

# The Impact of Academic Detailing (AD) for Appropriate Antibiotic Use with Oklahoma Medicaid Patients

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**OKLAHOMA**  
Health Care Authority



# Disclosures

- Sources of funding for this project: Children's Health Insurance Program (CHIP) Health Service Initiative, Oklahoma Health Care Authority (OHCA)
- Employed by the University of Oklahoma (OU) College of Pharmacy and OU Medical Center
- Graduate Researcher for Pharmacy Management Consultants (PMC)



## **Academic Detailing Programs:**

Attention-Deficit/Hyperactivity Disorder (ADHD)

Second Generation/Atypical Antipsychotic Medications

Antibiotic Prescribing

# What outcomes are you currently using to evaluate your AD programs?

# Has your AD program ever detailed on appropriate antibiotic prescribing?

Yes

No

I'm not  
sure

# Antibiotic AD Program

- Providers were identified for AD based on **self-referral** and **counts of antibiotic prescriptions written** compared to peers
- Newsletter articles were published highlighting the **increased need for appropriate antibiotic prescribing**
- **AD materials** were created, and **educations sessions** were provided by a clinical pharmacist
- Occasionally, non-targeted providers and other staff members participated in the sessions; however, **only targeted and detailed providers were included in this investigation**

# AD Investigation

- **Design:** Retrospective database analysis using comprehensive medical and prescription claims data for Oklahoma Medicaid (MOK)
- **Inclusion Criteria:** Targeted and detailed providers providing care to MOK members <65 years of age from 01/01/2015 – 08/30/2020
- **Exclusion Criteria:** Medicare, Tribal Nations, or Indian Health Services
- **Outcomes:**
  - Prescribing patterns
  - Antibiotic prescribing appropriateness
- **Statistical Analysis:** Paired sample T-Tests using SAS 9.4

# AD Investigation: Outcomes

- **Prescribing Patterns:**

- Total prescriptions and total prescription costs
- Total first-line antibiotic medication claims
- Total non first-line antibiotic medication claims

- **Antibiotic prescribing appropriateness<sup>1</sup>:**

- Never appropriate
- Sometimes appropriate
- Always appropriate

1. Chua K, Fischer M A, Linder J A. Appropriateness of outpatient antibiotic prescribing among privately insured US patients: ICD-10-CM based cross sectional study BMJ 2019; 364 :k5092 doi:10.1136/bmj.k5092



# Categorizing Antibiotic Appropriateness

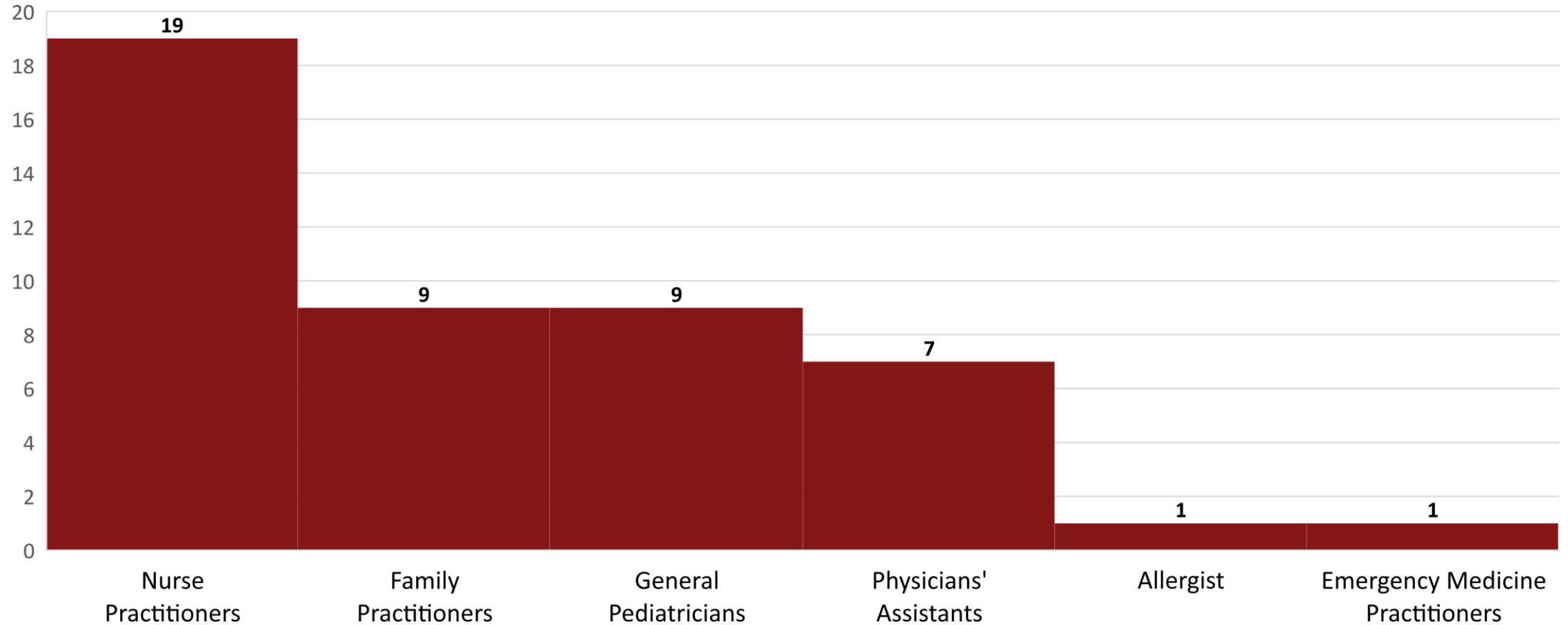
1. Identifying the antibiotic prescription claim
2. Three-day lookback for diagnosis code and antibiotic appropriateness<sup>1</sup>:

