Pharmacy-Initiated Naloxone Co-Prescribing Service

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Mentors:

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In 2017, how many overdose deaths involving opioids occurred in Oklahoma?

- A. Less than 200
- B. 200 300
- C. 301 400
- D. More than 400

Pre-Assessment Question #2

Why should pharmacy initiate a naloxone co-prescribing service?

- A. House Bill 2039 (2017) allows pharmacists the authority to prescribe and dispense naloxone
- B. Title 535 Oklahoma State Board of Pharmacy, chapter 10, subchapter 9, allows pharmacist to "prescribe and dispense Naloxone without a protocol or prescription to any person at risk of experiencing an opioid-related drug overdose"
- C. As of 2018, the Department of Mental Health and Substance Abuse Services has promoted an initiative called *Prescription for Change* to combat the opioid epidemic in Oklahoma
- D. All of the above



Oklahoma Data











(a) Purpose. The purpose of this subsection is to implement Title 63 OS 2-312.25 provisions for pharmacists.

(b) Definitions. [RESERVED]

(c) A Pharmacist may prescribe and dispense Naloxone without a protocol or prescription to any person at risk of experiencing an opioid-related drug overdose, family or friend of an at-risk person, or first responder. Naloxone may only be dispensed by, or under the supervision, of a licensed pharmacist.

[Source: Added at 35 Ok Reg 1916, eff 9-14-18]

Elaws.us. Oklahoma Administrative Code.

Title 535, Chapter 10, Subchapter 9

R Prescription for Change MENU Satellite Map NORTHWEST The Villa Nichols Hil Sr **Oklahoma** City Midwest City O O SEARCH THWEST IOMA CITY 73110 Okimready.org. Opioid Overdose. <u>Okimready.org</u> 14





Objectives Primary objective: O Expand a pharmacy-initiated program to identify patients at high risk for opioid overdose and provide them with naloxone for overdose reversal Secondary objective: O Follow up with patients who received naloxone to assess their knowledge of naloxone's indication, administration technique, and usage history

Inclusion Criteria

Inclusion criteria:

O Patients \geq 18 years old and at high risk for opioid overdose:

OOpioid dose ≥ 50 Morphine Milligram Equivalents (MME) per day

OConcurrent use of a benzodiazepine

OCurrent poly-opioid use

O Patients \geq 65 years old with prescribed long term duration of opioid treatment (\geq 3 months)

Exclusion Criteria

Exclusion criteria:

 ${\sf O}\operatorname{Patients}$ who are not prescribed opioid medications

O Patients taking opioids for acute pain (< 30 days)







Post-Assessment Question #1

In 2017, how many overdose deaths involving opioids occurred in Oklahoma?

- A. Less than 200
- B. 200 300
- C. 301 400
- D. More than 400



Post-Assessment Question #2

Why should pharmacy initiate a naloxone co-prescribing service?

- A. House Bill 2039 (2017) allows pharmacists the authority to prescribe and dispense naloxone
- B. Title 535 Oklahoma State Board of Pharmacy, chapter 10, subchapter 9, allows pharmacist to "prescribe and dispense Naloxone without a protocol or prescription to any person at risk of experiencing an opioid-related drug overdose"
- C. As of 2018, the Department of Mental Health and Substance Abuse Services has promoted an initiative called *Prescription for Change* to combat the opioid epidemic in Oklahoma
- D. All of the above







Conclusion

OLawton Indian Hospital (LIH) created a collaborative practice agreement for pharmacists to dispense naloxone to high risk patients to combat the growing trend of opioid misuse

- Increased naloxone access for high risk patients
- Educated patients on naloxone service offered at LIH
- Dispensed 76 naloxone rescue kits



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Disclosure

Under guidelines established by the Accreditation Council for Pharmacy Education, disclosure must be made regarding financial relationships with commercial interests within the last 12 months.

• Stephen Riley, Tyler Chia, James Foster, and Jessica Steinert have no relevant financial relationships or affiliations with commercial interests to disclose.

