

KENNEDY

PHARMACY INNOVATION CENTER

Pharmacist-Provided Cardiovascular Risk Assessment Program

Megan Nissen, PharmD^{1,2}, Lynn Connelly, RPh², Patricia H. Fabel, PharmD, BCPS^{1,3}

University of South Carolina College of Pharmacy¹, The Medicine Mart², Kennedy Pharmacy Innovation Center³

BACKGROUND

- Heart disease is the leading cause of death for both men and women in the U.S., killing more than 600,000 people each year.¹
- Several of the risk factors for cardiovascular disease (CVD), such as tobacco use, hypertension, hyperlipidemia, type 2 diabetes, physical inactivity and being overweight or obese, can be avoided or mitigated.
- Patients see their primary care physician an average of 4 times per year, whereas they visit a pharmacy 35 times per year.²
- Community pharmacists represent an ideal professional to not only assess cardiovascular risk, but to develop a plan to mitigate these risks.

OBEJCTIVES

- Primary objective:** To evaluate the impact of a pharmacist on the modifiable risk factors for CVD
- Secondary objectives:**
 - Patients results from pre- and post-program survey responses
 - Provider results from post-program survey responses
 - Pharmacist time spent with each patient and working on the case
 - Changes in medications (additions and/or deletions)

METHODS

- Patients who were at least 18 years of age were recruited by flyers, social media posts and pharmacy staff referral.
- Height, weight, waist circumference, blood pressure, blood sugar, tobacco history, family history of CVD and/or diabetes, a current medication list and lab values (HbA1c, lipid panel) were collected at the initial and 90-day visits. After the initial assessment, the pharmacist created a list of the patient's risks and developed an individualized plan with goals to mitigate risks.
- The pharmacist followed up with each patient via phone 14 days after the initial visit, then every 30 days until program completion at 90 days.
- Each patient's physician was sent a visit summary after the initial assessment and each follow-up visit.

Table 1. Patient demographics

Patient Demographics	Number	Range or Percentage
Total	6	-
Average Age (years)	61	Range (51 – 75)
Average BP (mmHg)	139/78	Range (SBP 126-162, DBP 72-84)
Female	4	66.67%
Overweight or obese	4	66.67%
History of CVD	2	33.33%
Diabetes	3	50%

RESULTS

Modifiable Risk Factors

2 of 6 patients completed the 90-day follow-up assessment. The remaining 4 of 6 patients have not yet reached the 90-day mark.

Table 2. Blood pressure, weight and waist circumference

	Baseline (n=6, females=4) (Range)	Last Visit (n=2)	Difference (Range)
Average SBP (mmHg)	139 (126-162)	136	-3 (-4 to -3)
Average DBP (mmHg)	78 (72-84)	78	0 (2)
Average Weight – Females* (lbs.)	163.2 (122.8-185.4)	141.4	-21.8 (-1.6 to -0.7)
Average Waist Circumference – Female* (inches)	35 (29-40)	32.5	0 (0 to 2)
Average Weekly Physical Activity (minutes)	88.3 (0 – 180)	140	51.7 (0 to 10)

*Not enough data to report average weight and waist circumference for males. Range not reported for Last Visit due to limited number of patients completing the 90-day period.