ICD Code	ICD-9 or ICD-10 <sup>2</sup>	Description	Appropriateness
003.1	ICD-9	Salmonella septicemia	Always
003.9	ICD-9	Unspecified salmonella infection	Sometimes
J00	ICD-10	Acute nasopharyngitis [common cold]	Never
J209	ICD-10	Acute bronchitis, unspecified	Never

1. Chua K, Fischer M A, Linder J A. Appropriateness of outpatient antibiotic prescribing among privately insured US patients: ICD-10-CM based cross sectional study BMJ 2019; 364 :k5092 doi:10.1136/bmj.k5092

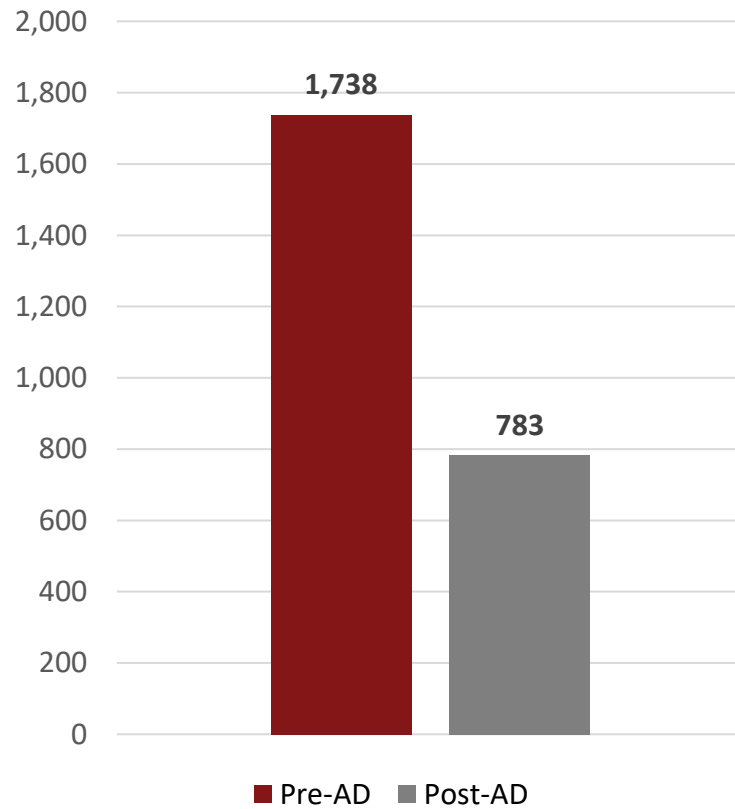
2. Centers for Disease Control and Prevention. General Equivalence Mappings (GEMS). <https://www.cdc.gov/nchs/icd/icd10cm.htm>. Accessed October 15, 2021.

