

Research Report

PROJECT TITLE & AUTHORS

Project Title:	Pharmacist-led Annual Wellness Visit (AWV) improves gaps in care closure in a Federally Qualified Health Center (FQHC)	
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PROPOSAL CHECKLIST

Completed (Y)	Checklist item
Y	Project title is clear and concise.
Y	Names and emails for project advisor(s) and up to five students per group are provided.
Y	Abstract is no more than 250 words and retains headings
Y	Introduction provides a definition of the topic under study, importance of the topic, and the issue addressed by the study and is no more than one single-spaced page.
Y	There is NO literature review section
Y	Purpose of project is clearly and concisely stated
Y	Methods section uses headings and represents a summary of the methods used. (Actual methods used should be described if they were modified from the proposal.)
Y	Data analysis described is appropriate and responds to the purpose.
Y	Appropriate tables are included in the results section.
Y	Text of results section interprets the findings reported in the tables, not repeating them.
Y	The discussion section includes a description of the most important findings, and relates findings to the literature.
Y	The final section of the discussion is the limitations section.
Y	The conclusions respond to the purpose statement.
Y	Reference list is complete and contains appropriate references, and reference style is applied correctly and consistently.
Y	Data collection/recording form(s) and/or questionnaire(s) are included in the appendix.
Y	Information is placed in the appropriate section—introduction, methods, results, etc.
Y	Template structure is maintained and all required sections are included. Red text instructions/examples are removed. Proposal is written in Times New Roman 12-point font and does not exceed 10 single-spaced pages (excluding appendices). Proposal has been spell-checked and grammar-checked.

1. ABSTRACT

2. **Specific Aims:** Compare the gaps in care addressed and/or closed per patient following a clinical pharmacist led AWV and primary care provider led AWV.
3. **Methods:** Sun Life employees collected data from the electronic health records (EHR) and the health plan lists. The clinical pharmacy team reviewed their health plan's participant list and scheduled those patients for a visit with either the provider or clinical pharmacist. Clinical pharmacists and medical assistants addressed and/or closed gaps in care and updated a spreadsheet with the outcome of the visit.
4. **Results:** Total random sample size was 100 patients for this project with 50 patients for both the pharmacist and primary care provider groups (PCP). 92% gaps in care were addressed by the pharmacist group, while 66% gaps in care were addressed by the PCP group. The average number of interventions addressed was 0.82 (SD = 0.93) interventions in the PCP group and f
5. 1.34 (SD = 1.66) interventions in the pharmacist led group, this difference was significant ($p = 0.0283$). Overall, AWV performed by the pharmacist group led to a higher percentage of gaps addressed in comparison to the PCP group.
6. **Conclusions:**

Pharmacist led annual wellness visits addressed more gaps in care compared to PCP led annual wellness visits.

7. INTRODUCTION

The percentage of people with health insurance in the United States was 92% in 2019, with 68% being privatized and 34% being public¹. Despite this vast health insurance coverage, certain populations are not benefitting from the high quality of healthcare that is available. Performing Medicare's annual wellness visits (AWV) can improve patient population health and lead to faster reimbursements for the medical clinic or hospital and result in overall financial growth. Pharmacists who are able to participate with the primary care team can help develop a more personalized approach for the patient's overall health and disease prevention. In addition to addressing and closing gaps in care for improvement in patient outcomes, these services are billable and can generate revenue for the health clinic. Sun Life Family Health Center is a Federally Qualified Health Center (FQHC) in Casa Grande, Arizona that offers a wide variety of services such as family healthcare, integrated behavioral health, diabetes education, physical therapy, pharmacy, and dentistry. The purpose of this study was to compare the clinical pharmacists' involvement in AWV to primary care provider (PCP)-led AWV in addressing and/or closing gaps in care.

METHODS

Design

This retrospective single-center study used data from deidentified patient charts and health plans that were obtained from the clinical pharmacy team at Sun Life Family Health Center.

