

Contribution of clinical pharmacy services to the achievement of diabetes- and hypertension-related quality measures among Medicare patients

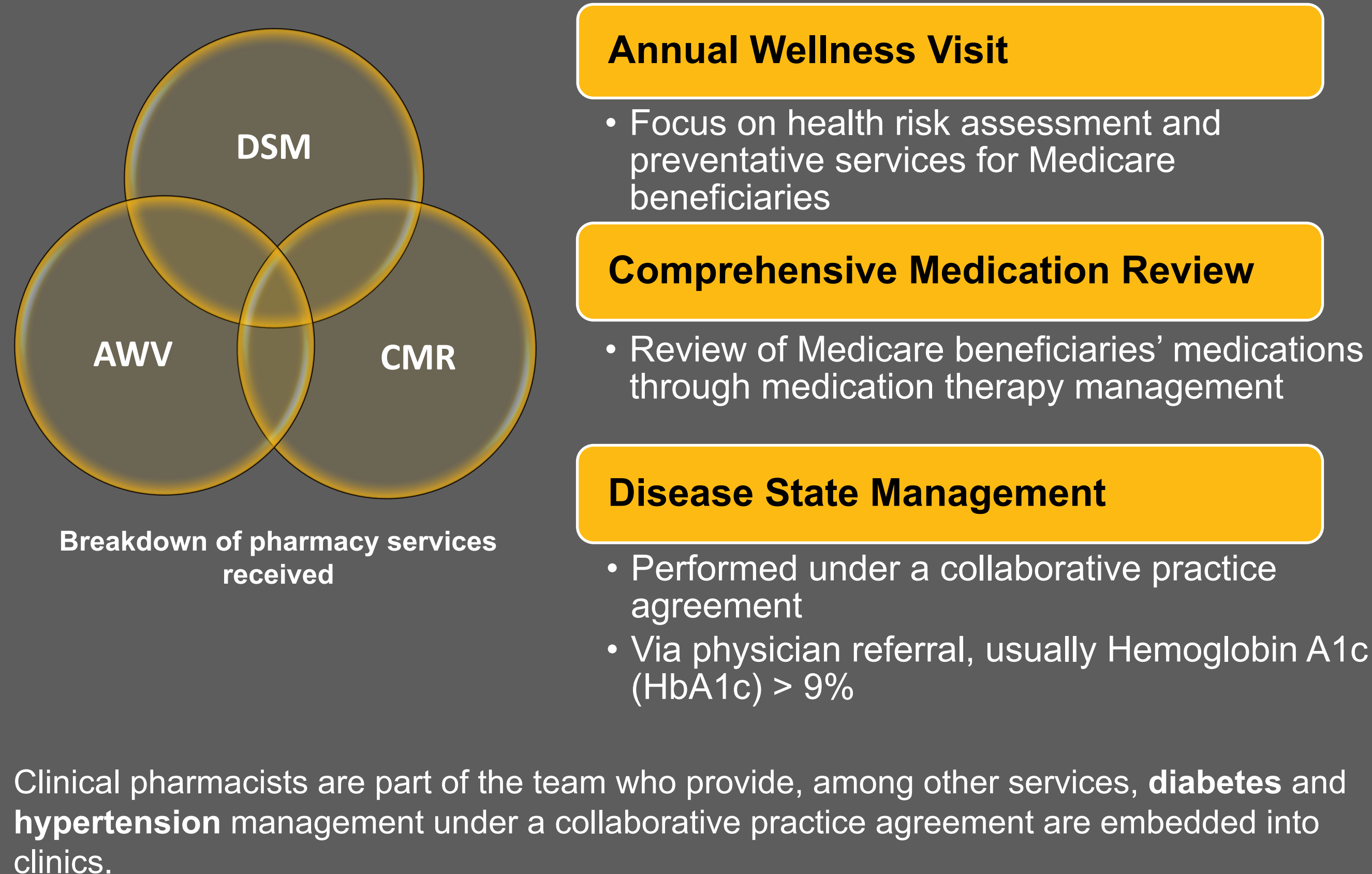
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Background