Pharmacist Time

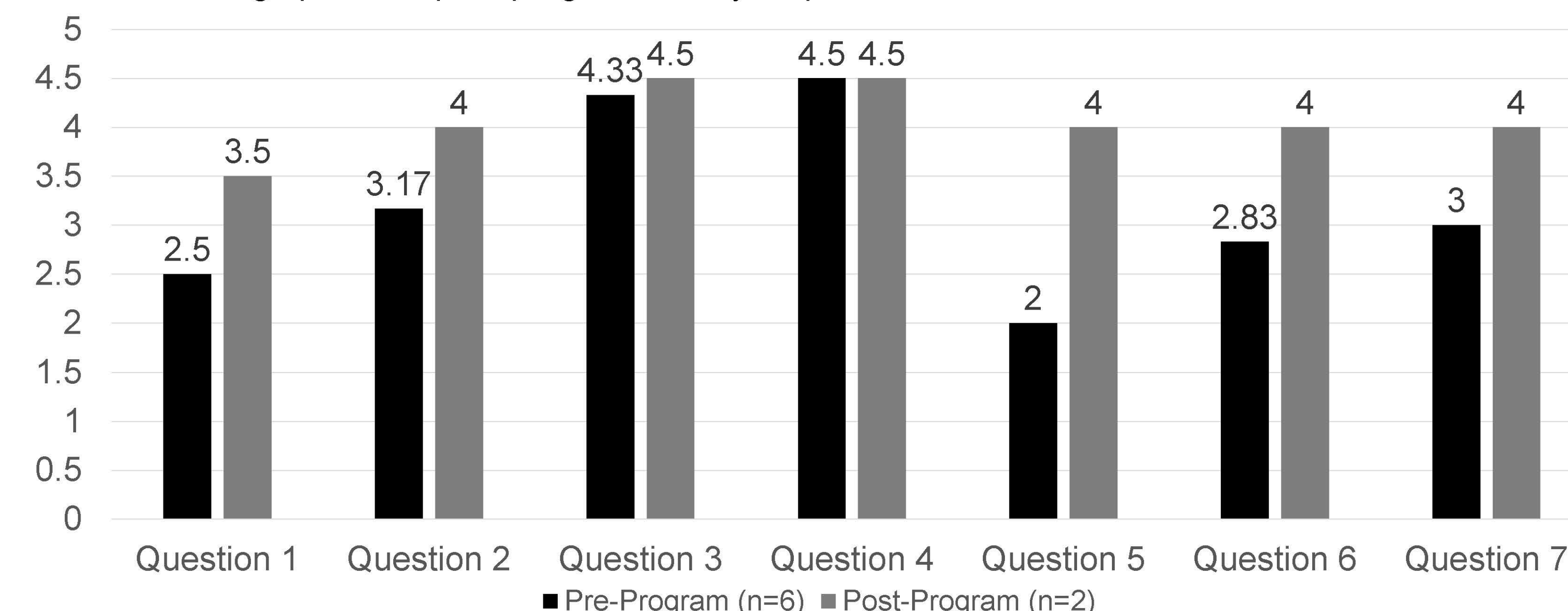
Table 3. Pharmacist time spent

Activity	Time Spent Per Patient (hours)
Conducting initial assessment of CVD risk	0.75
Developing goals and patient-centered plan	0.5
Follow-up phone calls	0.17
Conducting 90-day assessment	0.5
TOTAL	1.92

Survey

All 6 patients completed the pre-program survey. 2 of 6 patients completed the post-program survey after 90 days. The remaining 4 of 6 patients have not yet reached the 90-day mark. 0 out 2 physician surveys were returned.

Table 4. Average pre- and post-program survey responses



CONCLUSIONS

Limitations

- There was low patient enrollment throughout the program despite different types of marketing. Additional research is needed to determine what would help increase patient participation.
- The most common refusal reason for lack of participation was too much face-to-face time required.
- Each assessment, plan development, and follow-up for the patient was lengthy, requiring almost 2 hours of pharmacist time.
- The pharmacist was not equipped with tools to measure HbA1c and obtain a lipid panel, therefore few patients reported this data.
- Tobacco use, activity level and family history of CVD and/or diabetes were patient reported.
- Patients volunteered for the program and may have been more motivated to learn about their CVD risk and follow a plan than others.

Conclusions

- Pharmacists improved patients' knowledge about CVD and how to lower their risk.
- To make the initial assessment more efficient, the pharmacist can employ the help of a pharmacy intern or student to document while the pharmacist conducts the assessment.
- Further research with more patients is needed to determine the impact a pharmacist has on modifiable risk factors for CVD.

REFERENCES

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Disclosures

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Corresponding Author

Megan Nissen, PharmD | meganinissen@gmail.com | (813) 334-3553