

## Addressing Healthcare Disparities in Ohio's Appalachian Region: Over-the-Counter (OTC) Medication Usage and Health Education Initiative

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### INTRODUCTION

The Appalachian region of Ohio has a lack of healthcare professionals available, among the lowest in the country [1]. However, like most Americans, they do have pharmacists within reach. Approximately 95% of Americans live within 10 miles of a pharmacy, making pharmacists the most accessible healthcare professionals [2]. Over-the-counter medications (OTCs) play a crucial role in managing common health issues and can be used to prevent symptom escalation. The goal of the project was to have a local pharmacist educate residents of the area about commonly used OTCs and how they could be used to improve their health before conditions become problematic.

To accomplish this goal, we applied for the Health Equity Scholars program which aims "to prepare students at The Ohio State University with advanced education and skills to guide the generation or implementation of evidence to improve health equity in our community" [3]. This competitive program selects groups with two students from different colleges, and a mentor. This project was completed by Sonali Shah, a third-year business major on the pre-medicine track minoring in pharmacy, and Sagar Shah, a second-year double majoring in computer science engineering and neuroscience. The mentors for this project were Myriam Shaw Ojeda, an assistant professor at the College of Pharmacy who specializes in public health and rural health and Bella Mehta, a professor at the College of Pharmacy with a focus in leadership, outreach work, and OTCs. The community pharmacist we worked with was Rebecca Lahrman, Shrivvers Pharmacy and Wellness Center, a pharmacy local to that area. She specializes in rural health knowledge. This team brings knowledge and skills to impact patient care in Appalachia.

### OBJECTIVES

Enhance community understanding of over-the-counter (OTC) medications and their proper usage, empowering participants to make informed health decisions.

### METHODS

- Project was determined IRB-exempt through OSU board
- A county of Ohio was chosen, and a local pharmacist affiliated with Ohio State was identified to conduct the workshop
- Pre/post-surveys were developed, and pilot tested (data was not included in analysis)
- The study included 6 demographic questions, 4 drug knowledge questions, and 3 questions gauging participants confidence in drug knowledge
- The survey was estimated to take between 5-10 minutes to fill out, and participants were given 15 minutes at the beginning and end of workshop to complete the questions
- Participants were incentivized to complete the survey by having the opportunity to enter a raffle to win a gift basket worth \$50
- The workshop flow was the following:



- The presentation covered the following:

**AGENDA**

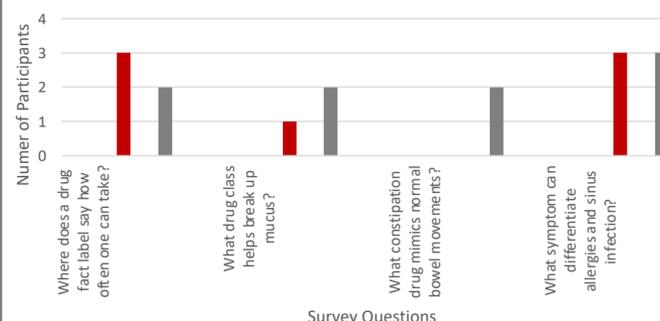
1. How to read a drug facts label
2. What to do when you are not feeling well
3. What to do to stay feeling well

### RESULTS

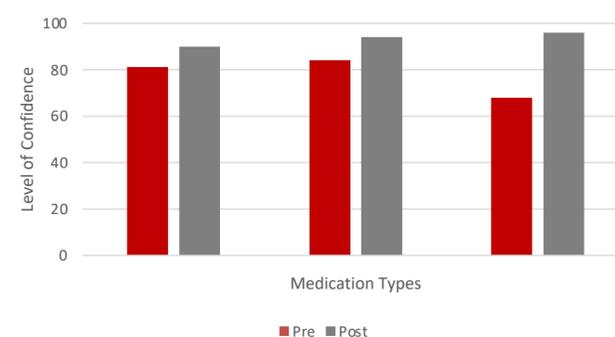
Demographic Information

Demographic Categories	# of Responses (n=4)	
Gender	Male	1
	Female	3
Marital Status	Married	2
	Single	1
	Separated	1
Age	26-35	2
	36-55	1
	56-70	1
Ethnicity	White	3
	Other	1
Education	Associates Degree	1
	Some college/no degree.	3
Employment	Full Time	3
	Retired	1

Correct Responses in Pre and Post-Surveys (n=4)



Confidence Levels in Knowledge (n=4)



The study results indicate some positive trends in health education and adherence to instructions post-intervention, although no significant changes were observed in demographic characteristics or overall survey scores. While improvements were noted in certain areas, such as reCAPTCHA® scores and instructional adherence, the lack of significant changes in other aspects suggests that further investigation and refinement may be needed to achieve desired outcomes. Attendees were able to engage and connect with pharmacist, asking personal question and clarifications on their respective medications. This impact cannot be addressed in a survey.

### CONCLUSIONS

This project succeeding in having someone who was known in the community to lead the workshop, however needed more marketing to have a larger impact. The workshop did not have a big enough sample size to have statically significant data. However, the goals of bringing awareness to OTCs and their usefulness was achieved. Additionally, this workshop gave people in the area an opportunity to interact with a local pharmacist. This workshop could be easily replicated in other rural counties across the country. This presentation can be easily tailored to meet the needs of the community it aims to teach and help foster relationships with pharmacists in those other areas.

### REFERENCES

- [1] Access to Community Pharmacies: A Nationwide Geographic Information .... [www.japha.org/article/S1544-3191\(22\)00233-3/full\\_text](http://www.japha.org/article/S1544-3191(22)00233-3/full_text). Accessed 1 Sep. 2023.
- [2] Troy Trygstad, PharmD. "Americans Love OTC Medications." *Pharmacy Times*, Pharmacy Times, 8 Mar. 2021. [www.pharmacytimes.com/view/americans-love-otc-medications](http://www.pharmacytimes.com/view/americans-love-otc-medications).
- [3] Bergfeld, Kelsey. "New Report Shows Ohio's Appalachian Region Facing Increased Barriers to Child Well-Being; Barriers Increased by Covid-19." *Advocates for Ohio's Future, Advocates for Ohio's Future*, 29 July 2020. [www.advocatesforohio.org/news/new-report-shows-ohios-appalachian-region-facing-increased-barriers-to-child-well-being-barriers-increased-by-covid-19](http://www.advocatesforohio.org/news/new-report-shows-ohios-appalachian-region-facing-increased-barriers-to-child-well-being-barriers-increased-by-covid-19).
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- [5] "Healthcare Access in Rural Communities Overview - Rural Health Information Hub." *Overview - Rural Health Information Hub*, [www.ruralhealthinfo.org/topics/healthcare-access#:~:text=Rural%20populations](http://www.ruralhealthinfo.org/topics/healthcare-access#:~:text=Rural%20populations)

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