- In the US, health care has seen a shift from fee-for-service to pay-for-performance models where health systems are reimbursed for the achievement of specific quality measures.
- Within primary care, some of these quality measures include blood pressure control, diabetes control, receipt of immunizations, colon cancer screenings, etc.
- Among US adults ages 65 and older, 70% have hypertension, and ~ 50% do not have their blood pressure under control.¹ Diabetes affects 29.2% of the Americans aged 65 and older, with studies showing 56% experience ineffective treatment.²
- Numerous studies involving pharmacists in primary patient care leads to improved diabetes and blood pressure (BP) control.³⁻⁵
- Bon Secours Mercy Health (BSMH) comprises 53 primary care practices in Virginia, of which 17 employ pharmacists who provide annual wellness visits (AWV), comprehensive medication reviews (CMR), and disease state management (DSM). **[Figure 1]**

Figure 1. Pharmacy Services



Research Aim

To identify clinical pharmacy services associated with quality measure achievement among Medicare patients for BP control, glycemic control, and annual eye and foot exams.

Results

- Demographics: Mean age of 73 years; 64% were female, 57% White, and 41% Black.
- Pharmacists provided AWV to 71% of patients, CMR to 12% of patients, and DSM to 20% of patients.
- 76% of patients had a diagnosis of hypertension and 49% had a diagnosis of diabetes.

Multiple Logistic Regression Predicting Services and Factors Associated with Quality Measure Achievement

Variable	aOR	95% CI
Blood Pressure Control (BP < 140/90)		
Black, <i>Ref</i> = White	0.57	0.36, 0.90
Hemoglobin A1c (HbA1c) Control (HbA1c < 9%)		
Receipt of DSM service, <i>Ref</i> = No	0.16	0.03, 0.91
Annual Foot Exam		
Receipt of CMR service, <i>Ref</i> = No	6.14	1.2, 31.4

aOR = adjusted odds ratio, CI = confidence interval, Ref = Reference

Methods

- Retrospective, cross-sectional observational study of electronic health records from BSMH in Virginia, USA.
- Data were abstracted for all Medicare patients, aged 65 – 85 years who were new to the pharmacist in 2017 and visited one of the 12 intervention group clinics. (N = 483)
- Healthcare Effectiveness Data and Information Set (HEDIS) / Medicare quality measure achievement was based on the last recorded measurement in 2017. **[Figure 2]**
- Multiple logistic regression models identified pharmacy services (AWV, CMR, DSM) associated with quality measure achievement, adjusting for model-specific covariates (listed below).

Age	Gender	Race
DSM Service	AWV Service	CMR Service

Figure 2. HEDIS® / Medicare Quality Measures

Blood Pressure Control		Patients 18-85 years, diagnosis of high BP, BP < 140/90 mmHg
Hemoglobin A1c Control		Patients 18-75 years, diagnosis of diabetes, HbA1c < 9%
Annual Eye Exam Receipt		Patients 18-75 years, diagnosis of diabetes
Annual Foot Exam Receipt		Patients 18-75 years, diagnosis of diabetes

HEDIS® quality measures are managed by the National Committee for Quality Assurance (NCQA). There are more than 90 measures across 6 domains of care that measure process, structure, and outcomes. The above measure address the “Effectiveness of Care” domain.

Conclusion

- No pharmacy services were associated with improvement in hypertension or diabetes quality measures among patients with Medicare.
- Pharmacists are referred complex patients with diabetes, potentially explaining the negative association between disease state management and glycemic control.
- Limitations: Missing data regarding eye and foot exam performed by outside specialists. Data is observational in nature.

Future Directions

Upcoming analyses will address the following aims:

- To assess quality measure achievement among patients who received clinical pharmacy services (intervention group) and those who did not (comparator group) within BSMH.
- To assess economic outcomes among patients who received clinical pharmacy services (intervention group) and those who did not (comparator group) within BSMH.
- To identify characteristics of primary care patients at risk of not meeting quality measures or having increased health care utilization.

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