

1. What is CMM?

Comprehensive medication management (CMM) is a patient-centered, systematic approach to optimizing medication use and improving patient health outcomes that is delivered by a clinical pharmacist working in collaborative practice with the physician, patient and care team. CMM is a team-based approach, to ensure appropriate use of medications and decrease waste due to medication misuse, overuse or underuse. This ongoing care process ensures each patient's medications (whether prescription, nonprescription, alternative, traditional, vitamins or nutritional supplements) are individually assessed to determine that each medication has an appropriate indication, will be effective for achieving defined patient and/or clinical goals, is safe given the comorbidities and other medications being taken and can be taken by the patient as intended.¹

2. Why is CMM beneficial to patients?

Medication therapy problems (MTPs) are prevalent and result in preventable morbidity, mortality and excess health care costs.² CMM in practice increases patient access to medication experts, resulting in prevention or identification and resolution of MTPs. Outcomes of CMM include better clinical control of chronic conditions, less missed work, better understanding of medications, increased satisfaction with health care and decreased need for emergency department visits; all of which promote better quality of life.¹

3. What types of medication therapy problems (MTPs) are identified and resolved through CMM?

MTPs exist when the use (or non-use) of a specific medication results in less-than-optimal clinical outcomes for the patient. The process of identifying, resolving and preventing MTPs is what differentiates the core patient care work of a clinical pharmacist providing CMM from that of other practitioners. The most frequently encountered MTP is inadequate therapy (56.68%), while others include adverse reactions (14.74%), non-adherence (14.89%), high dosage (6.8%) and unnecessary therapy (6.68%).¹

4. How are CMM services different from services offered by pharmacy benefit managers (PBMs)?

Unlike sporadic, often reactive and typically transaction-based PBM services—such as prior authorizations, step therapy and adherence programs—CMM is a proactive and ongoing care process provided by medication experts with real-time access to a patient's medical record, including current medications list, lab values, vital signs, physician-patient discussions and the current treatment plan. CMM is a coordinated, team-based, and patient-centered approach to medication management involving real-time collaborations between the physician, patient, clinical pharmacist and other CMM team members to determine the right medication to be utilized, the first time. CMM delivers preassessment of all current and newly prescribed medications to assure safety, need for genomic testing and appropriateness of medication selection and dosing, along with continuing to assess a patient's response to a medication to identify and resolve MTPs. Medication use through CMM is individualized to meet a patient's physical, mental, cultural, genomic and financial needs.

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5. Which patients benefit the most from CMM?

Those who benefit most from CMM are patients that have not reached, or are not maintaining, their intended therapy goals. These goals may be missed by those who are experiencing adverse effects from their medications, those in need of preventive therapy, those having difficulty understanding their medication regime and those who are frequently readmitted to the hospital.³ Patients with chronic conditions such as diabetes, hypertension, cardiovascular disease, chronic heart failure and asthma benefit from CMM.⁴⁻⁸ Improved quality of health care for these patients represents significant cost savings for employers due to decreased health care utilization and absenteeism. Patients who benefit most from CMM include, but are not limited to:

- Those with one or more chronic conditions being treated with multiple medications prescribed by multiple providers;
- Those with high emergency department (ED), urgent care utilization or hospitalizations;
- Those using one or more complex medications requiring specialized administration and frequent assessments of outcomes;
- Those transitioning between visits with specialists and primary care providers, ED, urgent care or discharge from a hospital or long-term care facility;
- Those at risk for sub-optimal clinical outcomes and related ED visits and hospitalizations due to medication therapy problems such as errors in self-administration, doses too high or low for their genetic make-up, adverse drug reactions, etc. and
- Those with newly initiated medications requiring personalized education and on-going assessment of patient response and clinical outcomes (e.g., inhalers, self-injectables, narrow therapeutic index, etc.).^{5,8}

