Journal of the American Pharmacists Association 56 (2016) 178–183

Contents lists available at ScienceDirect

Journal of the American Pharmacists Association

journal homepage: www.japha.org

EXPERIENCE

Integrating home-based medication therapy management (MTM) services in a health system

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ARTICLE INFO

Article history:
Accepted 18 January 2016

ABSTRACT

Objectives: To describe the integration of home-based Medication Therapy Management (MTM) into the ambulatory care infrastructure of a large urban health system and to discuss the outcomes of this service.

Setting: Minnesota from September 2012 to December 2013. The health system has more than 50 primary care and specialty clinics. Eighteen credentialed MTM pharmacists are located in 16 different primary care and specialty settings, with the greatest number of pharmacists providing services in the internal medicine clinic.

Practice innovation: Home-based MTM was promoted throughout the clinics within the health system. Physicians, advanced practice providers, nurses, and pharmacists could refer patients to receive MTM in their homes. A home visit had the components of a clinic-based visit and was documented in the electronic health record (EHR); however, providing the service in the home allowed for a more direct assessment of environmental factors affecting medication use.

Evaluation: Number of home MTM referrals, reason for referral and type of referring provider, number and type of medication-related problems (MRPs).

Results: In the first 15 months, 74 home visits were provided to 53 patients. Sixty-six percent of the patients were referred from the Internal Medicine Clinic. Referrals were also received from the senior care, coordinated care, and psychiatry clinics. Approximately 50% of referrals were made by physicians. More referrals (23%) were made by pharmacists compared with advanced practice providers, who made 21% of referrals. The top 3 reasons for referral were: nonadherence, transportation barriers, and the need for medication reconciliation with a home care nurse. Patients had a median of 3 MRPs with the most common (40%) MRP related to compliance.

Conclusion: Home-based MTM is feasibly delivered within the ambulatory care infrastructure of a health system with sufficient provider engagement as demonstrated by referrals to the service.

Home-based health care has been shown to benefit patients with a broad range of needs. Post-stroke rehabilitation delivered by home-health physical therapists has improved activities of daily living and gait speed.[1] Home-based nursing programs have demonstrated improvements in patients' clinical outcomes such as fatigue, activities of daily living, and quality of life in patients with stage two or three chronic obstructive pulmonary disease.[2] These programs have also improved patient self-efficacy in chronic-condition self-management, including asthma, chronic obstructive pulmonary disease, diabetes, coronary artery disease, hypertension, and congestive heart failure.[2,3] Home-based nursing has demonstrated improvements in clinical outcomes such as blood pressure, weight, and blood glucose levels.[3] Delivery of care in the home is beneficial for those with limited access to clinics and those with poor or questionable self-management of their disease state(s) and medication regimens.[4] Home-based care also provides invaluable information to clinicians about a patient's living environment.[4]

Disclosure: This project was supported by the Metropolitan Area Agency on Aging Title IIID Health Promotion Program.

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http://dx.doi.org/10.1016/j.japh.2016.01.003
1544-3191/

Key Points

Background:

- Many other health professions, including medicine, nursing, and therapy, have a history of providing home-based care; however, few descriptions of home-based MTM exist in the literature.
- Home-based MTM programs have been described that target patients recently discharged from the hospital where the pharmacist providing care is associated with a health system or a home care agency.

Findings:

- Patients with a history of nonadherence, transportation barriers getting to a pharmacy or clinic, or with home health care nurses may be good candidates for home-based MTM. Care coordination and documentation of services in the health-system EHR are essential to successful integration of home-based MTM.

Health care providers such as physicians, nurses, and physical therapists have a history of providing care in patients' homes; however, home-based pharmacist services are much less established. Some home-based pharmacist services have focused on patients who take specific medications, such as warfarin, or have specific conditions, such as heart failure.[4-6] Other services have targeted patients who have recently been discharged from hospital.[7-9] Benefits of pharmacists' interventions in these patients include improvement of patients' self-management of medications,[9] decreased emergency room visits, and decreased hospitalizations.[8] In one study, patients who received home-based MTM after hospital discharge were 40% less likely to have an emergency room visit or hospitalization than those receiving usual care.[8] Similarly, pharmacists have rated 70% of their home-based interventions as having a "dramatic" or "substantial" improvement on the patients' abilities to manage their medications.[9]

The benefits of pharmacist-provided MTM have been well documented.[10-13] Pharmacists have provided MTM to patients in clinics and pharmacies; however, these environments may have barriers. For example, MTM may be difficult to provide in busy community pharmacies.[14] The health system involved in this article observed that some patients had transportation barriers preventing them from getting to a clinic or pharmacy and others did not feel comfortable bringing medications to these locations for an MTM visit. Some patients with caregivers who should participate in an MTM encounter were unable to attend appointments at a clinic or pharmacy. The health system hypothesized that providing MTM in a patient's home may overcome these barriers and identified a need for improved care coordination between primary care providers (PCPs) and home health care care nurses and increased support for nonadherent patients. The health system looked to home-based MTM to meet these needs. Although providing home-based pharmacy services is not a new idea, the present article adds to the literature by describing how a health system with well established MTM services may implement home-based MTM. Although other home-based pharmacy services have targeted specific populations, this practice is innovative by targeting a wider ambulatory patient population.

Objectives

The objective of this article is to describe the integration of home-based MTM into the ambulatory care infrastructure of a large urban health system and to discuss the outcomes of this service.

Practice description

Hennepin County Medical Center (HCMC) has been providing MTM services since 2006. The health system has more than 50 primary care and specialty clinics. Eighteen credentialed MTM pharmacists are located in 16 different primary care and specialty settings, with the greatest number of pharmacists providing services in the internal medicine clinic. Services provided include comprehensive medication review, targeted disease state management, therapeutic drug monitoring, patient education, and adherence support. Primary care clinics are patient-centered medical homes, and pharmacists are able to use protocols to modify patients' medication regimens. Annually, pharmacists conduct approximately 10,000 MTM encounters and receive reimbursement primarily from Minnesota Medicaid. However, all insurers are billed for services. All MTM pharmacists undergo a credentialing and privileging process through the HCMC Office of the Medical Director, and appointment is renewed every 2 years. They are additionally credentialed as MTM Providers through insurance plans as able. The department is supported by a full-time MTM support analyst, a former community pharmacy technician, who assists with patient billing, scheduling, data reporting, and quality assurance initiatives.

Practice innovation

HCMC began providing home-based MTM in 2012. One pharmacist was designated as the home visit pharmacist and devoted 0.2 full-time equivalent to home-based MTM. Because the pharmacist had previous experience providing home-based MTM, no training related to home-based care was provided. The health system does provide personal safety training classes that would have been required otherwise because the pharmacist conducts visits alone. Components of a home-based MTM visit were designed to be similar to a clinic-based MTM visit to promote consistency across the health system. During the home visit, the pharmacist evaluates all medications and over-the-counter (OTC) products for indication, effectiveness, safety, and convenience and compliance. Because the visit occurs in the home, the patient's caregiver can easily participate in conversations related to medication use, and the pharmacist can observe the environment in which medications are taken and stored. The patient and pharmacist devise a plan for medications that is documented in the electronic health record (EHR). Updated medication lists are shared with non-HCMC providers, such as community pharmacies and home health care nurses, by fax. If more information needs