



COMPREHENSIVE MEDICATION MANAGEMENT: Employers hold the key to solving the \$528B health care problem

Medicine is how we treat most conditions: Roughly 75%-80% of physician office and hospital outpatient clinic visits involve medication therapy.^{1,2} And more often than we would like, it is how disasters occur. More than 275,000 die each year because of medication misuse, overuse or underuse. The financial cost tops \$528 billion annually,³ and employers are on the hook for a large portion of that.

Employers have the incentive, the leverage and the responsibility to change this. The evidence, best

practices and tools are there to solve the systemic issues that lead to sub-optimal medication use. Employers can lead the charge, through their contract authority and work with their suppliers, but they first must understand just how irresponsible doing nothing is.

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current system of delivery of medications across the US," says Sandra G. Morris, RN, MSN, CHC, senior advisor, GTMRx Institute; president, About Quality Benefits Design; and former senior manager, US Benefits Design, Procter & Gamble. Prescription drugs account for about 10% of US health care spending, but they make up 19% of employer health care spending—even with rebates.⁴

Underlying all this is the fact that prescription drug costs are increasing rapidly, due in large part to a rapid pipeline of biologics releases.

Increased cost and suffering in a trial-and-error system

Self-funded employers have, by federal law, a fiduciary responsibility to act prudently and avoid the risk of

¹ McInnis, T. et al., editors. *The Patient-Centered Medical Home: Integrating Comprehensive Medication Management to Optimize Patient Outcomes*. 2nd ed., Patient-Centered Primary Care Collaborative.

² Centers for Disease Control and Prevention. "Therapeutic drug use." <https://www.cdc.gov/nchs/fastats/drug-use-therapeutic.htm>

³ Watanabe JH, McInnis T, Hirsch JD. Cost of prescription drug-related morbidity and mortality. *Ann Pharmacother* 2018;52(9):829-37. <https://doi.org/10.1177/1060028018765159>

⁴ "Prescription Drugs' Sizable Share of Health Spending." [Kaiser Family Foundation](https://www.kaiserfamilyfoundation.org/). Dec. 2015.

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health care plan losses.⁵ “Losses include those things that are being paid for that are not effective or not achieving the outcomes that you would expect to achieve for the payment of those services,” Morris explains. The current trial-and-error system of medication use drives losses—losses in quality of life, losses in employee productivity and losses of money spent on medications that do not work.

A typical scenario goes like this: Jacob goes to the physician with a chronic health condition. The physician prescribes a medication he'll need to take over many months or years. It's probably a therapy the physician has prescribed many times for many patients and feels comfortable with it. “But keep in mind, we're talking about over 10,000 different medications being available

within our system. Obviously, physicians can't know about all those medications and how they will affect each patient.”

So the physician writes a prescription with a 30-day supply and tells Jacob, “Let's try this, and if it works, okay. If it doesn't work, we'll try a different one.” With this trial-and-error approach, Jacob may go months or years without the best medication for him.

What's even more frustrating, Morris says, is that we have the tools to keep this from happening. For example, using pharmacogenomic testing as part of the process of care we call comprehensive medication management (CMM) may identify the best medication for a particular person for some diseases, and the pharmacist-led process of patient care helps equip other team members not only with interpretation of the most

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recent science but also with a more targeted comprehensive medication plan. We have the science and processes, she says, but not the practice that leads to appropriate use of medications.

The solution: Comprehensive medication management

We have a tested and viable solution. The evidence shows the best way to optimize medication use is through [CMM in practice](#). CMM is an iterative process involving a clinical pharmacist, the patient, clinician and other team members working together to ensure all medications are appropriate, safe, effective and able to be taken.

The formal definition:

The standard of care that ensures each patient's medications (whether they are prescription, nonprescription, alternative, traditional, vitamins or nutritional supplements) are individually assessed to determine that each medication is appropriate for the patient, effective for the medical condition, safe given the comorbidities and other medications being taken and able to be taken by the patient as intended.⁶

⁵ “Health Plans & Benefits: Fiduciary Responsibilities.” U.S. Department of Labor. www.dol.gov/general/topic/health-plans/fiduciaryresp

⁶ McInnis T, Webb E, and Strand L. *The Patient-Centered Medical Home: Integrating Comprehensive Medication Management to Optimize Patient Outcomes*, [Patient-Centered Primary Care Collaborative](#), June 2012.