Subjects

Patient panels were sent to Sun Life's clinical pharmacists from "Health Plan 1" and "Health Plan 2", and those panels were then utilized by the clinical pharmacy team and the medical assistant. AWWs for "Health Plan 1" were conducted by the clinical pharmacy team, while the AWWs for "Health Plan 2" were conducted by the primary care provider team. Patients seen for AWWs at Sun Life Family Health Center between January and December 2021 from "Health Plan 1" and "Health Plan 2" were eligible to participate in this study.

Measures

Data collected from a random sample of 100 patients from both health plans were de-identified and placed into an Excel spreadsheet. The clinical pharmacy team then reviewed their health plan's participant list and scheduled them for a visit with the provider and clinical pharmacist. Clinical pharmacists and medical assistants addressed and/or closed gaps in care and collected the outcome of the visit on a spreadsheet. Measures collected included medication review, breast cancer screening, colon cancer screening, and diabetes care (eye exam, blood sugar control, statin therapy).

Data Collection

Data was collected from a random sample of 50 patients from the pharmacist-led AWW health plan and 50 patients from the PCP-led AWW health plan.

Data Analysis

Based on the 100 patients from both health plans, we estimated that the pharmacist-led AWW addressed and/or closed more gaps in care from health plans when compared to a PCP-led AWW. Descriptive data was used to compare the two groups. Frequencies and percentages were used for the number of gaps in care addressed. The number of gaps addressed per patient was compared using means and standard deviations, and a one-sided two-sample t-test was used to determine if the difference was significant. The a priori p-value was 0.05.

RESULTS

As seen in Tables 1 and 2, the biggest difference between the gaps that were addressed was found in the medication review intervention. When looking at the percentages of gaps addressed, the PCP group had fewer gaps addressed at a total of 66% when compared to the pharmacist group which totaled at 92%. The pharmacist group also addressed more interventions with an average number of interventions addressed at 1.34 (SD = 1.66) than the PCP group with an average number of interventions addressed at 0.82 (SD = 0.93). This difference was significant with $p < 0.05$ ($p = 0.0283$). The pharmacist-led AWW scheduled more colon cancer screenings, diabetes eye exams, and initiated more diabetes patients on statin therapies in comparison to the PCP-led group.

DISCUSSION

Clinical pharmacists can play an important role in AWW and provide valuable services such as addressing gaps in care, referring for preventative care, and medication reconciliations. The primary finding of this study was that pharmacist-led AWW addressed and/or closed more gaps than PCP-led AWW. The average number of gaps addressed by the pharmacist-led group was significantly higher compared to the PCP-led group ($p = 0.0283$). Pharmacists being the medication experts addressed and/or completed 100% of their medication review gap while the PCP-led group only addressed and/or completed 25% of them.

Similar results have been reported in Sewell et al² comparing a composite of interventions and screenings and revenue generated by a pharmacist with those made by a primary care provider during a subsequent AWW. In that study, the composite of interventions and screenings was significantly higher in the pharmacist group, with more interventions being made in the health advice, vaccination, and screening. This highlights the importance of having clinical pharmacists conduct AWWs, permitting more time for providers to give more individualized care to the patient and while also allowing pharmacists to provide more medication-related services to the patients.

In another study³ conducted at a FQHC analyzing clinical pharmacist impact in AWWs, they found that recommendations made by a pharmacist during an AWW had a high acceptance rate and generated substantial revenue. Furthermore, this study demonstrated that the pharmacist-led AWW provides the opportunity to expand pharmacist-led interventions within the primary care setting, while impacting patient's health by identifying medication-related problems, ensuring appropriate preventative screening, and promoting wellness.