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Learning Objectives At the completion of this activity, pharmacists and pharmacy technicians will be able to: Discuss the importance of proper penicillin allergy documentation and its impact on patient care Identify the potential consequences of inaccurately documented penicillin allergies Identify proper medication allergy practices and services

Pre-assessment question #1

What percentage of the American population has a "true" penicillin allergy?

A. 10%

- B. 20%
- C. 1%
- D. 5%

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Pre-assessment question #2

What is an example of a potential consequence of inaccurately documented penicillin allergies?

- A. Increase healthcare costs
- B. Increase broad-spectrum antibiotic use
- C. Increase antibiotic resistance potential
- D. All the above

Pre-assessment question #3

What question should always be asked when performing an allergy history?

A. What was the reaction?

- B. How long ago did the reaction occur?
- C. How was the reaction managed?
- D. All the above



Statistics

- Approximately 10% of all patients in the United States (U.S.) report having an allergy to penicillin antibiotics.
- Only about 1% of the U.S. population have a "true" penicillin allergy.
- Patients can lose their sensitivity to penicillin antibiotics over time.

CDC.gov. Is it Really a Penicillin Allergy? https://www.cdc.gov/antibiotic-use/community/pdfs/penicillin-factsheet.pdf (accessed February 9, 2019).



Previous data

- In a retrospective study, patients were evaluated to assess how betalactam allergy documentation affected subsequent antibiotic choice.
- The data included 232,616 patients from 198 primary care providers, of which 36,193 were labeled as having a beta-lactam allergy.
- Of the patients that were labeled to have a beta-lactam allergy only 22.7% had allergy reaction documentation.

Shah N, Ridgway J, Pettit N, et al. Documenting Penicillin Allergy:The Impact of Inconsistency. PLoS ONE 11(3): e0150514. https://doi.org/10.1371/journal.pone.0150514 (accessed February 10, 2019).







Data collection

- Data was collected for 3 months prior to the educational intervention.
- After the educational intervention was given, data was collected for an additional 3 months in order to assess the effectiveness of the session.



Adult care data

	Number of visits	Number of interventions made	Intervention percentage
No allergy reaction specified (before midpoint)	112	4	3.6%
No allergy reaction specified (after midpoint through 5/14/2019)	97	14	14.4%



Pharmacy data

	Penicillin allergies documented accurately	Penicillin allergies documented inaccurately	Inaccuracy rate
3 months prior to midpoint intervention	28	34	54.8%
3 months following midpoint up to 5/14/2019	9	10	52.6%

Study conclusion

- According to the data that as been collected, the overall intervention rate on incompletely documented penicillin antibiotics did increase in the adult care clinic after the educational intervention.
- However, the overall prevalence of inaccurately documented penicillin allergies in the outpatient pharmacy did not share the same degree of improvement.

• 1		
-	Do you have any medication allergies?	
	What reaction occurred?	
	How long ago did the reaction occur?	
	What was the outcome of the reaction?	
	When was the last time you received the reacting medication?	







D. All the above

Post assessment question #3

What question should always be asked when performing an allergy history?

A. What reaction occurred?

B. How long ago was the reaction?

C. What was the outcome of the reaction?

D. All the above

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Summary

- Inappropriately documented penicillin allergies can lead to increased healthcare costs and increased antibiotic resistance potential.
- Performing an allergy history is an important first step in obtaining the most up-to-date patient allergy information.
- Penicillin skin allergy tests and oral penicillin challenge are other methods that can be potentially utilized to confirm penicillin allergies.

References

- 1. CDC.gov. Is it Really a Penicillin Allergy? https://www.cdc.gov/antibiotic-use/community/pdfs/penicillinfactsheet.pdf (accessed February 9, 2019).
- 2. aaaai.org. American Academy of Allergy Asthma and Immunology website. Anaphylaxis TTR. https://www.aaaai.org/conditions-and-treatments/library/allergy-library/anaphylaxis. (accessed February 11, 2019).
- 3. Shah N, Ridgway J, Pettit N, et al. *Documenting Penicillin Allergy:The Impact of Inconsistency*. PLoS ONE 11(3): e0150514. https://doi.org/10.1371/journal.pone.0150514 (accessed February 10, 2019).

