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Cover Page Footnote

The authors acknowledge the assistance of Dr. Dan Longyhore for statistical analysis of the data presented.

Pharmacy Students as Health Coaches

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Abstract

Chronic diseases are the main contributor to both health care costs and mortality in the United States, with medication non-adherence and lifestyle modifications being leading causes. To motivate patients with several co-morbidities, the longitudinal care class was used to educate on maintaining adherence to prescribed regimens. Twenty pharmacy students were trained in health coaching and motivational interviewing methods. Specifically, students were to provide patients with education sheets, apply the teach-back method, and motivate the patient to develop and reach SMART goals made with the pharmacy student over a course of one academic school year.

Keywords: health coaches, motivational interviewing, OARS method, student pharmacists, SMART goals.

Description of the Problem

The Centers for Disease Control and Prevention indicate that 86% of the health costs and 70% of deaths annually in the United States are attributed to chronic diseases.¹ Americans spend approximately 17% of the gross national product on health care, but only rank 13th among industrialized nations in health care associated outcomes.² Medication adherence is an enormous problem that contributes to higher hospital readmission rates and overall increased health care spending. Pharmacists can play an important role in improving medication adherence with new roles, including home visits soon after hospital discharge, still evolving. However, the role of pharmacy students' visits in the home community setting is not yet fully explored.

Longitudinal Care is a 1-credit required course in the third year of the professional pharmacy curriculum. Longitudinal care is a service-learning course designed to provide students with opportunities to deliver care to elderly patients in the home setting. Students are randomly assigned to four different social service agencies or health system community care networks to identify and facilitate patient introductions and care coordination. During the academic year, students visit their patients every two weeks for a total of fourteen visits. Small groups of six students to one faculty instructor meet bimonthly to discuss relevant medical, economic, and psychosocial implications of aging and medication use. The course is divided into seven modules and provides an assortment of assignments that include falls home assessment, health literacy assessments, cultural sensitivity awareness, patient specific medication information,

medication adherence, SOAP note writing, visit reflections, and selected readings. A sub-group of the class (assigned to one agency) was trained as health coaches using motivational interviewing techniques.

Description of the Innovation

The initiative aimed to improve medication understanding through student pharmacists visiting patients in their homes soon after hospital discharge and using the health coaching model.

The health coaching strategy has been identified as being a distinctly different approach. Traditionally, health education or counseling was delivered by a health care professional in either written and/or face-to-face encounter. Generally, the educator instructed the patient with directions to follow with little allowance for exchange of information. While that can and may work for some patients, it fails to optimize outcomes in the majority of cases. Adherence to medical advice and medication use requires behavioral and lifestyle changes. Some individuals possess the health literacy, economic, and psychosocial skills needed to make necessary daily behavioral adjustments to accommodate medical advice. For others these changes seem insurmountable. Motivational interviewing had been identified as a necessary clinical skill, which is used in health coaching to assist individuals with identifying relevant problems and concerns that may prevent achievement of treatment goals. In discussions with their health coaches, the patients come to an agreement on small incremental changes they had identified as important and necessary.

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Health coaching has been defined by the National Consortium for Credentialing Health and Wellness Coaches (NCCHWC).³ This coaching method focuses on what the patient does well and reaching a collaborative agreement, in order to motivate, engage, and increase the self-confidence of the patient. Patient-centered goals and lifestyle modifications are used and Specific, Measureable, Achievable, Results, and Timed

(SMART) goals have been associated with health-coaching.⁴ (Table 1) A one year study examining a pharmacist acting as a health coach in a community setting found a significantly reduced total cholesterol, LDL, HDL, fasting blood glucose, and diastolic blood pressure. After a short survey collected from the participating patients, over 90% were satisfied with the service and care provided by the pharmacist.⁵