6. Why is CMM beneficial to me as a plan sponsor?

CMM is a proven benefit strategy that can be used to reduce participant cost of care and improve employee/family health, saving lives and saving money. Analyses involving employer groups have demonstrated:

- Improved clinical outcomes and employee health, especially in those with chronic conditions such as diabetes and cardiovascular disease;⁴⁻⁸
- Decreased employee absenteeism;⁹
- Reduced health care utilization, including emergency department visits, hospitalizations and readmissions;^{5,8}
- A reduction in annual total health care costs of an average of \$1,000 per participating member/year;⁶⁻⁹ and
- A return on investment to average around 3:1 to 5:1 the first year.¹⁰

7. What kind of outcomes can I expect for my employee population if I integrate CMM services? How do I measure success?

Medication optimization through CMM leads to increased quality of care, decreased utilization and costs of care, saved lives through avoidance of medication therapy problems (MTPs) and adverse drug events.

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7. What kind of outcomes can I expect for my employee population if I integrate CMM services? How do I measure success?

Routine assessment of process of care and clinical outcome metrics allows measurement of successful CMM implementation.

- **Process of Care Measures**

- Patients with > one chronic condition receive CMM services at least twice annually (>90%).
- Patients with > one chronic condition have a CMM encounter at each care transition (within 72 hours post hospital discharge or emergency department visit).
- Patients and medical providers grant access to the patient’s electronic medical record for the CMM team (from within or outside of the medical practice).

- **Outcome Success Measures for CMM**

- Reduced utilization of health care services including ED visits, hospital admissions and readmissions^{5,8} with resulting cost avoidance^{11,12}
- Reduction in annual total health care costs per participant⁶⁻⁹
- Decreased employee absenteeism^{5,8}
- Positive return on investment¹⁰

8. How can I ensure that CMM is consistently available to my employees?

Add utilization and coverage of CMM to your health care insurance carrier contracts. To realize the quality of care and cost benefits of medication management, the intervention must be comprehensive and ongoing. Thus, pharmacy benefit solutions focused on medication use (prior authorization, step-therapy, adherence programs, etc.) must be combined with practice-based interventions utilizing a clinical pharmacist working in collaborative practice with the physician. Clinical teams focus on individualized patient assessments with appropriate medication selection, on-going patient outcomes monitoring and adjustments as needed. These components of CMM may be delivered by clinical pharmacists in collaborative practice with physicians, or through internal health care insurance carrier systems. Require your health care insurance carriers to track and report on CMM interventions and treatment outcomes for medication therapy problems that include (in order of frequency) inadequate therapy, non-adherence, adverse reactions, dose too high and unnecessary therapy. Actions that will change things:

- Using data analytics from your benefits spend (e.g. readmissions, polypharmacy, emergency department visits, adverse medication events), to establish the need for company adoption of CMM as a health care benefit and advocacy for transformation of the current system of medication use.
- Engaging with employers, primary care and specialist physician organizations, medical and pharmaceutical service providers, community leadership organizations, health care insurance carriers and consumer groups focused on acute/chronic care outcome improvement to discuss the community’s need to transform medication use through CMM.

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8. How can I ensure that CMM is consistently available to my employees?

- Utilizing value-based contracting to incorporate shared savings with medical carriers and PBMs to incentivize delivery of team-based CMM services with the clinical pharmacist as a vital team member.
- Ensuring contracts with medical insurance carriers require real-time interoperability and sharing of patient records between care providers.
- Basing contract performance guarantees on measurable clinical outcome improvements and financial waste avoidance achieved by medication optimization through appropriate implementation of CMM in practice to manage all medication therapy problems.
- Promoting employer and employer health care coalition education and advocacy to build demand for CMM services to ensure appropriate use of medications and gene therapies and reduce waste in benefits spend.
- Recognizing the value and importance of adding the CMM service component—when evaluating PGx testing to target correct therapies—as a way to ensure appropriate use of companion and complimentary diagnostics.

