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RESEARCH NOTES

Pharmacist medication therapy management in home health care: Investigation of a sustainable practice model

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ABSTRACT

Objectives: The objective of this study was to quantify the financial impact of a pharmacist-driven pilot medication therapy management (MTM) program within a visiting nurse service (VNS) and identify types of medication-related problems affecting the home health care population.

Methods: Patients were contacted to schedule a home visit with the primary investigator. At the appointment, a comprehensive medication review (CMR) was completed, and data collected included primary reason for VNS care, comorbid diagnoses, number of prescription and nonprescription medications at time of visit, and type of pharmacist-identified medication therapy intervention(s). The VNS is a nonprofit independent home health care agency serving patients of all ages and health conditions. Patients admitted with primary insurance coverage through Blue Cross Blue Shield (BCBSRI) Blue Chip for Medicare and 65 years of age and older were eligible for inclusion. Intervention categories were aligned to coordinate with current billable OutcomesMTM claim categories. Dollar allocation for each intervention severity level was assigned according to the predetermined Medicare cost savings predicted value from BCBSRI. Interventions were assigned cost-saving value by the severity level to estimate savings.

Results: Twenty-five patients received CMRs. Patients averaged 5.92 chronic health conditions, 8.48 Part D drugs, and 3.88 over-the-counter medications. Two hundred eighteen medication-related problems were identified spanning 13 intervention categories. Intervention severity level was assigned to the medication-related problems, with calculated cost savings from pharmacist interventions totaling \$124,352.

Conclusion: This pilot study demonstrated the positive economic impact of a pharmacist-run MTM program at VNS for patients with multiple chronic conditions and medication-related problems. Potential societal benefits include that community members admitted to VNS will continue to have access to a pharmacist as a standard of care with the continuation of this MTM program.

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Medication therapy management (MTM) is a personalized component of health care that allows pharmacist–patient interaction to create individualized therapeutic care plans, fostering positive health outcomes.¹ MTM was enacted with the Medicare Modernization Act of 2003, requiring Part D

sponsors to identify eligible patients for MTM services to reduce health care spending and improve outcomes.^{1–3}

In 2015, Medicare patients accounted for 16.3% of national insurance coverage, servicing approximately 43,308,400 beneficiaries.³ Of the total beneficiaries, approximately 135,100 patients were from Rhode Island, representing 13% of the state's population.³ For this growing population, Medicare Part D plans are required to offer MTM programs to plan beneficiaries who meet eligibility criteria, as determined by the insurer.^{4,5} These criteria describe number of comorbid conditions, number of medications, and anticipated annual health care spending.⁴ Many patients enrolled in a visiting nurse service (VNS) are Medicare beneficiaries already eligible to receive MTM services.

Pharmacists currently offer MTM services across various settings, including community, primary care, and ambulatory

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care practice. Medication-related problems identified by pharmacists in community care settings have saved patients and hospitals money, with \$12.15 cost savings for every \$1.00 spent on MTM programing, and have increased patient satisfaction.^{6,7} Associated costs for medication nonadherence alone account for up to 69% of medication-related hospital readmission rates at an estimated cost exceeding \$177 billion dollars in 2000.⁶ These medication-related problems, including nonadherence, are often problems in which realistic solutions are discovered and implemented as the MTM process unfolds.

Pharmacist inclusion on the home health care team has demonstrated significant reduction in emergency room visits and rehospitalizations for patients receiving these services.^{8,9} Disease state complexity within the home health care population calls for sustainable pharmacist inclusion on the VNS team. The initiation of a pharmacist-driven MTM program within the VNS would identify medication-related problems, promote medication adherence and safety, and identify potential cost savings. MTM services in this population may drive optimal disease state outcomes, provide cost savings, and reduce hospital readmission rates.

Objectives

The objective of this study was to quantify the financial impact of a pharmacist-driven pilot medication therapy management program within the VNS and identify types of medication-related problems affecting the home health care population.

Methods

Study design and period

This study was a prospective, pilot MTM program initiated with the VNS of Newport and Bristol Counties, a home health care agency serving southeastern Rhode Island and Massachusetts. The study was reviewed and approved by the University of Rhode Island Institutional Review Board. Data were collected from January 2017 through May 2017.

Patient selection

Patients were eligible for inclusion if they were 65 years of age or older, admitted to VNS of Newport and Bristol Counties, enrolled in Blue Cross Blue Shield of Rhode Island (BCBSRI) Blue Chip for Medicare, and had a cardholder identification number beginning with "ZBM," indicating OutcomesMTM eligibility. Patients not meeting inclusion criteria were excluded. Participant data were deidentified and recorded on an intervention tracking spreadsheet.

Setting

VNS is a nonprofit independent home health care agency serving patients of all ages and health conditions, including hospice and palliative care patients, across southeastern Rhode Island and Massachusetts; these patients often meet MTM criteria because they are receiving care for a new or preexisting medical condition.¹⁰ The pharmacy program

within the VNS began in 2013 as a partnership with the University of Rhode Island College of Pharmacy as an ambulatory care practice site for the postgraduate year 1 (PGY-1) community residency program. Over the past 5 years, the relationship has expanded to include medication reconciliation home visits, drug information, community outreach, and prescriber communication by the PGY-1 resident, a faculty member from the College, and a part-time pharmacist. Pharmacists initially shadowed registered nurses for 2 months to gain experience in caring for patients in their homes, then independently scheduled patient visits once the orientation period was completed.

Procedures

Potential participants were identified at VNS by primary insurance carrier and insurance beneficiary member identification number. When patients are admitted to VNS, they authorize the release of their insurance information to VNS for service-associated billing. The insurance data, which are already authorized and used routinely by VNS, were used to identify patients eligible for comprehensive medication review (CMR) for the study. Patient interventions were not released to the insurance sponsor.

On identification, patients were contacted by the primary investigator to schedule home MTM appointments. At the appointment, an informed consent form for research was reviewed and a CMR was completed with the patient in his or her home, lasting approximately 1 hour. Data collected included primary reason for VNS care, comorbid diagnoses, number of prescription and nonprescription medications at time of visit, and type of pharmacist-identified medication therapy intervention(s). Patients were provided with a Personal Medication Record (PMR) and Medication Action Plan (MAP) on completion of the visit. Changes to the MAP, such as a prescriber-accepted change to the medication regimen, were communicated as a follow-up telephone call or additional home visit, depending on the medication-related problem addressed.

Outcome measures and analysis

Intervention categories were aligned to coordinate with current billable OutcomesMTM claim categories. Intervention categories identified during CMR included adherence (inappropriate administration or technique), adherence (overuse of medication), adverse drug reaction, cost-effective alternative, dose too high, dose too low, drug interaction, needs drug therapy, needs immunization, new or changed over-the-counter therapy, new or changed prescription therapy, suboptimal drug, and unnecessary therapy treatment. Dollar allocation for each intervention severity level was assigned according to the predetermined Medicare cost-savings predicted value from BCBSRI (Table 1). Intervention severity levels for claims included adherence support, reduced medication cost, prevented physician visit, prevented additional prescription order, prevented emergency department visit, prevented hospital admission, prevented life-threatening situation, or patient or provider refusal. To calculate estimated savings, the interventions were assigned cost-saving value by the severity level of the intervention.

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