

# Impact of Pharmacy Teach Back Method Counseling for Chronic Disease Management In A Developing Country



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## Objective

To assess the effectiveness of pharmacist teach-back method counseling for patients with chronic disease states in a developing country.

## Background

Wingate University School of Pharmacy offers an Advanced Pharmacy Practice Experience elective focused on indigent care and global health, providing the opportunity for fourth year pharmacy students to work in an indigent clinic in the United States and also participate in an international medical mission trip. The school teams with the non-profit organization Shoulder-to-Shoulder Inc to serve at the Brown University Affiliate Clinic in Guachipilincito, Intibucá, Honduras. On a previous trip in February 2015, it was identified that patients were unable to demonstrate proper inhaler technique or recall key counseling points after receiving education from a pharmacist. A proposed solution to resolve this issue was to incorporate teach-back method counseling. Teach-back counseling is an educational tool that is used to assess a patient's comprehension of verbal information. After being taught a concept or receiving counseling information; the patient is asked to repeat in their own words their understanding of what they have just been taught, allowing the educator to tailor the teaching as needed until the patient understands the material<sup>1</sup>. One study by Wilson FL, et al., used the teach-back method to increase immunization literacy among low-income pregnant women in Jamaica<sup>2</sup>. Through the teach-back method, 100 percent of the women were able to recall the safety component of the immunization information correctly. The Wingate faculty and students sought to produce similar results with patients who have chronic diseases, helping to improve patient safety and efficacy of therapy.

## References

1. Tamura-Lis, Winifred. "Teach-back for quality education and patient safety." *Urologic Nursing* Nov.-Dec. 2013: 267+. *Academic OneFile*. Web. 14 July 2015.
2. Wilson FL, et al. Using the teach-back method to increase maternal immunization literacy among low-income pregnant women in Jamaica: a pilot study. *Journal of Pediatric Nursing* (2012);27:451-59.

## Methods

**Setting:** Brown University Affiliate Clinic, Shoulder-to-Shoulder Inc, Guachipilincito, Intibucá, Honduras

**Inclusion Criteria:** 18 years old, diagnosed and receiving medications for asthma, chronic obstructive pulmonary disease (COPD), diabetes mellitus (DM), and/or hypertension (HTN)

**Intervention and Interactions:** Data collection took place via patient interview through the use of a Spanish interpreter

- **Post-Intervention 1** (August 2015):
  - Counseling using the teach back method was provided to patients with asthma, COPD, DM, and/or HTN
  - A counseling checklist containing information on disease states, directions for medication use, and counseling points was used to standardize the information provided
  - Patients were asked to recall the information immediately after counseling and given a corresponding score based on the amount of information they were able to recall correctly (0 = incorrect, 1 = partially correct, 2 = completely correct)
- **Post-Intervention 2** (February 2016):
  - Patients counseled in August that returned were asked to recall the information presented to them in the pre-intervention interview and were given a score of 0-2.