9. What are the roles and responsibilities of each clinical team member and the patient during the CMM process?

■ **Physician:**

- During routine patient care activities, identify the patients who would benefit from CMM, including those with one or more chronic conditions being treated by multiple providers and/or prescribed with multiple medications, those with high emergency department (ED)/urgent care visits and hospitalizations, those transitioning between visits with specialists and primary care providers, etc., those at risk for sub-optimal clinical outcomes and those with newly initiated medications requiring personalized education and on-going assessment of patient response and clinical outcomes.^{5,8}
- Connect patients with CMM services, providing an explanation of the benefit/importance to encourage their participation.
- Collaborate with CMM pharmacist as a resource for general and patient-specific, evidence-based medication information:
 - Mutually develop collaborative practice agreement(s), protocol(s) or other agreements to define the pharmacist scope of practice.
 - Ensure the CMM pharmacist has read and write access to electronic medical record.
 - Communicate with the CMM pharmacist regarding relevant, patient-specific information, including reason for referral, new diagnoses, transitions of care, need for follow-up, therapy changes, etc.

■ **Clinical Pharmacist:**

- Collaborate with the physician to implement therapy changes through collaborative practice agreements, institutional protocols or other means. Access and review electronic medical records of CMM candidates.

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9. What are the roles and responsibilities of each clinical team member and the patient during the CMM process?

- Conduct an encounter with the patient to assess prescription/non-prescription medications and associated conditions. For each medication, identify appropriateness, effectiveness, safety and adherence. Include assessment of the patient's physical, mental, cultural, genetic and financial abilities to utilize a medication. Identify and address medication therapy problems (MTPs) and the need for additional therapy and/or medication discontinuation.
- Discuss potential therapy changes and measurable goals with the patient, provide disease and medication education and involve the patient in therapeutic decision making. Establish a regular cadence of follow-up visits to monitor progress/lack thereof and document encounters in the patient's electronic medical record.
- Monitor labs/vitals and other clinical data to ensure that medication-related clinical endpoints are being achieved, and collaborate with the physician as needed on recommended changes in the treatment plan.
- Provide ongoing support and education to physicians and other clinical team members regarding evidence-based pharmacotherapy and patient-specific therapy queries.

■ Patient:

- Participate as a member of the CMM integrated care team in the development and implementation of their CMM care plan.
- Share personal medication experience, history, preferences and biases including clinical goals of therapy and adherence.
- Regularly review medications with the CMM team asking questions and clarifications about their treatment and medications in relation to the CMM care plan.
- Follow the CMM care plan and share any concerns with the CMM team.
- Actively participate and offer feedback in follow-up evaluations with all members of the CMM care team to determine the effects of changes and any new desired clinical goals.
- Alert the CMM care team about any drug interactions or side effects experienced.
- Refill medications in a timely manner.
- Alert the CMM team quickly if there are difficulties obtaining or refilling medications due to cost, transportation issues, etc.

■ Other Team Members:

- Nurses, nutritionists, physician assistants, case managers, social workers, etc. collaborate with the patient, physician, and clinical pharmacist in the implementation of CMM, providing needed care within their scopes of practice to achieve desired patient outcomes.

10. How much can I expect to pay for CMM services?

The costs of CMM services will vary based on place of service (physician office, insurance carrier system, carve-out provider), number and demographics of covered population, level of population risk for MTPs and payment methodology (PEPM, PMPM, per case). You can expect a CMM return on investment to average around 3:1 to 5:1, which represents \$1,200 to \$1,872 in per participant per year savings.¹⁰

11. How receptive are prescribing physicians to CMM delivered along with the pharmacist?

Physician work satisfaction increases when clinical pharmacists provide CMM services. Primary care physicians report decreased workload, decreased mental exhaustion, enhanced opportunities for professional learning and clinical collaboration when clinical pharmacists are incorporated into their practice. Additionally, primary care teams indicate that CMM services result in better care and improved patient access to care.^{13,14}

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