Identifying Intervention Opportunities for Medication Adherence Barriers through Pharmacist Collaboration with Community Health Workers

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Problem Description

Patients face many barriers to medication adherence. Medication nonadherence has been shown to negatively impact health care costs and lead to poor clinical outcomes. Pharmacists are in a unique position to effectively evaluate and educate patients regarding medication adherence; however, opportunity exists for collaboration to further examine barriers that patients may encounter, especially in those patients who come from diverse backgrounds and cultures. Community Health Workers (CHWs) are lay members from the communities of the patients they serve, and they can form trusting relationships that are conducive to identifying and addressing barriers that patients face to medication adherence as well as connecting patients to appropriate healthcare resources.

Goal

To examine intervention opportunities for patient medication adherence barriers related to antidiabetic and antihypertensive medications that are identified by CHWs.

Program Description

This pilot project involves the collaboration between pharmacists from the Center for Quality Medication Management (CQM) at the University of Florida (UF), pharmacy students from UF, and CHWs who have had Medication Therapy Management (MTM) support training and Motivational Interviewing (MI) training by a team of pharmacists and pharmacy students from UF. The CHWs used an encounter form to conduct interviews with a total of 20 patients, during which they collected information about demographics, medications, adherence, adherence barriers to antihypertensive and antidiabetic medications, and patient concerns. Next, they met with pharmacy students who reviewed the collected information for accuracy and completeness. Lastly, the CHWs collaborated with a CQM pharmacist to identify opportunities for intervention based on the adherence barriers identified. The CHW would then provide the patient with a written plan, connect the patient to the appropriate healthcare resources, and empower the patient to meet his or her goals. The CHW would complete up to 2 monthly follow-up meetings with the patients followed by collaboration with the pharmacy students and pharmacist to monitor progress.

Adherence Barrier Assessment

Baseline Demographic Data and Health Characteristics in 20 Patients

Characteristic	Number (%)
Age, mean (SD), years	67.2 (10.4)
Female	11 (55)
Male	9 (45)
Black	15 (75)
American Indian	4 (20)
White	1 (5)
Hypertension*	20 (100)
Diabetes*	11 (55)
Mean Number of Antihypertensive Medications per Patient	1.45
Mean Number of Antidiabetic Medications per Patient	0.85

*Patients may be reflected in multiple categories. 9 of the 20 patients were identified as having both diabetes and hypertension.

Observations

Number of Patients Experiencing at least 1 Adherence Barrier by Category in 20 Patients

	Number of Patients*	Percent
Forgetfulness	16	80
Running out of Refills	7	35
Knowledge	12	60
Side Effects	10	50
Cost	5	25

*Patients may be reflected in multiple categories.

Identified Adherence Barriers Related to Antihypertensive Medications

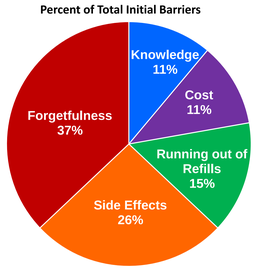
	Number of Barriers (Initial Encounter)	Number of Barriers (Final Encounter)	Percent Resolved*
Forgetfulness	18	5	72.2
Running out of Refills	8	4	50
Knowledge	16	4	75
Side Effects	9	4	62.5
Cost	6	3	50
Total	57	20	64.9

*Per category. Patients must have answered "no" to ALL adherence barrier questions in said category in order for the barrier to be considered resolved during the final encounter.

Identified Adherence Barriers Related to Antidiabetic Medications

	Number of Barriers (Initial Encounter)	Number of Barriers (Final Encounter)	Percent Resolved*
Forgetfulness	10	3	70
Running out of Refills	4	2	50
Knowledge	3	2	33.3
Side Effect	7	2	71.4
Cost	3	2	33.3
Total	27	11	59.3

*Per category. Patients must have answered "no" to ALL adherence barrier questions in said category in order for the barrier to be considered resolved during the final encounter.



Blood Pressure (mmHg) at Initial vs. Final Encounter in 17 Patients*

	Initial Encounter Mean (SD)	Range (min – max)	Final Encounter Mean (SD)	Range (min – max)	p-value
Average Systolic	139.8 (8.3)	130 – 160	129.3 (11.1)	115 – 165	<0.0001
Average Diastolic	84.4 (11)	60 – 96	79.8 (10)	60 – 90	0.0051

*Blood pressure analysis included data from 17 patients, as 3 patients were omitted due to lack of follow-up blood pressure data. A total of 4 patients had an initial systolic BP > 140 mmHg, two of which had an initial diastolic BP > 90 mmHg.

Observations (continued)

Types of Interventions Related to Antidiabetic and Antihypertensive Medication Offered by CHWs in Partnership with Pharmacists

Intervention	Number (%)
Physician and/or Pharmacist Referral	18 (22.2)
Educate on Reminder Tools	16 (19.8)
Provide Disease State Related Handout to Review	8 (9.9)
Insurance Company Referral	6 (7.4)
Provide Disease State Related Education Statements	5 (6.2)
Educate on Asking Pharmacy for Large Print Labels	5 (6.2)
Educate on Pharmacy Specific Cost Savings	4 (4.9)
Assist with Automatic Refill	4 (4.9)
Other Opportunities for Intervention	4 (4.9)
Educate on Asking Pharmacy for Easy Open Caps	3 (3.7)
Assist with Obtaining Mail Order	3 (3.7)
Educate on Assistance Programs	2 (2.5)
Assist with identifying Diabetic Education Class	2 (2.5)
Check for Lower Cost Alternative	1 (1.2)
Total Number of Interventions	81

Findings/Recommendations

The findings of this pilot project involving the collaboration between pharmacists and CHWs show that the most commonly identified adherence barriers related to taking antidiabetic and antihypertensive medications were forgetfulness, side effects, and knowledge. Physician and/or pharmacist referral and reminder tool education were the most commonly offered interventions. Additionally, a statistically significant reduction in mean blood pressure was displayed between the initial and final patient encounters. The findings of this pilot project support the value in the collaboration between CHWs and pharmacists to help improve medication adherence.

Sponsorship

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References

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