There were several limitations to this study. First, the study had a small sample size and is limited to a select number of health plans, so not all Medicare/Medicaid plans will be included which can result in selection bias. This means that the study results could potentially be attributable to only those selected health plans. Secondly, it is important to point out that there were 11 more gaps available to address in the pharmacist group compared to the PCP-led group which could increase type-1 error rate using the t-test. Additionally, although the gaps in care were addressed within both groups, it was difficult to determine whether the screenings and recommendations were completed by the patient. This factor can overestimate the closure of gaps in care across both groups.

CONCLUSION

It is apparent that utilizing pharmacists to conduct AWWs can favorably impact patients' overall health and wellbeing by identifying medication related complications, providing comprehensive medication knowledge, confirming that the appropriate preventative screening is completed, and ensuring that their patients are being treated with the utmost care. Recommendations made by clinical pharmacists during AWWs addressed and/or closed more gaps in care in comparison to PCP-led AWWs.

REFERENCES

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<https://www.census.gov/library/publications/2020/demo/p60-271.html#:~:text=The%20percentage%20of%20people%20with,of%202019%20was%2092.0%20percent.&text=Private%20health%20insurance%20coverage%20was,point%20during%20the%20year%2C%20respective>
9. Sewell MJ, Riche DM, Fleming JW, Malinowski SS, Jackson RT. Comparison of Pharmacist and Physician Managed Annual Medicare Wellness Services. *J Manag Care Spec Pharm.* 2016 Dec;22(12):1412-1416. doi: 10.18553/jmcp.2016.22.12.1412. PMID: 27882836.
10. Alhossan A, Kennedy A, Leal S (2016, February 15). Outcomes of annual wellness visits provided by pharmacists in an accountable care organization associated with a federally qualified health center. *Am J Health Syst Pharm.* 73(4):225-8. doi: 10.2146/ajhp150343. PMID: 26843499.

TABLES AND FIGURES

Table 1. Interventions performed by the pharmacist group			
Intervention	# of gaps available	# of gaps addressed	% of gaps addressed
Referral			
Breast mammography	8	8	100
Colon cancer screening	13	10	76.92
Laboratory testing			
Diabetes eye exam	4	3	75.00
Diabetes care- blood sugar control	14	12	85.71
Diabetes care - Statin therapy	5	5	100
Medication review	5	5	100

Table 2. Interventions performed by the PCP group			
Intervention	# of gaps available	# of gaps addressed	% of gaps addressed
Referral			
Breast mammography	6	6	100
Colon cancer screening	7	3	42.86
Laboratory testing			
Diabetes eye exam	3	1	33
Diabetes care- blood sugar control	8	8	100

Diabetes care - Statin therapy	0	0	0
Medication review	12	3	25

Table 3. Gaps of care addressed pharmacist group vs PCP group

	PCP group	Pharmacist group
Total gaps addressed	41	67
Total gaps available	62	73
% Gaps addressed	66%	92%
Average gaps addressed (± SD)	0.82 ± 0.93	1.34 ± 1.66
P-value	0.0283	

APPENDICES
Data Collection Form

Patient	Gaps per insurance prior to AWV (Total #)	Gaps Closed?	(Total # closed)	Other Referrals (relevant to AWV)	Vaccines given	
1	Diabetes Care: Blood Sugar Controlled	1	a1c ordered	1	No	No
2	Breast Cancer Screening	1	mammogram referral placed (no recent mammo in chart)	1	No	No
3	Diabetes Care: Blood Sugar Controlled	1	a1c ordered and completed	1	No	No
4	None	0	n/a	n/a	mammo referral placed, all routine labs ordered	No
5	Care for Older Adults: Pain Screening	1	Yes - pain screening completed and code billed	1	No	No
6	None	0	N/a	n/a	No	No
7	Breast Cancer Screening, Colorectal Cancer Screening	2	mammo/colon referral placed (no results in chart)	2	No	No
8	None	0	N/A	n/a	No	No
9	Colorectal Cancer Screening	1	No	0	mammo	No
10	Colorectal Cancer Screening,	2	BP addressed and treated and billed	1	No	No

	Controlling Blood Pressure		correctly, no colon referral			
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