## Results

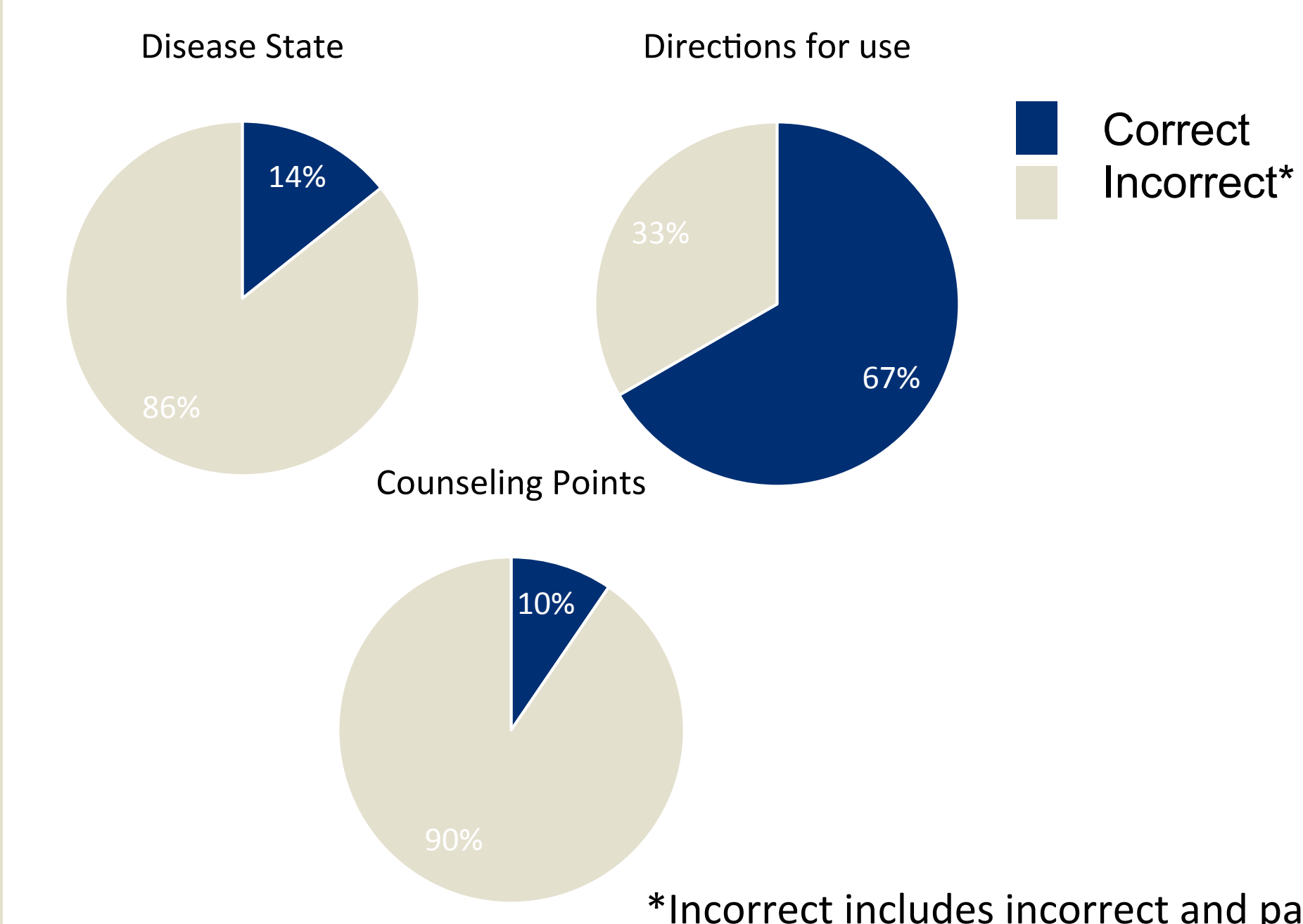
Baseline Characteristics n(%)	
Participants	
Male	4 (20%)
Female	16 (80%)
Disease state	
Hypertension	15 (75%)
Diabetes	5 (25%)
Asthma	1 (5%)
Level of Education - years	
0 – 5	14 (70%)
>6	5 (25%)
Unknown	1 (5%)
Duration of Medication Management for Disease State - years	
0-3	8 (40%)
4-6	5 (25%)
8-10	4 (20%)
Unknown	3 (15%)

Logistic Regression Models			
	Parameter	p-Value	95% CI
Disease State	Constant	0.752	(-12.941, 9.351)
	Level of education	0.842	(-0.830, 0.677)
	Age	0.372	(-0.091, 0.244)
Directions for use	Constant	0.292	(-3.483, 11.585)
	Level of education	0.084	(-1.132, 0.072)
	Age	0.285	(-0.159, 0.047)
Counseling points	Constant	0.970	(-11.580, 12.040)
	Level of education	0.474	(-1.290, 0.600)
	Age	0.454	(-0.103, 0.230)

