Development and integration of pharmacist clinical services into the patient-centered medical home

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Abstract

Objectives: To describe the development of pharmacist clinical services within a primary care physician practice using a standardized business plan, the extent of clinical pharmacy service integration into the patient-centered medical home (PCMH), and the clinical changes in the pharmacist's patient cohort.

Setting: A two-physician primary care/occupational care practice in Pittsburgh, PA, from May 2007 to December 2011.

Practice description: Pharmacist-led clinic receives physician referrals for medication management, adherence, and disease management services.

Practice innovation: Pharmacist practice in a primary care setting with emphasis on integration of clinical services into the medical home model designed by the American Academy of Family Physicians.

Main outcome measures: Characterization of the patient's pharmacist and services provided by the pharmacist. Glycosylated hemoglobin (A1C), body mass index (BMI), low-density lipoprotein cholesterol, high-density lipoprotein cholesterol, total cholesterol, triglycerides, and blood pressure.

Results: The top five primary referral reasons were diabetes self-management, weight management, medication adherence, hypertension, and dyslipidemia management. Improvements in clinical parameters were demonstrated for lipids and A1C at 1 and 2 years after baseline. Statistically significant improvements in BMI also were observed.

Conclusion: The pharmacist developed and integrated clinical services into a primary care practice, became an integral member of the clinical team in the two-physician PCMH, and improved patient outcomes.

Keywords: Primary care, ambulatory care, diabetes, clinical pharmacy, patient-centered medical homes.

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The patient-centered medical home (PCMH) is a team-based model of care led by a personal physician who provides continuous and coordinated care throughout a patient's lifetime to maximize health outcomes.[1] The model described by the American Academy of Family Physicians (AAFP) consists of four building blocks: (1) quality measures, (2) the patient experience, (3) practice organization, and (4) health information technology (www.aafp.org/online/en/home/membership/initiatives/pcmh.html). Clinical pharmacy services can be integrated into the medical home's building blocks by locating the pharmacist directly inside the medical home practice or connecting with a pharmacist through community links. The pharmacist focuses on patients with chronic illness and medication-related problems. The pharmacist contributes directly to improved patient health outcomes by ensuring the quality and safety of medication use. Clinical services include medication reconciliation, especially post–hospital discharge, self-management of chronic disease and healthy lifestyle modification, review of polypharmacy and drug related problems, and counseling on medication adherence.[2,3] With the mandate to restructure health care delivery, the concept of PCMH is gaining momentum. The National Committee for Quality Assurance (NCQA) has developed standards for recognition of PCMH. The standards specify that the practice implement evidence-based care plans, use nonphysician practitioners in care management, coordinate care transitions, and support patient self-management.[4,5] Nonphysician practitioners include physician assistants, nurse practitioners, clinical social workers, and pharmacists. Including a pharmacist in the medical home supports the Institute of Medicine's philosophy that the pharmacist is an essential resource on medication use and must be accessible to patients at all times.[6]

At a Glance

Synopsis: The current work demonstrates that pharmacists can collaborate with primary care physicians through a well-planned practice model. A clinical pharmacy service was implemented in a primary care practice working toward accreditation as a patient-centered medical home (PCMH). A variety of clinical services were implemented using the American Academy of Family Physicians (AAFP) medical home model checklist. Payments for some pharmacist consults were successfully billed using Current Procedural Terminology codes, with diabetes self-management the service most successfully billed. The pharmacist also assisted the practice in achieving quality improvement measures.

Analysis: *As more primary care practices achieve accreditation, alternate reimbursement methods from payers in both government and private sectors should become available. A key to successful practice in the medical home is for pharmacists to educate both legislators and payers about increasing access for the public to valuable clinical pharmacy services. Physician acceptance, slow credentialing status, inadequate knowledge of billing and clinical skills, indifferent attitude of pharmacy practitioners, and insufficient space to perform clinical services are barriers to overcome. Benefits to patients in the PCMH include improved health, preventing admissions to the emergency department and hospital, consults on the risk and benefit of complementary and alternative medicine use, improved monitoring of high-risk drug therapy, access to a drug information resource, and adherence counseling.*

Objectives

We describe one type of pharmacy practice model located in a PCMH. The concept is not new, as academic pharmacists and others have been working in primary care settings for years. However, few published references exist about pharmacist clinical services offered in a medical home. The current work describes (1) the development of pharmacist clinical services within a primary care physician practice using a standardized business plan,[7] (2) the extent of clinical pharmacy service integration into PCMH using the AAFP practice model, and (3) the clinical changes in the pharmacist's patient cohort. The Duquesne University Institutional Review Board approved the project.

Practice description

A long-standing relationship between the Duquesne University Mylan School of Pharmacy (Pittsburgh, PA) and the Duquesne University Rangos School of Health Sciences physician assistant program was the connection for developing a pharmacy practice within a primary care medical practice. The medical practice consists of two physicians who are adjunct clinical professors at the Rangos School and familiar with teaching physician assistant students experientially. The practice uses one full-time physician who typically sees 12 to 15 patients per day. The second physician sees patients 3 days a week and teaches at the university 2 days each week. Both physicians are preceptors for physician assistant students. The physical practice includes three examination rooms, a large minor surgery and dressing suite, office manager and physician offices, and a reception area. Our office doubles as an audiometry and optometry exam room. The Internet is accessed through the office Wi-Fi connection. The pharmacist is a senior faculty member board certified in pharmacotherapy and experienced in disease management. The pharmacist spends 12 to 15 hours per week at the practice site. The practice site accommodates students in an advanced pharmacy practice experience (APPE) ambulatory care practice, as well as ambulatory care residents and academic/research fellows. APPE students are on site with the faculty member for 12–15 hours per week, whereas a resident or fellow are on site for eight hours per week. The majority of time is spent in patient care, with about 10% of time spent on research. Research time involves data entry and maintenance