Think about it this way: If your primary care physician discovers a cardiac issue, she'll refer you to a heart specialist, working and communicating with that specialist. "We're proposing that we do the same thing for medication management. Through collaborative practice agreements with the physician, this lets the clinical pharmacist who has the most current knowledge and experience in understanding medications, become the coach and partner for the patients who need help in this area," she says.

Just as some patients have need of an oncologist or an interventional cardiologist, others may need the

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services of a clinical pharmacist. This makes sense, but it's not the way we do things now, Morris says. The burden falls on the prescriber which is unfair to patient and provider alike.

Physicians spend about 5% of the average 16-minute office visit—less than a minute—introducing and explaining newly prescribed medications to patients. Roughly 26 seconds is devoted to guideline-recommended components, with 23 seconds left for all the other aspects of the drug.⁷

"These are tasks clinical pharmacists are trained to perform and the system needs to change and accept clinical pharmacists as the experts in medication therapy management, and it needs to pay for those services. The savings themselves are well worth it," she says.

Proven approach

Having clinical pharmacists work in collaborative practice with physicians and other prescribers makes an enormous amount of sense. It also has a strong body of evidence behind it.

By optimizing medications through CMM, employers can decrease misuse, overuse and underuse of medications; that will, in turn, increase quality of care, reduce costs and ensure a healthy and productive workforce. But it *must* be CMM, as

⁷ Tarn DM, Paterniti DA, Kravitz RL, et al. "How much time does it take to prescribe a new medication?" *Patient Educ Couns.* 2008;72(2):311–319. doi: 10.1016/j.pec.2008.02.019

defined above; see sidebar on page 5 for an explanation of CMM vs. MTM. Years of evidence and research builds a strong case for the value of CMM shown through better care, lower costs, higher physician and patient satisfaction and better outcomes.⁸

CMM has been shown to decrease total cost of care by an average of \$1,000 per patient per year. This savings accrues in a variety of ways, including improved clinical outcomes, especially in those with chronic conditions; reduced emergency department visits, hospitalizations and readmissions; and reduced absenteeism. In fact, as the evidence document outlines, employers have seen return on investment average around 3:1 to 5:1 the first year.⁹

Like any tool, to be effective, CMM must be deployed with precision.

The right approach for the right patient

CMM is appropriate for certain people with specific needs. You don't need to be able to identify each employee, but you do need to understand at a macro level, says Jan D. Hirsch, BS Pharm, PhD, founding dean and professor of clinical pharmacy, School of Pharmacy & Pharmaceutical Sciences, University of California, Irvine.

⁸ *The Outcomes of Implementing and Integrating Comprehensive Medication Management in Team-Based Care: A Review of the Evidence on Quality, Access and Costs*, GTMRx, October 2020.

⁹ *A Review of the Evidence on Quality, Access and Costs*, op cit.

Start by looking at your health care costs and see individual cases where it's obvious that the patient is not achieving the clinical outcomes. The employees who will most benefit are those taking medications for one or more chronic conditions. Maybe they're high utilizers of the emergency department or urgent care. Another clue: Employees who are on complex medications that require injections, inhalers, etc., may need CMM services. If they don't administer the medication correctly, it won't be effective, she warns. It might even be dangerous. (See Figure 1 below for list of patients who most benefit from CMM interventions.)

CMM is especially appropriate for patients transitioning from hospital to home or across other care settings—and that includes everyone moving between specialist and primary care. "As part of CMM services, the pharmacist can look at medication changes in the context of all medications a patient is using to help troubleshoot and rationalize the regimen for the entire team."

Make it so: How employers can advance CMM

CMM represents a dramatic change from the status quo. Employers can drive that change, but where do they begin?

A good place to start is the [GTMRx Employer Resource Center](#) which contains the [Employer Toolkit](#). It provides concrete steps for change—the what and how—and it provides the rationale. It includes road-tested tools and proven strategies to help employers work with and choose better health plans and PBMs and to use their contract authority to adopt comprehensive medication management practices. It helps employers understand why CMM matters, discover the ways CMM is currently being used today and recognize why employers should champion change. (For a basic employer checklist, see Figure 2 on page 6.)