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Effects of a Pharmacy-led Educational Intervention on Penicillin Allergy Documentation in an Ambulatory Care Setting

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Decentralization of the Pharmacist to an Endocrinology Service in a Diabetes Wellness Center

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LEARNING OBJECTIVES

At the completion of this activity, pharmacists will be able to:

- Measure improvements in diabetes and co-morbid disease state management after pharmacist involvement in endocrinology visit by assessing certain objective measures such as hemoglobin A1c, lipid panel, blood pressure, etc.
- Calculate adherence rates through proportion of days covered and medication possession ratio calculations.
- Assess patient/provider satisfaction with the involvement of a decentralized pharmacist service.

At the completion of this activity, pharmacy technicians will be able to:

 Assess patient/provider satisfaction with the involvement of a decentralized pharmacist service.















PROJECT DESIGN	11
Inclusion Criteria	Exclusion Criteria
Patient has a diagnosis of Type I or Type II Diabetes Mellitus	Patient is seen by another provider in DWC
Patient is seen in endocrinologist's service	Patient does not receive chronic care from the Choctaw Nation of Oklahoma
Between the ages of 18-95	











ADHEREN	ICE RATE D	ATA		17
► Adherence	e rates above 7	70% for all mec	lication classes	for 6 months
▶ 3 montr▶ 14 patient	ts consented	months after i	oeing seen by j	pharmacist
► 3 montr ► 14 patient Medication Class	ts consented 3 Months Before PDC	3 Months After PDC	3 Months Before MPR	pharmacist 3 Months After MPR
 3 montr 14 patient Medication Class Antidiabetic 	3 Months Before PDC 70.9	3 Months After PDC 81.8	3 Months Before MPR 90.7	oharmacist 3 Months After MPR 95.4
► 3 montr ► 14 patient Medication Class Antidiabetic Antihypertensive	s before and 3 ts consented 3 Months Before PDC 70.9 89.7	3 Months After PDC 81.8 78.9	3 Months Before MPR 90.7 96.0	oharmacist 3 Months After MPR 95.4 99.1
 ► 3 montr ► 14 patient Medication Class Antidiabetic Antihypertensive Antihyperlipidemic 	3 Months Before PDC 70.9 89.7 73.4	3 Months After PDC 81.8 78.9 82.5	3 Months Before MPR 90.7 96.0 96.9	3 Months After MPR 95.4 99.1 87.1





AIC N	MEASI	JREN	MENTS				20
A1C Statistics (All Patients)	Initial	Visit 2	Difference	A1C Statistics (without outlier)	Initial	Visit 2	Difference
Mean	<mark>9.3428</mark>	<mark>9.4214</mark>	+0.08	Mean	<mark>9.4153</mark>	<mark>9.0923</mark>	-0.32
Variance	5.2149	3.8171		Variance	5.5697	2.4924	
Observations	14	14		Observations	13	13	
Pearson Correlation	0.575796			Pearson Correlation	0.844129		
Hypothesized Mean Difference	0			Hypothesized Mean Difference	0		
t Stat	-0.14898			t Stat	0.875095		
P(T<=t) two-tail	0.883857			P(T<=t) two-tail	0.398699		
	0.1/02/0			t Critical two tail	0 170012		

BLOOD PRESSURE MEASUREMENTS

Systolic BP	Initial	2nd
Mean	132.35	127.64
Variance	257.32	359.48
Observations	14	14
Pearson Correlation	0.263487	
Hypothesized Mean Difference	0	
t Stat	0.825556	
P(T<=t) two-tail	0.423948	
t Critical two-tail	2.160369	

Diastolic BP	Initial	2nd
Mean	77.29	75.14
Variance	66.22	72.29
Observations	14	14
Pearson Correlation	0.537488	
Hypothesized Mean Difference	0	
t Stat	1.001199	
P(T<=t) two-tail	0.335003	
t Critical two-tail	2.160369	



















































Medication Utilization Management

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