

The Opportunity for Comprehensive Medication Management

Within the Patient-Centered Medical Home Structure

The redefined role of primary care embodied in the Patient Centered Medical Home (PCMH) presents a unique opportunity to maximize both the quality and coordination of patient care. Complex chronic diseases and their associated co-morbidities can be addressed in a more collaborative and clinically effective way for patients.

A significant factor in the management of all chronic diseases is the use of medications. Consequently, producing more positive clinical outcomes within the PCMH will often require the provision of comprehensive and effective medication management **by an interprofessional medical home team.**

“We found that over half of our patients in the “resistant hypertension” clinic were actually not taking their medications.”

Bruce McCarthy, M.D. - Medical Director, Primary Care

Allina Health System - Minnesota

This paper presents the rationale for developing a PCPCC guideline document addressing medication management in the medical home, by outlining opportunities to positively impact the care of patients.

Four out of five patients who visit a physician leave with at least one prescription¹, and nearly one-third of all American adults take five or more different medications. Medications are involved in 80% of all treatments and are the most common modality for controlling and/or preventing the progression of chronic disease.

Medicare beneficiaries with multiple chronic illnesses:

- see an average of 13 different physicians and have 50 different prescriptions filled each year;
- account for 76% of all hospital admissions;
- account for 88% of all prescriptions filled;
- account for 72% of physician visits, and
- are 100 times more likely to have a preventable hospitalization than someone with no chronic conditions.²

¹*The chain pharmacy industry profile.* National Association of Chain Drug Stores. 2001

² Testimony of Gerard F. Anderson, Ph.D., Johns Hopkins Bloomberg School of Public Health, Health Policy and Management, before the Senate Special Committee on Aging, “The Future of Medicare: Recognizing the Need for Chronic Care Coordination, Serial No. 110-7, pp. 19-20 (May 9, 2007)

While only 10% of total healthcare costs are attributable to medications, their ability to control disease and impact overall cost, morbidity, and productivity- when appropriately utilized- is enormous.³

The need for and value of a more comprehensive and systematic approach to the management of medications is increasingly clear. Patients need and deserve appropriate, effective, safe and convenient medications. The PCMH, because of its unique focus on quality outcomes and coordination of care, is the logical approach to provide a systematic medication management process that fully utilizes the knowledge and skills of the physician together with those of other team members -- especially pharmacists who can collaboratively deliver care and services that help patients safely and more effectively use their medications. In short, comprehensive medication management can, and should, be an essential service of the effective PCMH.

Actively engaging patients to understand their personal medication experience - including behaviors and beliefs related to how they actually take the medications, is an essential beginning to maximizing positive clinical outcomes. Individualized medication care plans that are designed to achieve the clinical goals of therapy and that meet patients' specific needs are essential. Regularly updating the clinical goals of medication use as patients' conditions and responses to various therapies change is also crucial to the achievement of quality outcomes. Follow-up of actual patient outcomes allows us to learn how medications work in the presence of multiple co-morbidities and multiple medications.

“When we looked at our patients with asthma that were seen in the ER or hospital, we found that over half were not on a controller medication. Now all CCNC networks have a Pharm.D. to assist with medication management of high cost patients. The result- we were able to increase controller medication use in these asthmatic patients to 93% - lowered hospital admission rates by 34%, ER rates by 8%, and lowered total cost by episode for children enrolled in CCNC by 24%.”

**L. Allen Dobson Jr. M.D., FAAFP, Former Assistant Secretary
North Carolina Department of Health & Human Services**

As the number of clinicians involved with a patient's care increases, the potential for drug therapy problems increases and the patient's understanding of the role of their medications can become more confusing. The PCMH has a unique opportunity to effectively manage medications for and with its patients.

“I have been taking this medication for almost seven years. I have never been clear on why I am taking it or what it is supposed to do for me, and, I have never had anyone who had the time to explain it to me. Now I can ask questions and discuss my concerns about my medications.”

**J.P. (Patient receiving medication management services
at a medicine clinic in Minneapolis, MN)**

³ Source: Centers for Medicare & Medicaid Services, “National Health Expenditures,” 7 January 2008, <http://www.cms.hhs.gov/NationalHealthExpendData>.