The aim of this initiative was to determine if pharmacy students acting as health coaches would improve patients' understanding of medication use in a home-based community setting. Motivational interviewing skills' training was provided to students prior to initiation of patient visits. Training was provided in three hours of practical, skills-based classes using the OARS (open ended questions, affirmation, reflection, and summarization) method.⁶ Students would document visit details, education provided, patient relevant concerns or issues, and patient- identified SMART goals for follow-up at the next visit. In addition, students measured patient knowledge for each of medications using the Drug Regimen Unassisted Grading Scale (DRUGS®).⁷ Briefly, this instrument provides scoring from 0 to 100 (maximum) to assess the patients' knowledge and ability to accurately identify their medications, open prescription containers and use the appropriate dose at the appropriate frequency and timing. Higher scores demonstrate higher functional capacity to independently manage and take their medications as directed by their physicians. Students assessed the scores at their first meeting, the end of the fall semester, and the end of the spring semester. Longitudinal home visits by pharmacy students have been previously published⁸; the distinction here is the health coaching/motivational interviewing strategy used by the students.

This study was reviewed and approved by the Wilkes University Institutional Review Board. SPSS (Version 23, Armonk, New York) was used to provide descriptive statistics and the Mann Whitney U test for nonparametric data was used for the analysis of DRUGS® score change.

Key Findings

The mean DRUGS® scores increased from 78 at baseline to 81.4 at the end of the fall semester, to 90.7 by the last documented patient visit (Table 2). The documentation of patient SMART goals was only completed by eleven students. Patient collaboration being critical to the process, these results were analyzed separately and the average spring mean score for this subset was 91.4. Although these preliminary results are encouraging, it is unknown whether the increase in a patient's DRUGS® score would lead to improved patient medication adherence or prevent hospital readmission rates.

Next Steps

The health coaching strategy has the potential of improving patients' medication adherence in the treatment of chronic medical conditions. Recently, the Centers for Disease Control and Prevention cited motivational interviewing techniques as opportunities for health care providers to improve antihypertensive medication nonadherence.⁹ Beginning health coach training as students would better prepare the next generation of pharmacists to step out of the realm of traditional counseling to improve disease state management and possibly reduce hospital re-admission rates. This year, faculty have expanded the motivational interviewing training and implemented the health coaching strategy with all students in the course. Motivational interviewing practical training has increased from three hours to six hours for all students. At the beginning of the semester, one hour of longitudinal care class time was devoted to SMART goal explanation, development, and student expectations. All students in the course are required to identify SMART goals with each patient encounter regardless of agency assignment. The SMART goals are an important component of the visit encounter, which is submitted with 48 hours of the visit to their course instructors.

The testing of improved patient adherence to prescribed medications would follow these interim findings of enhanced medication knowledge. Additionally, students would be surveyed on this approach to determine their degree of comfort, the usefulness of the health coaching, and the impact on the patients. Patients can also be surveyed to determine if there were any behavioral changes that had occurred as a direct result of the students' health coaching. Any changes in patient's behavior can then be considered as one method of evaluating the effectiveness of students' as health coaches.

Disclosures: None

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Table 1. Example SMART Goals Defined with Patients

Element	Definition	Example
Specific	Simply and concisely define what you are going to do.	“I will exercise as recommended by my doctor to maintain a healthy weight.”
Measureable	Tangible evidence that you have reached your goal.	“I will walk 15 minutes each day three days per week.”
Achievable	Goals should challenge, but be reachable by the patient.	“I would like to lose two pounds per month by monitoring by body weight weekly.”
Results oriented	Goals should measure results of outcomes not activities,	“I will lower and maintain my weight by caloric restriction and healthy eating.”
Timed	Time frame should be established to produce a relevant outcome.	“I will lower my weight by four pounds in two months.”

Table 2. Patient DRUGS[®] Score Assessed by Students

Time	N	Mean	Std. dev.	Significance ^a
Baseline	20	78.0	19.5	n/a
Fall	17	81.4	21.1	0.384
Spring	14	90.7	13.3	0.021

a. Compared to baseline