# Implementing Evidence-Based Protocols for the Management of Hypoglycemic and Anaphylactic **Emergencies in an Outpatient Primary Care Office Setting**

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### Purpose

The purpose of the project was to evaluate the need for and implementation of hypoglycemia and anaphylactic emergency management protocols in a primary care office.

# Background

- Anaphylaxis is a severe, potentially lifethreatening allergic reaction occurring in approximately 1 in 20 adults.
- All offices that administer vaccines, IV medications, and perform at-risk procedures should have adequate preparation and practice at responding to early signs and symptoms of anaphylaxis.
- Currently, there are no standardized protocol manuals for the appropriate recognition and treatment of hypoglycemia and anaphylaxis in an outpatient primary care office and many other similar offices.
- The general practitioner may be the first contact of patients who are experiencing symptoms associated with hypoglycemic and anaphylactic events; therefore, it is paramount that medical office staff have updated knowledge and training to provide the necessary care for the patient until the emergency personnel arrive.

## Methods

#### Design

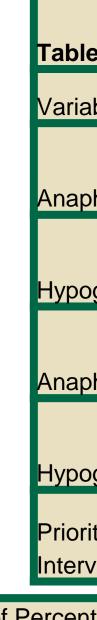
• This project was conducted to develop and evaluate education and recognition of hypoglycemic and anaphylaxis standardized protocols

#### Sample

• 10 office staff (MDs, ARNP, MAs, ARNP student, front office staff, and office manager)

#### Setting

• Primary care medical practice, in affiliation with a large community hospital group in the city of St. Petersburg, Florida.



<b>Table 2.</b> Comparison of Percent Correct in Pre In-service Survey by Medical   Education					<b>Table 3.</b> Comparison of Percent Correct in Post In-service Survey by Medical   Education				
Variable		MA with	No Medical Education with Highschool Diploma/GED	Nurse Practitioner Masters Student	Variable	Medical Provider with Masters or Doctorate Degree	MA with Highschool Diploma/GED	No Medical Education with Highschool Diploma/GED	Nurse Practitioner Masters Student
Anaphylactic Reaction Treatment	100.0%	100.0%	100.0%	100.0%	Anaphylactic Reaction Treatment	100.0%	100.0%	100.0%	100.0%
Hypoglycemic Reaction Treatment	66.7%	50.0%	100.0%	100.0%	Hypoglycemic Reaction Treatment	100.0%	75.0%	100.0%	0.0%
Anaphylactic Reaction Symptoms	33.3%	25.0%	0.0%	0.0%	Anaphylactic Reaction Symptoms	100.0%	75.0%	100.0%	100.0%
Hypoglycemic Reaction Symptoms	100.0%	25.0%	0.0%	0.0%	Hypoglycemic Reaction Symptoms	100.0%	50.0%	0.0%	100.0%
Prioritization of Emergency Interventions	100.0%	25.0%	50.0%	0.0%	Prioritization of Emergency Interventions	100.0%	100.0%	100.0%	0.0%



### Results

• Of all office staff surveyed prior to in-service and protocol education, only the medical doctors and nurse practitioner student (n=3, 30%) reported competence in recognizing and treating patients experiencing a hypoglycemic or anaphylactic reaction until emergency personnel arrive. • The nurse practitioner with a masters degree, four medical assistants with high school diplomas, and two office staff members without medical training and high school diplomas (n=7, 70%) reported they did not feel competent in recognizing or treating patients experiencing hypoglycemic or anaphylactic emergencies prior to in-service and protocol education.

• The majority of office staff (n=9, 90%) reported the office would benefit from hypoglycemia and anaphylactic training and protocol implementation. Following in-service and protocol implementation, office staff (n=10, 100%) reported competence in recognizing and treating patients experiencing an anaphylactic or hypoglycemic reaction until emergency personnel arrive. The office staff (n=10, 100%) also reported that the office would benefit from having hypoglycemia and anaphylactic emergency protocols on site.

e 1. Comparison of Outcomes in the Pre In-service Survey and Post In-service Survey							
able	Pre In-service Survey	Post In-service Survey					
ohylactic Reaction Treatment	10	10					
oglycemic Reaction Treatment	7	8					
ohylactic Reaction Symptoms	2	9					
oglycemic Reaction Symptoms	4	6					
itization of Emergency ventions	5	9					

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# Discussion

### **Implications for Practice**

- Results of the post in-service survey, reveal that the office staff benefited from protocol education and implementation.
- The need for increased learning in the primary care office setting related to emergency protocols for hypoglycemia and anaphylaxis was demonstrated by the pre-implementation survey data and the post-implementation survey data as well as the literature review data.
- The results of this project demonstrate the need for increased learning and resources in the primary care office setting related to emergency protocols for hypoglycemia and anaphylaxis.

### **Recommendations**

- The protocols remain in the office for review and serve as a reference for the staff following the inservice.
- Outpatient primary care offices that implement the use of hypoglycemia and anaphylaxis protocols would need to provide repeat inservices to allow for familiarization and immediate action if a patient has an anaphylactic or hypoglycemic emergency while in the office.

# Limitations

- The small sample size may affect the generalizability of the results.
- Difficulty recruiting outpatient clinic participation due to scheduling conflicts and the contact person not perceiving a need for this type of education.
- Variance in education levels of participants.

# References

• Available upon request.

# Acknowledgements

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A PREEMINENT RESEARCH UNIVERSIT Tampa, Florida

# Nurse Practitioner Masters Student 100.0%