Systematic approaches to medication management must be considered during transitions of care such as post-hospital discharge. Most physicians and providers have the training and experience to manage medications effectively within their area of general or specialist knowledge, but may seek additional consultation in managing medications outside of their usual scope of care or when patients are not reaching clinical goals of therapy. Currently, primary care providers frequently refer patients back to a medical specialist for medication adjustments, even when the diagnosis is well established. Common examples include referral to a pulmonologist for worsening asthma or COPD, to a cardiologist for poorly controlled hypertension, or to a psychiatrist for worsening psychosis. A primary care clinician in the PCMH team that has a specially trained pharmacist (either integrated in the team internally, or as an external referral resource) would be a more logical and cost effective choice for medication change and management recommendations.

Many believe that an EMR linked to e-prescribing will allow for better medication reconciliation and management. However reliance on e-prescribing and EMR/claims will only capture about half of medications actually consumed by patients. Missing from these data sources are prescription samples, medications bought out-of-pocket (i.e., large chain \$4 prescriptions not documented in claims systems), medications previously prescribed (back of the medicine cabinet) nonprescription medications, “alternative” medications, those obtained from family and friends, and internet purchases.

Most importantly, medication management services can produce significantly improved clinical outcomes. A report measuring the impact of medication therapy management services being delivered to Minnesota Medicaid recipients indicates that 77% of patients with diabetes who received this service achieved the QCare 2006 A1C benchmark. In addition 36% of patients with diabetes met all the performance-based benchmark standards compared to a state average of 6%. (Isetts, BI. Final Report: Evaluating Effectiveness of the Minnesota Medicaid Therapy Management Care Program, December 14, 2007.) This service has been shown to make a clinically significant difference in patients’ lives.

For health plans and payers, these services have resulted in returns on investment between 4:1 and 12:1 by avoiding unnecessary ED visits, hospitalizations, and specialist/other visits, while appropriate use of medications is maximized. (Isetts BI, Schondelmeyer SW, Artz MB, et al. Clinical and economic outcomes of medication therapy management services: The Minnesota Experience, JAmPharmAssoc. 2008;48:203-211.) Both health outcomes and clinical outcome measures improved, enhancing clinician achievement of quality performance indicators.

“Most patient care interactions involve medications and the limitations both in knowledge and time on my part make the addition of a clinical pharmacist on the medical home team MANDATORY ! I would have a difficult time maintaining our current standards without this person on board.”

**James Bergman, M.D. – Staff Physician, Group Health Permanente
Associate Professor, Family Medicine, University of Washington, Seattle**

The rationale for developing a PCPCC guideline document addressing medication management is to clearly outline, for evolving PCMH's, (1) the value, role, responsibility, and opportunities related to effective medication management, which is integrally linked to enhanced clinical outcomes, infrastructure planning (such as HIT), and (2) examples of payment approaches that have been utilized for these services.

We recognize that the expanded team for a highly functional PCMH includes other providers as an extension of the "medical home" (such as behavioral health experts, physical therapists, and nutritionists), and we believe this includes and should recognize the professional role and contribution that pharmacists can make in helping both providers and patients address ever more complex medication therapy issues, as has been demonstrated in Community Care of North Carolina, Fairview Health Systems, The Mayo Clinic in Minnesota, Group Health Permanent, and others (see attached appendices for several practice profiles).

The recognition of the need for this service and the demonstrated effectiveness of the service when provided in a collaborative and interprofessional framework, lead us to conclude that a systematic approach to medication management can and should be a hallmark component of the effective PCMH.

"Pharmaceuticals are the most common medical intervention, and their potential for both help and harm is enormous. Ensuring that the American people get the most benefit from advances in pharmacology is a critical component of improving the national health care system."

