Development and evaluation of a cardiovascular-focused educational program taught collaboratively by a pharmacist and registered dietitian

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Background

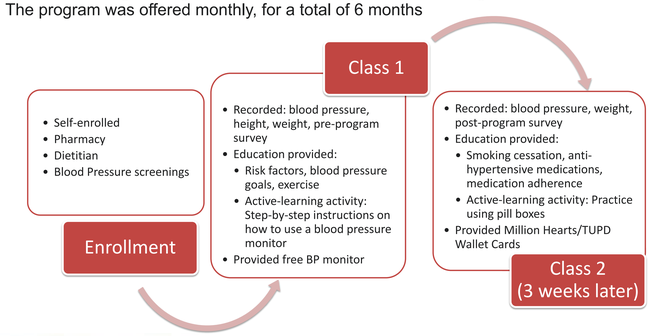
- "Triple aim" is a framework developed by the Institute for Healthcare Improvement to address health care costs. The three aims are to: 1) improve the patient's experience of health care 2) improve population health and 3) reduce healthcare costs.[1] Team Up. Pressure Down. (TUPD) was developed as a nationwide pharmacy-focused effort on blood pressure control to assist in the triple aim.[2]
- Patients have access to both a pharmacist and a registered dietitian in a grocery store. This is an ideal collaboration for assistance in hypertension management.
- This project expanded TUPD by incorporating a registered dietitian.
- A pharmacist (shared faculty member of the University of Maryland and Giant Pharmacy) and registered dietitian (of Giant Food) collaboratively developed and taught a patient-centered cardiovascular-focused program.
- Currently, there are no studies describing a cardiovascular-focused educational class led by both a registered dietitian and a pharmacist in a grocery store chain.

Objectives

- Describe the impact of the educational program on patient's knowledge of blood pressure control.
- Describe the impact of the educational program on patient's self-management behaviors of diet, exercise and self-monitored blood pressure.
- Describe patient satisfaction with this interprofessional educational program.

Program Overview

- One Giant Pharmacy located in central Maryland
- Eligible for the program if the following criteria were met:
  - 18 years of age and older
  - Could read and speak English
  - Had one of the following at time of enrollment:
    - Self-reported hypertension
    - Self-reported anti-hypertensive medication
    - Average blood pressure reading of ≥140/90mmHg after two consecutive readings during an in-store blood pressure screening
- Each program consists of two 1.5 hour classes, taught collaboratively by a pharmacist and a registered dietician (3 weeks between Class 1 and Class 2)
- Pharmacy students participated in: blood pressure screenings for recruitment, blood pressure readings during classes, and assisting in active-learning activities
- The program was offered monthly, for a total of 6 months



Methods: Survey

- Survey comprised of 21 questions which included multiple choice and Likert scale questions
- The same survey was provided in Class 1 and Class 2
- Class 1's pre-program survey was provided before Class 1 (prior to the program). The survey included: patient sociodemographics/characteristics, importance of self-management behaviors, self-management behaviors (diet, exercise, and frequency of blood pressure monitoring), and knowledge-based questions on hypertension
- Class 2's post-program survey was provided at the end of Class 2 (end of the program). The survey included: importance of self-management behaviors, self-management behaviors, knowledge-based questions, and satisfaction
- Study was approved by University of Maryland's Institutional Review Board

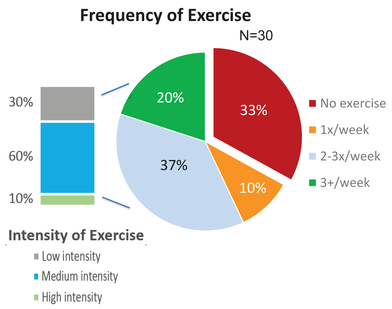
Patient Sociodemographics and Characteristics

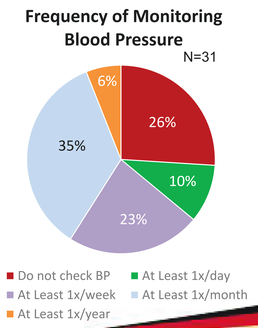
Variable	N=31
Gender*	
Female, n (%)	21 (70%)
Male, n (%)	9 (30%)
Age*	
26-44 years old, n (%)	1 (3%)
45-64 years old, n (%)	13 (43%)
≥ 65 years old, n (%)	16 (53%)
Race/Ethnicity*	
African American, n (%)	3 (10%)
Caucasian, n (%)	26 (87%)
Hispanic, n (%)	1 (3%)
Highest Education Level	
Some High School, n (%)	1 (3%)
High School or GED, n (%)	1 (3%)
Some College, n (%)	6 (19%)
Undergraduate degree, n (%)	5 (16%)
Graduate and/or Professional degree, n (%)	18 (58%)
Income	
$10,001-$25,000	4 (13%)
$25001-$40,000	8 (26%)
$40,001-$55,000	4 (13%)
More than $55,000	15 (48%)

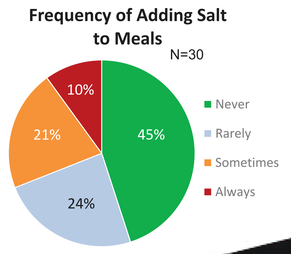
Variable	N=31
Prescription Medications	
1-4 drugs, n (%)	21 (68%)
5-7 drugs, n (%)	5 (16%)
More than 7 drugs, n (%)	5 (16%)
Medical Conditions	
1-2 Conditions, n (%)	14 (45%)
3-4 Conditions, n (%)	12 (39%)
More than 4 conditions, n (%)	5 (16%)
Years with Hypertension	
I don't have high blood pressure, n (%)	2 (6%)
0-1 years, n (%)	4 (13%)
≥ 1 year to 2 years, n (%)	1 (3%)
≥ 2 years to 5 years, n (%)	2 (6%)
≥ 5 years, n (%)	18 (58%)
Don't Know/ Unsure, n (%)	4 (13%)
Medication Adherence	
No medications, n (%)	2 (6%)
I do not miss any doses, n (%)	18 (58%)
Less than 1 dose per week, n (%)	8 (26%)
1-2 doses per week, n (%)	3 (10%)

* n=30 due to omitted responses

Pre-Program Results: Self-Management Behaviors







Results

- 81% (n=25) patients attended both sessions

Survey Question n=24	Improvement	No Change	No Improvement
Medication Adherence	21%	67%	13%
Frequency of exercise	33%	63%	4%
Frequency of blood pressure monitoring	75%	21%	4%
Frequency of adding salt to meals	29%	71%	0%

- Mean % Correct of Knowledge-Based Questions on survey (n=25)
  - Pre-Program: 48%
  - Post-Program: 79%
- 96% of patients self-reported to be "very satisfied" or "satisfied" with the overall information as well as the overall experience with the program

Conclusions

- Majority of patients were female, greater than 65 years old and Caucasian
- Those attended were highly educated and understood the importance of diet, exercise, and routine monitoring for blood pressure control
- A high percentage of patients improved in frequency of blood pressure monitoring
- Patients gained an increased knowledge of hypertension
- Patients were satisfied with the program
- Limitations: self-reported data, short term study

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Disclosures

The authors report no conflicts of interest, and no financial interest in any company, product, or service mentioned in this study.

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