Patients Who Benefit Most from CMM

Characteristics of patients who benefit most include:

- One or more chronic conditions treated by multiple providers/multiple meds
- High ER/urgent care/hospital utilization
- One or more complex medications requiring specialized administration and frequent outcomes assessments
- In transition between specialists and primary care providers visits, ER/Urgent Care visits, or discharge from a hospital/long-term care facility
- Risk for sub-optimal clinical outcomes due to medication therapy problems such as errors in self-administration, doses too high or low, adverse drug reactions, etc.
- New medications requiring personalized education and on-going assessment of outcomes (inhalers, self-injectables, narrow therapeutic index, etc.)
- Absence of or erratic maintenance of intended therapy goals
- Problems understanding and following their medication regimen

McInnis T, Webb E, and Strand L. *The Patient-Centered Medical Home: Integrating Comprehensive Medication Management to Optimize Patient Outcomes*, Patient Centered Primary Care Collaborative, June 2012
Comprehensive Medication Management FAQ for Employers. (GTMRx November 2020). Retrieved December 1, 2020, from <https://gtmr.org/wp-content/uploads/2020/11/Comprehensive-Medication-Management-FAQ-for-Employers-11252020.pdf>

Figure 1

Disambiguation: MTM vs CMM

One of the biggest challenges to employers embracing CMM is the fact that it continues to be confused with medication therapy management (MTM). MTM has, over the years, come to include all sorts of activities aimed at optimizing medication use. Typically, MTM efforts focus on the medication and a specific condition—but not on the total individual. During traditional MTM, the clinical pharmacist may not even engage a patient directly, but instead work from billing and medical records, and there's typically no ongoing collaboration with the physicians or other prescribers in developing a more effective medication plan in accordance with the care plan.

MTM is siloed; it seeks to address a single problem *in isolation* from the prescriber, ongoing disease process, co-morbidities, the patient's other medications (e.g., nonprescription, vitamins or supplements), the patient's preferences, etc.

CMM is more collaborative, longer term and focused on obtaining patient treatment goals. It is a *comprehensive* approach to assessing all a patient's medications in collaboration with a team. It has a clear definition and 10 essential components. An organization must do all 10, or they are not providing comprehensive medication management.

10 Steps to Achieve CMM



1. Identify patients that have not achieved clinical goals of therapy.



2. Understand the patient's personal medication experience, history, preferences & beliefs.



3. Identify actual use patterns of all medications including OTCs, bioactive supplements & prescribed medications.



4. Assess each medication for appropriateness, effectiveness, safety (including drug interactions) & adherence, focusing on achievement of the clinical goals for each therapy.



5. Identify all drug therapy problems.



6. Develop a care plan addressing recommended steps including therapeutic changes needed to achieve optimal outcomes.



7. Ensure patient agrees with & understands care plan which is communicated to the prescriber or provider for content & support.



8. Document all steps & current clinical status vs. goals of therapy.



9. Follow-up evaluations are critical to determine effects of changes, reassess actual outcomes & recommend further therapeutic changes to achieve desired clinical goals & outcomes.



10. CMM is a reiterative process! Care is coordinated with other team members & personalized goals of therapy are understood by all team members.

McInnis T, Webb E, and Strand L. The Patient-Centered Medical Home: Integrating Comprehensive Medication Management to Optimize Patient Outcomes, Patient Centered Primary Care Collaborative, June 2012

Morris counsels larger employers to work with their local health care employer coalitions to consider whether to, as a group, hire a CMM vendor. “Don’t let the PBM try to tell you they already perform CMM services. Most likely, they are simply referring to prior authorization or perhaps traditional medication therapy management services like adherence programs” she warns. “In CMM, the goal is not to see how

much money can be made off of a rebate program. The goal here is to achieve the best clinical outcomes individually for the patients who are the most in need of this particular service.” That will require significant changes in the traditional PBM/ employer relationship.

Hirsch emphasizes that employers of any size can push for CMM, and they can start by talking to their

health plans and PBM. (See sidebar at left for different models of CMM employers can deploy.)

Large and mid-size employers may have more leverage, but smaller employers, she says, can turn to the community. For instance, a local school of pharmacy can help coordinate CMM efforts. “Even if you don’t have a school of pharmacy, there are local pharmacy associations everywhere, and they can help you identify pharmacists who will provide CMM services to your employees.”