# Results: Academic Detailing Provider Types



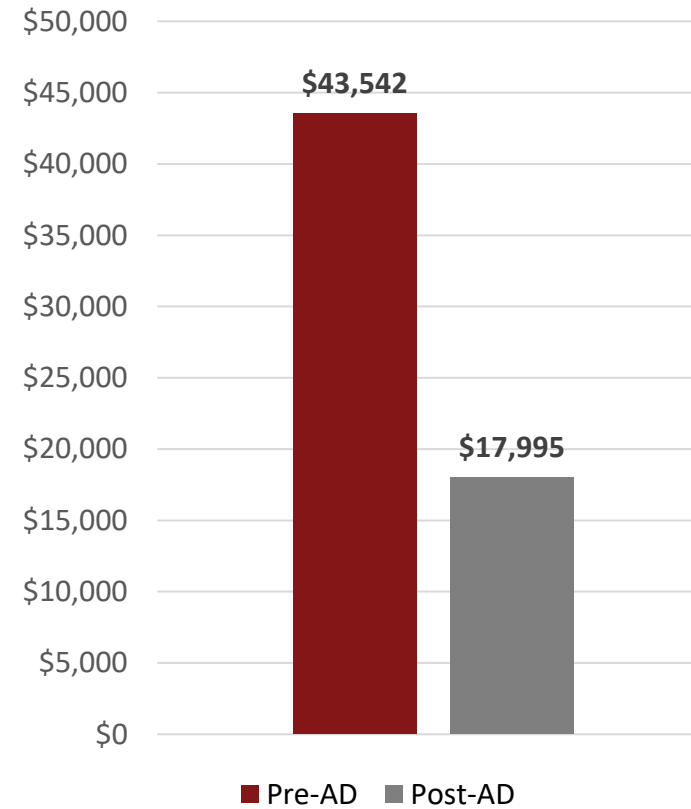
# Results: Prescribing Pattern Outcomes

Number of Medications\*



**54.9%**  
Decrease

Prescription Costs (US\$)\*

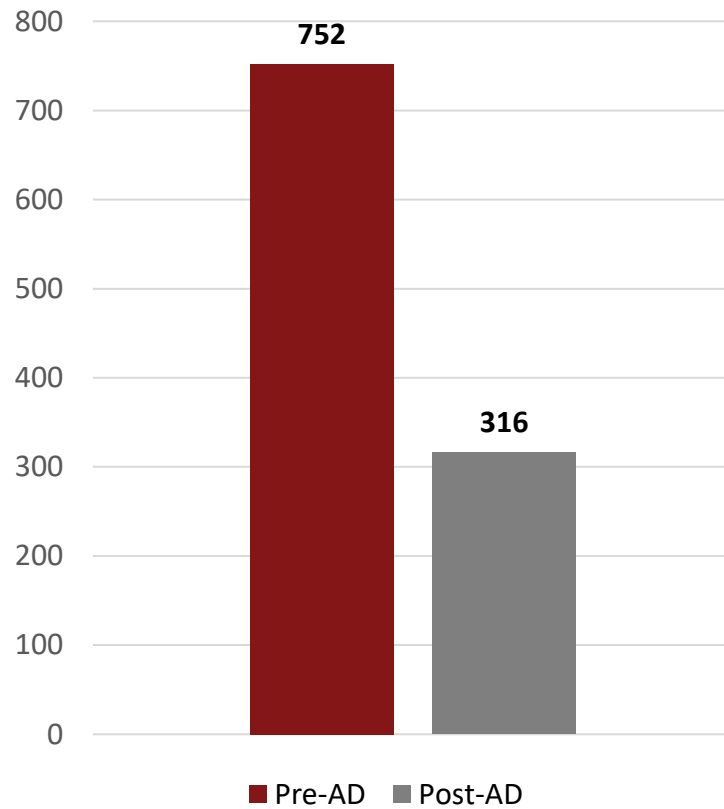


**58.7%**  
Decrease

Costs do not reflect rebated prices or net costs. Costs based on National Average Drug Acquisition Costs (NADAC) or Wholesale Acquisition Costs (WAC) if NADAC unavailable. AD: Academic Detailing; US\$: United States Dollar; Paired sample T-Tests comparing Post-AD to Pre-AD; \* p<0.001

