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CS-CASH Pilot Grant: Improving Agricultural Worker Health & Safety Awareness through Multimodal, Case-Based Physician Assistant Education

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Abstract

The University of Nebraska Medical Center Division of Physician Assistant Education intends to improve health outcomes of patients in Midwest agricultural communities through didactic, clinical, and case-based instruction of Physician Assistant Education. The program aims to increase PA student awareness of agricultural health and safety issues, increase PA medical knowledge on respiratory health, chemical exposure, and noise-induced hearing loss, and enhance PA student communication skills with agricultural patients. The University of Nebraska Medical Center Division of Physician Assistant Education PA students will undergo learning specific to agricultural-related respiratory health issues, chemical exposures, and hearing loss, including preventative health education and communication with agricultural patient populations. Additionally, students will complete 12 weeks of clinical learning opportunities in a rural, primary care setting.

Methods

Survey Questions

Question 3: How comfortable do you feel taking a comprehensive history on an agricultural patient?

Question 5: How confident are you in performing a complete hearing assessment?

Question 6: How confident are you in performing a thorough pulmonary examination?

Question 8: How confident are you in creating a differential diagnosis for a patient with an agricultural chief complaint?

Rating Scale:

1: Not at all
2: Slightly
3: Neutral
4: Somewhat
5: Very

Results

Comparison of Pre-Didactic and Post-Didactic Survey Results

Percent of Students that Have Previously Lived in a Rural Area

UNMC PA students will undergo learning specific to agricultural-related respiratory health issues, chemical exposures, and hearing loss, including preventative health education and communication with agricultural patient populations. Additionally, students will complete 12 weeks of clinical learning opportunities in a rural, primary care setting.

Aim 1
Increase PA student awareness of agricultural health and safety issues

Aim 2
Increase PA student medical knowledge on respiratory health, chemical exposure, and noise-induced hearing loss

Aim 3
Enhance PA student communication skills with agricultural patients

Aim 4
Increase patient health care access in agricultural environments

Case-Based Learning Skills

Taking a Patient-Centered and Culturally Competent History
Performing a Physical Examination and Understanding Findings
Ordering and Interpreting Diagnostic Tests
Creating a Patient-Centered Treatment Plan
Providing Patient Education, Including Preventive Measures

Discussion & Future Directions

Data collected will guide future endeavors in agricultural health & safety research, as well as continuous curriculum advancement as it pertains to agricultural health. Final data collection will consist of student evaluation data, pre and post surveys, and Typhon patient logs.

With the assistance of statistical support, data may be utilized to assess outcomes of didactic and clinical Physician Assistant education regarding agricultural health and safety issues, specifically respiratory diagnoses, hearing loss, and chemical exposure. Secondary data collection will also allow for further assessment of Midwest agricultural patient population needs.

References