Institute of Medicine⁴

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⁴ Institute of Medicine - National Academy of Sciences- Informing the Future: Critical Issues in Health, Fourth Edition pg. 13 <http://www.nap.edu/catalog/12014.html>

Medication Management Services (MMS) and the Patient-Centered Medical Home:

Practice Profile

- Type of Practice/Facility:** Multi-specialty physician private group practice
- Location:** Greensboro, North Carolina
- Pharmacist Relationship To Practice:** Physically present, contracted staff (medical practice contract with clinical pharmacy services private practice), practicing under collaborative drug therapy management protocols and “clinical pharmacist practitioner” licensing (NC specific).
- MMS provision:** Patient-specific care related to:
- ID/document medication-related problems
 - Anticoagulation management and testing
 - Insulin/oral hypoglycemic therapy
 - Hyperlipidemia therapy
 - Multi-disease medication regimen optimization
 - Patient education
 - Longitudinal outcomes monitoring
- Access to MM Service:** (1) Physician/PCP referral
(2) Direct patient request/appointment
(3) Benefit design/contract
- Payment/Billing Methods:** (1) Incident-to-physician using E&M CPT codes (patient/coverage determined)
(2) MTM CPT codes for Medicare patients
(3) Patient-pay
- Service Assessment Measures (documented):** (1) Clinical treatment goal achievement
(2) Patient adherence
(3) Adverse effects identified/prevented

Medication Management Services (MMS) and the Patient-Centered Medical Home:

Practice Profile

Type of Practice/Facility: Community pharmacy practice; pharmacists with focused training in medication management, working with small physician groups in rural Minnesota

Location: Minnesota – several small to medium communities: Willmar, Little Falls, St. Cloud, Princeton

Pharmacist Relationship To Practice: Pharmacist is employed by the pharmacy chain; medication management practice is separately structured from the dispensing operation

MMS provision: Patient-specific care related to:

- Comprehensive assessment of medication and medical conditions
- Identification/documentation of drug therapy problems
- Physician-pharmacist care plan development
- Follow up/evaluation visits
- Written documentation of encounters to physician and patient

Access to MM Service: (1) Physician/PCP referral to pharmacist
(2) Direct patient request/appointments
(3) Employers/other payer referral

Payment/Billing Methods: (1) MTM CPT code billing/documentation
Minnesota Medicaid
Self-insured employers (U. of Minn., General Mills, Fairview Health System, state employees)
(2) Patient self-pay/copayments

Service Assessment

Measures (documented): (1) Volume and complexity of patients
(2) Clinical goals achievement
(3) Hospitalizations avoided/clinic visits prevented
(4) Medication cost savings
(5) Days at work saved
(6) Patient adherence to regimen

Medication Management Services (MMS) and the Patient-Centered Medical Home:

Practice Profile

Type of Practice/Facility:	Group model health maintenance organization providing ambulatory care and acute care services for enrolled members
Location:	Denver, Colorado
Pharmacist Relationship To Practice:	Both physically and virtually present models, employee staff, practicing under approved collaborative drug therapy management protocols; integrated within specific primary care clinics, medical services, and departments
MMS provision:	Patient-specific care related to: <ul style="list-style-type: none">• Identify/document medication-related problems• CVD/hypertension therapy• Anticoagulation management• Chronic care/geriatrics/palliative care• Mental health/neurology• Care transition/medication reconciliation• Patient education (in-person/telephonic)
Access to MM Service:	(1) Physician/PCP referral (2) Inter-service referrals (3) Pharmacist follow up appointments (4) Direct patient request/appointments
Payment/Billing Methods:	(1) PM/PM Capitation Model (2) Patient-pay/co-pay
Service Assessment Measures (documented):	(1) Clinical treatment goals achievement (2) NCQA/HEDIS measures (various) (3) Annualized cost avoidance/ROI (4) Patient satisfaction
Physician/Staff View:	“My primary care clinical pharmacy specialist is as important as my nurse and LPN in getting work done efficiently throughout the day and in giving excellent care to our patients. I can’t imagine working without her help.”
Patient/Caregiver View:	“I call them my heart team ...I pay attention to what they tell me,” [The patient] looks forward to calls from her pharmacist, who adjusts her medications for cholesterol, thyroid disease and blood pressure. "He makes sure my heart is protected, let me tell ya," – Patient interview – Denver Post – March 28, 2009.

