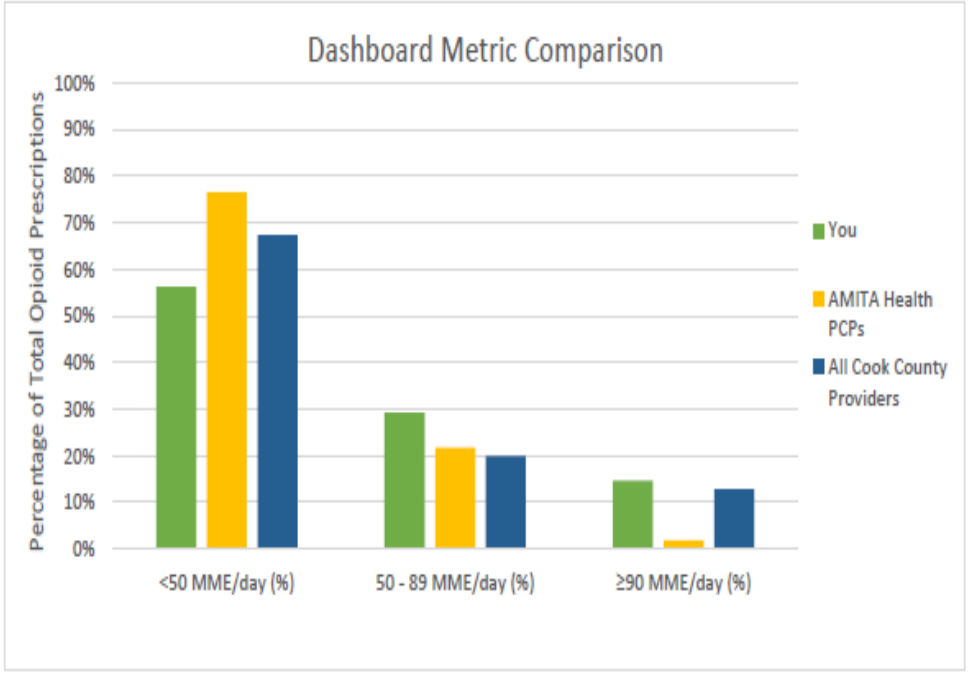
- Audit and feedback is a widely used strategy to motivate behavior change
- Feedback on provider clinical performance was provided via opioid prescribing information
- Provider-specific opioid prescribing information was obtained from the IL PMP
- Detailers shared this information with providers at 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 prescripti
number of monthly PMP queries along with the average for all AMITA Health primary care pr
providers from Cook County.

	You		AMITA Health PCPs	
<50 MME/day (%)[1a]	27	(56%)	12,903	(76%)
50 - 89 MME/day (%)	14	(29%)	3,668	(22%)
≥90 MME/day (%)	7	(15%)	312	(2%)
Average number of monthly opioid prescriptions	8.0		13.5	
Average number of monthly PMP queries	0.0		3.6	

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 v



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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**

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

- **Phase II: Rural Providers**

Provider characteristics		
Total Providers, n	119	
Sex, n (%)		
Female	56	(47.0)
Male	63	(53.0)
Years of Practice, mean (SD)		
Mean	13.8	(11.0)
Provider Type, n (%)		
MD/DO	76	(63.9)
PA/NP	43	(36.1)

Provider Satisfaction Measure Results

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

*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

Preliminary Evaluations

Table 1. Baseline demographics comparison between AD-Exposed and AD-Unexposed providers in the Urban region

	Overall		AD-Exposed		AD-Unexposed	
n (%)	550		151	(27.5%)	399	(72.5%)
Sex						
Female	286	(52.0%)	88	(58.3%)	198	(49.6%)
Male	264	(48.0%)	63	(41.7%)	201	(50.4%)
Years of Practice						
Median (interquartile range)	19	(17)	18	(15)	19	(17)
Provider Type						
MD	423	(76.9%)	87	(57.6%)	336	(84.2%)
DO	74	(13.5%)	38	(25.2%)	36	(9.0%)
NP	34	(6.2%)	18	(11.9%)	16	(4.0%)
PA	19	(3.5%)	8	(5.3%)	11	(2.8%)
Provider Specialty						
Family Medicine	228	(41.5%)	115	(76.2%)	113	(28.3%)
Internal Medicine	322	(58.5%)	36	(23.8%)	286	(71.7%)

Preliminary Outcomes

Table 2. Difference-in- Difference Estimates for Mean Monthly Total Opioid Prescriptions per Provider					
	Pre-AD Mean	**Post-AD Mean**	**D-I-D Estimator**	**95% CI**	**P-value**
AD-exposed	15.22	15.51	**-0.85**	(-1.36, -0.33)	0.001
AD-unexposed	13.86	15.00			

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					
	Pre-AD Mean	**Post-AD Mean**	**D-I-D Estimator**	**95% CI**	**P-value**
AD-exposed	0.86	0.55	**-0.11**	(-0.24, 0.01)	0.08
AD-unexposed	1.10	0.90			

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)

Preliminary Outcomes (Cont'd)

Table 4. Difference-in- Difference Estimates for Mean Monthly Patients Co-Prescribed Opioids and Benzodiazepines					
	Pre-AD Mean	**Post-AD Mean**	**D-I-D Estimator**	**95% CI**	**P-value**
AD-exposed	3.68	3.36	**-0.22**	(-0.41, -0.04)	0.02
AD-unexposed	3.31	3.21			

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)

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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