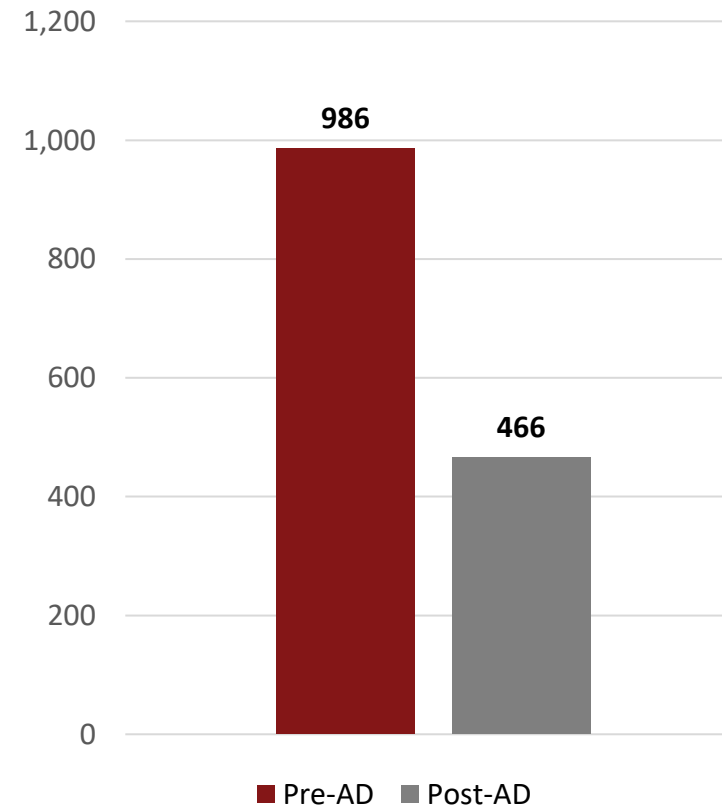
# Results: Prescribing Pattern Outcomes

First-Line Antibiotics\*



**58.0%**  
Decrease

Non First-Line Antibiotics\*

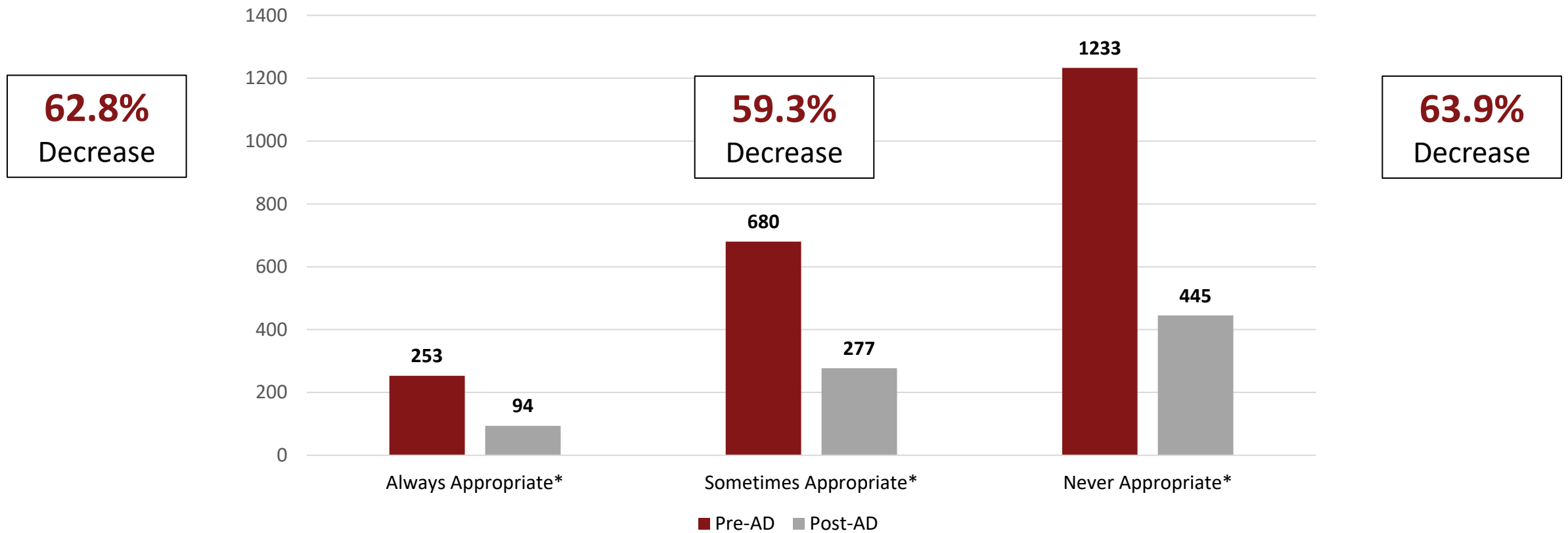


**52.7%**  
Decrease

ABX: Antibiotic; AD: Academic Detailing; Paired sample T-Tests comparing Post-AD to Pre-AD; \*  $p < 0.001$