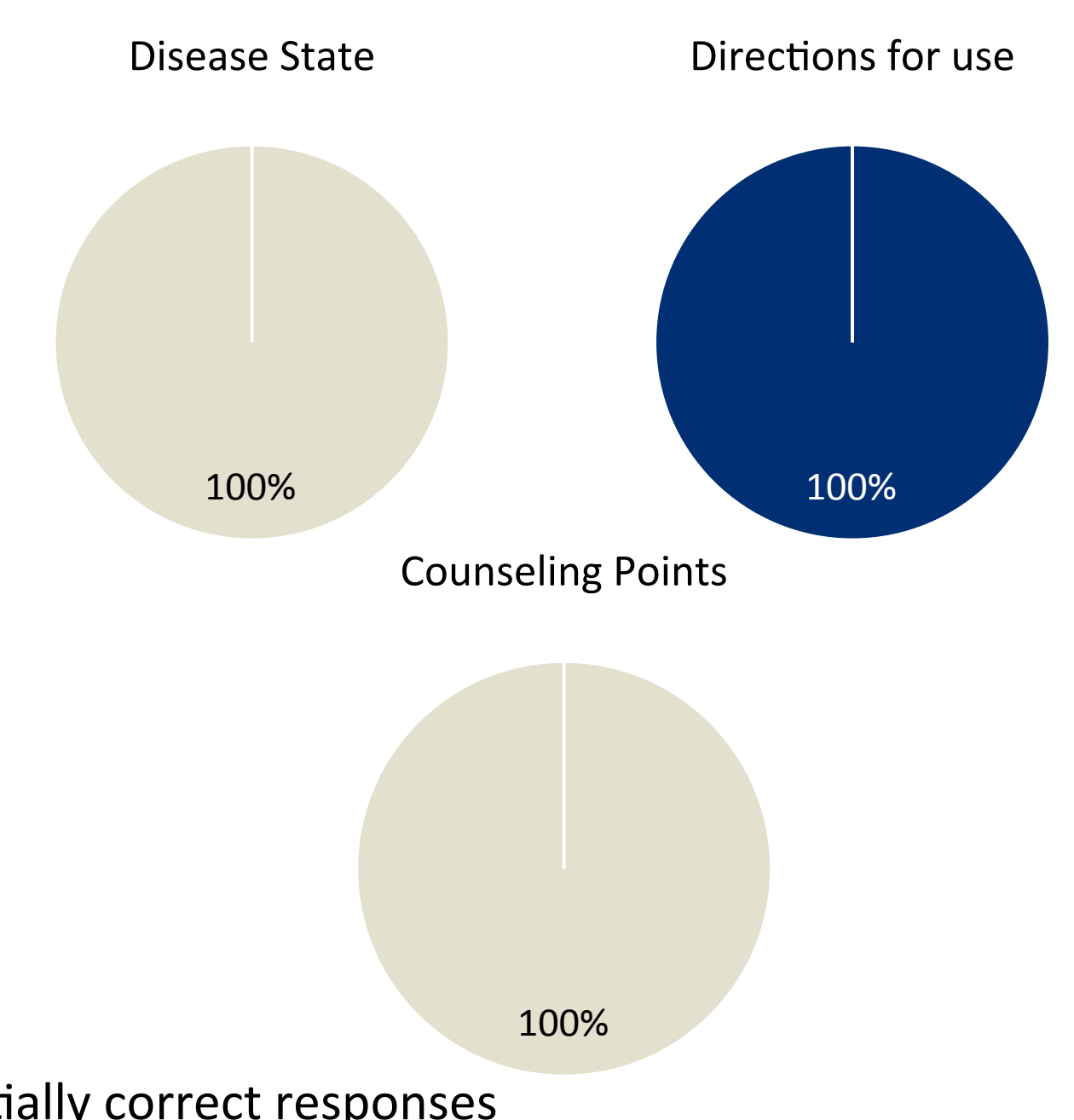
## Results Continued

- **February:** Four patients returned. All the patients that returned had HTN.
- **August Data Analysis:** A significant difference was not found in the in any of the study models.

### Comprehension immediately following counseling – August 2015 (n=21 encounters)



### Comprehension 6 months following teach back counseling – February 2015 (n=4 encounters)



\*Incorrect includes incorrect and partially correct responses

Pearson correlation				
Counseling section	Patient characteristic			
		Duration of therapy	Level of education	Age
	Disease state	-0.589	0.403	-0.674
	Directions for use	-0.177	0.578	-0.221
Counseling points		-0.683	0.366	-0.475

## Conclusion

Individual counseling using the teach back method enhances the patient's understanding of a medication therapy's purpose, efficacy, and safety. The teach back method proved to be especially beneficial in helping patients to recall medication directions. This was the first attempt at documenting an improved method of counseling in a third world country.

**Strengths:** Standardized scoring took place for both the post-intervention phases

**Limitations:** Different interpreters were used for the patient interviews; small sample size; new counseling technique for patients; merge of "incorrect" and "partial" responses