Medication Management Services (MMS) and the Patient-Centered Medical Home:

Practice Profile

Type of Practice/Facility: **Physician-directed interprofessional community health center (HRSA supported)**

Location: **Tucson, Arizona**

**Pharmacist Relationship
To Practice:**

Physically present, employee staff, practicing under collaborative drug therapy management protocols

MMS provision:

Patient-specific care related to:

- **ID/document medication-related problems**
- **Insulin/oral hypoglycemic therapy**
- **Hyperlipidemia therapy**
- **CVD/hypertension therapy**
- **Patient education**

Access to MM Service:

- (1) Physician/PCP referral**
- (2) Pharmacist follow up appointments**
- (2) Direct patient request/appointments**

Payment/Billing Methods:

- (1) HRSA/community funded**
- (1) MTM CPT codes (documentation only)**
- (2) Patient-pay/co-pay**

Service Assessment

Measures (documented):

- (1) Clinical treatment goals achievement**
- (2) Patient adherence**
- (3) Adverse effects identified/prevented**

Physician/Staff View:

“Working with a pharmacist as part of my medical service team is like having an additional clinical resource in my pocket. I have access to a wealth of medication knowledge to improve patient safety and health outcomes. The collegiality found with a pharmacist who can build trust with me and our patients [allows] us to complement each other’s services and to meet mutual goals with our patients.” – Arthur Martinez, M.D. – Chief Medical Officer

Medication Management Services (MMS) and the Patient-Centered Medical Home:

Practice Profile

Type of Practice/Facility: University-based interprofessional primary care practice, serving university employees/dependents (self-insured); clinical education site for physicians, pharmacists, nurses.

Location: Columbus, Ohio

Pharmacist Relationship To Practice: Physically present, employee staff, practicing under approved collaborative drug therapy management protocols; three part-time primary care physicians, nurse practitioner, practice manager

MMS provision: Patient-specific care related to:

- Identify/document medication-related problems
- Medication goals/plan development
- Disease/medication management coordination
- Medication access assistance
- Patient education (in-person/telephonic)

Access to MM Service: (1) Physician/PCP referral
(2) Pharmacist follow up appointments
(3) Direct patient request/appointments

Payment/Billing Methods: (1) Self-insured university employee health benefit
(2) Patient co/pay

Service Assessment Measures (documented): (1) Clinical treatment goals/care plan achievement
(2) NCQA/HEDIS measures
(3) Annualized cost avoidance of higher intensity services
(4) Patient satisfaction

Physician/Staff View: “Practicing medicine as a part of an interprofessional team has greatly enhanced the quality of patient care I am able to deliver. I have noted a marked increase in patient adherence and improved outcomes as a result of the more intensive education and medication monitoring that we are able to provide.”

– Kelly Hall, M.D., Primary Care Physician

Medication Management Services (MMS) and the Patient-Centered Medical Home:

Practice Profile

- Type of Practice/Facility:** Staff model health maintenance organization/medical home framework providing acute and chronic ambulatory care services to enrolled members.
- Location:** Seattle, Washington
- Pharmacist Relationship To Practice:** Physically present, salaried employee staff, practicing under approved collaborative drug therapy management protocols; integrated as core team members within primary care clinics.
- MMS provision:** Patient-specific care related to:
- Identify/document medication-related problems
 - CVD/hypertension therapy
 - Anticoagulation management
 - Group care registries for chronic disease panels
 - Patient education (in-person/telephonic)
- Access to MM Service:** (1) Physician/PCP referral
(2) Pharmacist-initiated follow up appointments
(3) Direct patient request/appointments
- Payment/Billing Methods:** (1) PM/PM Capitation Model
(2) Patient-pay/co-pay
- Service Assessment**
- Measures (documented):** (1) Clinical treatment goals achievement
(2) HEDIS/NCQA measures
(3) Annualized cost avoidance/ROI
(4) Patient satisfaction
(5) Medication/treatment adherence
- Physician/Staff View:** “Most patient care interactions involve medications and the limitations both in knowledge and time on my part make the addition of a clinical pharmacist on the medical home team MANDATORY ! I would have a difficult time maintaining our current standards without this person on board.”-
- James Bergman, M.D. – Staff Physician, Associate
Professor of Family Medicine, U. of Washington