Assessing outcomes

Employers can champion change, says Hirsch, by making clear to carriers—insurers, PBMs, etc.—what, as customers, they want to happen. Ask these vendors what steps they are already taking to

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What can employers do? A checklist

- ✓ Understand CMM: Read and learn from the GTMRx Employer Toolkit.
- ✓ Use data analytics of benefits spend (e.g., readmissions, poly-pharmacy, 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.
- ✓ Engage with other employers, primary care and specialist physician organizations, medical and pharmaceutical service providers, community leadership organizations, health care insurance carriers and consumer groups to discuss the community’s need to transform medication use through CMM.
- ✓ Use value-based contracting building in the demand for CMM services for those with multiple chronic conditions, seeing multiple providers, using multiple medications to incorporate shared savings with medical carriers and PBMs to incentivize delivery of team-based CMM services and advanced primary care.
- ✓ Ensure contracts with insurance carriers require real-time interoperability and sharing of patient records between care providers (to include the clinical pharmacist).
- ✓ Base contract performance guarantees on clinical outcome improvements and financial waste avoidance achieved through CMM. Promote employer health care coalition education and advocacy to build demand for CMM services.

Figure 2

Comprehensive Medication Management in Benefits Design: A Toolkit for Employers

Concerned about medication misuse, underuse or overuse in your pharmacy and medical program?

Everyone is different, not every medication is right for every person. Comprehensive medication management (CMM) is a well-established process of care that ensures that every medication an individual takes is appropriate and effective for them.

CMM is different from medication therapy management (MTM), a broad term that has, over the years, come to include all sorts of activities related to pharmacy benefit management (PBM). MTM activities are not clearly defined or implemented in a standard way by PBMs and health plans. Employers should be wary of programs that offer only single service activities (e.g., adherence, medication reconciliation, comprehensive medication review) such as those found in Medicare Part D prescription drug

plans; this is not CMM. CMM is a well-defined process to optimize medication use that has delivered consistent results. This 10-step process of care is delivered in collaborative practice with a physician by a qualified member of the health care team (usually a clinical pharmacist) and designed specifically to ensure that all medications are optimized for that patient. It may also include tools such as pharmacogenomics (PGx) testing to target correct therapies. CMM is a patient-focused process versus a medication-focused activity.

This toolkit explores the benefits of CMM for individuals and for the employers who pay for benefits. Research published in March 2018 reveals the waste to the system when the wrong drugs are prescribed, drugs are skipped or make people sicker, causes an estimated 375,689 deaths per year.¹ In financial terms, there's also a \$528 billion price tag attributed to non-optimized medication use.



Decreasing waste, improving quality and ensuring appropriate use of medications through health benefit design is a high priority for employers. As you plan your health benefit strategy (for pharmacy and medical), and as you seek to contract for programs that optimize medication use and manage medication therapy problems, use this toolkit to work with your:

¹ [Hendricks, et al. Cost of Prescription Drug-Related Hospitalizations and Mortality. Annual Report of the American Society of Health-System Pharmacists.](#)

About the GTMRx Institute

The Get the Medications Right Institute brings critical stakeholders together. Board by the experts need to optimize outcomes and reduce costs by getting the medications right. We are physicians, pharmacists, nurses, patients, health IT innovators, drug and diagnostics companies, consumer groups, employers, payers—all agreed to save lives and save money through comprehensive medication management. Our goal is to ensure appropriate and personalized use of medication and gain the most by advancing a scientific, evidence-based and cost-effective decision-making process and a team-based, systematic approach to medication use. We believe this will offer consumers a personalized approach to medication use. For those who pay for care, it will create a reduction in total costs of care—saving lives and saving money.

Questions? See our [GTMRx Quick Start](#).

An Employer Toolkit, created by employers for employers

This toolkit, developed by the [GTMRx Employer Toolkit Taskforce](#), explores the benefits of CMM for individuals and for the employers who pay for benefits.

Covers topics, such as:

- What is CMM
- How CMM differs from traditional MTM
- The ROI of CMM in practice
- Patients that benefit the most from CMM services
- CMM & value-based strategies (return-on-investment)
- CMM & pharmacogenomics testing
- Employer call to action.