# Results: ABX Appropriateness Outcomes

Antibiotic Appropriateness Before and After Academic Detailing



AD: Academic Detailing; Paired sample T-Tests comparing Post-AD to Pre-AD; \* p<0.001

# Conclusion/Discussion

- Academic detailing programs may **reduce antibiotic prescribing** and **affect prescribing appropriateness** for antibiotics
- **Tracking outcomes** that act as proxies for guideline adherence may give further insight to the impact of AD programs
- **Further research** into the effects of these programs on health care utilization across various conditions **is warranted**

# Limitations

- This investigation does not control for multivariable factors that may influence antibiotic prescribing
- Out-of-pocket claims are not captured within these data
- Caution should be undertaken in generalizing findings to other payers, patients, or Medicaid programs

# THE DETAILS BLOG

Capturing Stories from the Field: Reflections, Challenges, & Best Practices

## A Healthy Dose of Flexibility: Identifying Unique Clinician Challenges to Improve Patient Outcomes

5/3/2021

*An interview with **Jacki Travers**, PharmD, Clinical Academic Detailing Pharmacist, [Pharmacy Management Consultants \(PMC\)](#). PMC operates out of the [University of Oklahoma College of Pharmacy](#) and has been providing educational and consultative services for the Oklahoma Medicaid Pharmacy Program for 25 years. PMC began its academic detailing program in 2014 and Jacki was onboarded in 2015 as the first detailer. The academic detailing work is funded primarily by the Health Services Initiative Grant received by Oklahoma Medicaid from the [Children's Health Insurance Program](#). Jacki also serves as an [expert training facilitator](#) for the NaRCAD team.*

by [Anna Morgan](#), MPH, RN, PMP, NaRCAD Program Manager

Tags: [Detailing Visits](#), [Evaluation](#), [Primary Care](#)

Source: <https://www.narcad.org/best-practices-blog/a-healthy-dose-of-flexibility-identifying-unique-clinician-challenges-to-improve-patient-outcomes>



## OHCA Pediatric (0-17) Academic Detailing Program Update September 2020

	Pre-AD	Post-AD	Change*	% Change*
<b>Prescribing Patterns</b>				
ABX Claims	204.7	161.5	-43.2	-21.1%
ABX Claims Costs (US\$)	\$6,547	\$4,215	-\$2,332	-35.6%
First-Line Antibiotic Claims	84.1	61.4	-22.7	-27.0%
Non-First Line Antibiotic Claims	120.6	100.2	-20.4	-16.9%
<b>Prescribing Appropriateness<sup>1</sup></b>				
Always Appropriate	50.4	33.1	-17.3	-35.3%
Sometimes Appropriate	27.8	25.3	-2.5	-9.0%
Never Appropriate	167.8	139.3	-28.5	-17.0%
<b>Health Care Utilization Outcomes</b>				
Hospital Stays	0.95	0.47	-0.48	-50.5%
Length of Stay (Days)	5.15	2.42	-2.73	-53.0%
ED Visits	15.7	1.60	-14.1	-89.8%

\*Negative indicates improvement

Costs do not reflect rebated prices or net costs. Costs based on National Average Drug Acquisition Costs (NADAC) or Wholesale Acquisition Costs (WAC) if NADAC unavailable.

OHCA: Oklahoma Health Care Authority; AD: Academic Detailing; n: number of providers; ABX: antibiotic; US\$: United States Dollar

Source: [https://oklahoma.gov/content/dam/ok/en/okhca/docs/about/boards-and-committees/dur/2020/DUR%20Packet\\_9\\_2020.pdf](https://oklahoma.gov/content/dam/ok/en/okhca/docs/about/boards-and-committees/dur/2020/DUR%20Packet_9_2020.pdf)

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# Acknowledgements

**Terry Cothran, D.Ph.**

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**Grant Skrepnek, Ph.D., M.Sc., R.Ph.**

Director of Academic Research, Pharmacy Management Consultants

**Jacki Travers, Pharm.D.**

Academic Detailing Pharmacist, Pharmacy Management Consultants

# Would you consider appropriate antibiotic prescribing as a clinical topic for future detailing work?

Yes

No

I'm not  
sure

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