See what others are saying about the Employer Toolkit:

“The value of widespread adoption of comprehensive medication management cannot be overstated, and we’ve seen studies that show it results in decreased employee absenteeism, reduced hospitalizations and an overall savings of \$1,000 per employee per year. The GTMRx Toolkit puts employers on the path toward creating health plan designs that put comprehensive medication management front and center in an easy-to-understand way.”

Chris Syverson, CEO, Nevada Business Group on Health/ Nevada Health Partners

“The new Employer Toolkit is an important resource for employers who are concerned with wasteful spending on pharmaceuticals, which has been estimated as \$528 billion annually across the nation. The Toolkit should help employers assess their current situation and support them as they develop an effective comprehensive medication management strategy in partnership with health plans, benefits consultants and service vendors, in order to improve medication management and workforce health and lower costs of care.”

Neil Goldfarb, President & CEO, Greater Philadelphia Business Coalition on Health

“Employers often don’t know the power they wield with contract authority in shaping health plans and PBM product design—they truly act as architects for the quality and effectiveness of medication management programs their employees are receiving, and it’s in their best interest to be sure their agents are doing all they can to create programs and services that will optimize medication use through contracting for comprehensive medication management services.”

Marianne Fazen, Ph.D., President & CEO, Dallas-Fort Worth Business Group on Health

“Studies have shown that employers who engage CMM benefits not only decrease employee absenteeism but also reduce emergency room visits and improve employee health; this is especially important for those with chronic conditions such as diabetes and cardiovascular disease. CMM makes sense when so much we are doing today is not working. The evidence shows that this is a vital pathway forward.”

Cheryl Larson, President & CEO, Midwest Business Group on Health

Different models using CMM

Hirsch identified three example approaches to CMM that have been reported by employers and shared some of the outcomes. Although each employer looked at patients with diabetes, they varied their approach in engaging with a clinical pharmacist and the metrics they used.

■ Employers & health system pharmacy

Contract with a hospital pharmacy for their clinical pharmacists to provide CMM to patients at hospital or at employer site

In year one

- The percentage of patients that were at their diabetes goal increased from 66% to 75%, and cholesterol numbers improved.
- Employer savings per patient: about \$253 for medications and about \$1,000 total cost on average.
- Patient satisfaction was very high: 4.8 out of 5.

■ Employer & onsite pharmacist

PBM engaged clinical pharmacist to provide CMM at employer's Occupational Health clinic

In year one:

- The percentage of patients that were at their diabetes goal rose from 55% to 72%. There was also improvement in blood pressure.
- Resource utilization dropped: they saw 30% fewer hospitalizations, and 24% fewer emergency department visits.

■ Employers & community pharmacies

Employees referred to CMM services provided by local community pharmacists

In year one:

- The percentage of patients that were at their diabetes goal rose from 38% to 62%, and cholesterol numbers improved.
- Total medical costs decreased. Physician, hospital, emergency department visits all decreased. Labs decreased, but prescription drug costs increased, which is to be expected.
- Sick days dropped from a mean 12 per year down to six per year; the employer estimated that was worth about \$18,000 per year.
- Patients also increased participation in recommended self-care activities.

(Source: Johannigman MJ, Leifheit M, Bellman N, et al. Medication therapy management and condition care services in a community-based employer setting. Am J Health Syst Pharm. 2010 Aug;67(16):1362-7)

“Even if you don't have a school of pharmacy, there are local pharmacy associations everywhere, and they can help you identify pharmacists who will provide CMM services to your employees.”

*Jan D. Hirsch, BS Pharm, PhD,
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Clinical Pharmacy, School of Pharmacy
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optimize medicine, and then state what you expect. Ask how they will work with you to develop a CMM program solution.

Make it clear that the program will be evaluated on an ongoing basis to make sure that it is achieving the goals that we need it to achieve and supports the CMM patient [care process](#). To do that, you will need to know how to build in metrics to assess success. It's important to consider decreases to the *total* cost of care. It's tempting to look at pharmacy-related drug costs in isolation, but that defeats the purpose. Did we improve patient health outcomes? Did we lower the *total* cost of care?

Hirsch provides a few examples of process and outcome measures employers could consider:

- Patients with more than one chronic condition receive CMM services at least twice a year and at each care transition.
- Patients and medical providers grant EHR access to the entire CMM team (to include the clinical pharmacist).
- Outcomes of CMM patients vs. prior year or a concurrent comparator group not receiving CMM; relevant to the defined CMM intervention

- Tracking and measurement of reduced utilization of health care services including ED visits, hospital admissions and readmissions with resulting cost avoidance
- Reduction in annual total health care costs per participant
- Decreased absenteeism
- Patient and health team satisfaction with CMM services

It's time for employers to demand change, Hirsch and Morris say.

"As an employer, *you* have the call to action because you are best positioned to lead optimized medication use through CMM in practice as a standard of care for our future," says Morris. "You are the one paying the bill. You are the one everyone will listen to." [GTMR](#)

About the Experts



Sandra G. Morris, RN, MSN, CHC
*Senior Advisor, GTMRx Institute;
 President, About Quality Benefits Design;
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Sandra is a senior advisor for the Get the Medications Right Institute (GTMRx). Sandra joined GTMRx in March 2019 to support the Institute's vision of enhancing life by ensuring appropriate and personalized use of medications and gene therapies, as well as its mission of bringing critical stakeholders together, bound by the urgent need to optimize outcomes and reduce costs by getting the medications right. Sandra's role in the Institute is to bring members together to advance the Institute's key initiatives of practice transformation, evidence and innovation and policy solutions.

Sandra is the president/owner of About Quality Benefits Design, LLC.

She is a former senior manager of U.S. benefits design for the Procter & Gamble Company. Her responsibilities included the strategic development, deployment and administration of benefits for P&G's US employees and retirees. After 13 years as a critical care nurse, nursing supervisor and nursing professor, Sandra joined Procter & Gamble in 1990, served in several benefit management and human resources roles during her 25-year tenure and was awarded the William Procter Award of Excellence for her skills in designing and managing innovative and leading-edge employee benefits.

Sandra is a member and former executive board member and secretary of the Midwest Business Group on Health, a member of the DFW Business Group on Health and Southwest Business Group on Health, as well as a registered nurse, certified professional manager and certified health coach.

continued

About the Experts

Her passions include educating stakeholders on skin cancer prevention; promotion of appropriate and cost-efficient use of over-the-counter and prescription drugs; and motivational speaking on a variety of self-help topics.



Jan D. Hirsch, BS Pharm, PhD
*Founding Dean and Professor of Clinical Pharmacy
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Jan D. Hirsch, BS Pharm, PhD, is the founding dean of the University of California Irvine School of Pharmacy and Pharmaceutical Sciences and professor of clinical pharmacy. She is a distinguished scholar and

fellow of the National Academies of Practice (NAP) in pharmacy and distinguished fellow of the Get the Medications Right (GTMRx) Institute. She joined UC Irvine in January of 2019. Previously, she was professor of clinical pharmacy and chair of the division of clinical pharmacy at the Skaggs School of Pharmacy and Pharmaceutical Sciences at the University of California, San Diego. Dr. Hirsch was also executive director of an outreach program of the school, providing medication therapy management services in the community.

She received her B.S. in pharmacy and M.S. and Ph.D. degrees in pharmacy administration from the University of South Carolina, College of Pharmacy. Prior to returning to academia, she spent 14 years in the pharmaceutical and managed care industries where she was responsible for establishing and managing the outcomes research departments for two pharmaceutical companies, Glaxo Group Research in Greenford (UK) and Allergan (US), and a pharmacy benefit management company, Prescription Solutions (US).

Our **VISION** is to enhance life by ensuring appropriate and personalized use of medication and gene therapies.

Our **MISSION** is to bring critical stakeholders together, bound by the urgent need to optimize outcomes and reduce costs by *getting the medications right*.



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About the GTMRx Institute

The GTMRx Institute is a catalyst for change that brings critical stakeholders together, bound by the urgent need to get the medications right. We are physicians, pharmacists, caregivers, health IT innovators, drug and diagnostics companies, consumer groups, employers, payers and health systems—aligned to save lives and save money through comprehensive medication management, or CMM. By showcasing evidence and innovation, we motivate practice transformation and push payment and policy reform. Together, we ACT to champion appropriate, effective, safe and precise use of medication and gene therapies. Learn more at gtmr.org.

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