

## More than a theory: Putting CMM in practice

**W**e need a better way to manage medications. Medicine is the main way we treat illness, but it's also the source of avoidable misery.

Roughly 80% of patients leave their primary care provider's office with a prescription.<sup>1</sup> Nearly 30% of adults take five or more medications.<sup>2</sup> Yet, often we're getting it wrong. Reframe it, and ask one simple question: "Are patients receiving the right medications (or combination of medications) at the right time in the right dose to meet patient and clinical goals of therapy?" The answer is "not often enough."

The human and financial toll associated with poorly optimized

medications—medications that are wrong, skipped or not used as intended—is tremendous. More than 275,000 people die, and \$528 billion is wasted every year due to our trial-and-error approach to medication use.<sup>3</sup> (See Figure 1 on page 2.)

Why are we in this predicament? Mary McClurg, PharmD, MHS, professor and executive vice dean-chief academic officer, UNC Eshelman School of Pharmacy, points to a few of the many reasons.

First, health care delivery has long been fragmented, and the growing shortage of primary care clinicians is compounding the problem.

Second is a lack of communication. "We have not closed the feedback

loop between specialists, primary care providers and pharmacists relating to medication use." It is known that Medicare Part D beneficiaries have an average of three to

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*Mary Roth McClurg, Pharm.D., MHS  
Professor and Executive Vice Dean-  
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UNC Eshelman School of Pharmacy*

1 Watanabe JH, McInnis T, Hirsch JD. *Ann Pharmacother.* 2018 Sep;52(9):829-837

2 Medication Errors. June 2017, <http://psnet.ahrq.gov/primers/primer/23/medication-errors>

3 Watanabe JH, McInnis T, Hirsch JD. *Op cit*

four prescribing providers.<sup>4</sup> In fact, as illustrated in Figure 2 on page 3, employers identified lack of communication between prescribers and pharmacists as the most pressing issue in medication management.

Third, the population is aging. More people are living longer. They have chronic diseases, and they're taking more medications. This alone adds so much complexity to one's ability to manage medications.

Fourth, more medicines are available to take, including specialty medications and gene therapies.

Finally, prescription drug costs are rising. "This sets us up for a lot of medication problems and misadventures," she warns.

4 CMS Chronic Condition Data Warehouse Medicare Part D Prescription Drug Utilization 2008-2017.

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### Medication isn't optimized. What does that mean?

"Medication optimization is a patient-centered, collaborative approach to managing medication therapy that is applied consistently and holistically across care settings to improve patient care and reduce overall health care costs," McClurg explains.

In other words, medications must be taken *and* taken correctly—the right dose of the right medicine at the right time.

One proven approach to optimizing medication is comprehensive medication management (CMM).<sup>5</sup>

So what is CMM?

*Comprehensive medication management (CMM) is a patient centered approach to optimizing medication use and improving patient health outcomes that is delivered by a clinical pharmacist working in collaboration with the patient and other health care providers. This care process ensures each patient's medications (whether prescription, non-prescription, alternative, traditional, vitamins or nutritional supplements) are individually assessed to determine that each medication has an appropriate indication, is effective for the medical condition and achieving defined patient and/or clinical goals, is safe given the comorbidities and other medications being taken and that the patient is able to take the medication as intended and adhere to the prescribed regimen.*<sup>6</sup>

5 McInnis, T. Capps, K. Get the medications right: a nationwide snapshot of expert practices—Comprehensive medication management in ambulatory/community pharmacy. Health2 Resources, May 2016

6 Patient-Centered Primary Care Collaborative (PCPCC). The patient-centered medical home: integrating comprehensive medication management to optimize patient outcomes resource guide, 2nd Ed. Washington, DC: PCPCC, 2012. <https://www.pcpcc.org/sites/default/files/media/medmanagement.pdf>

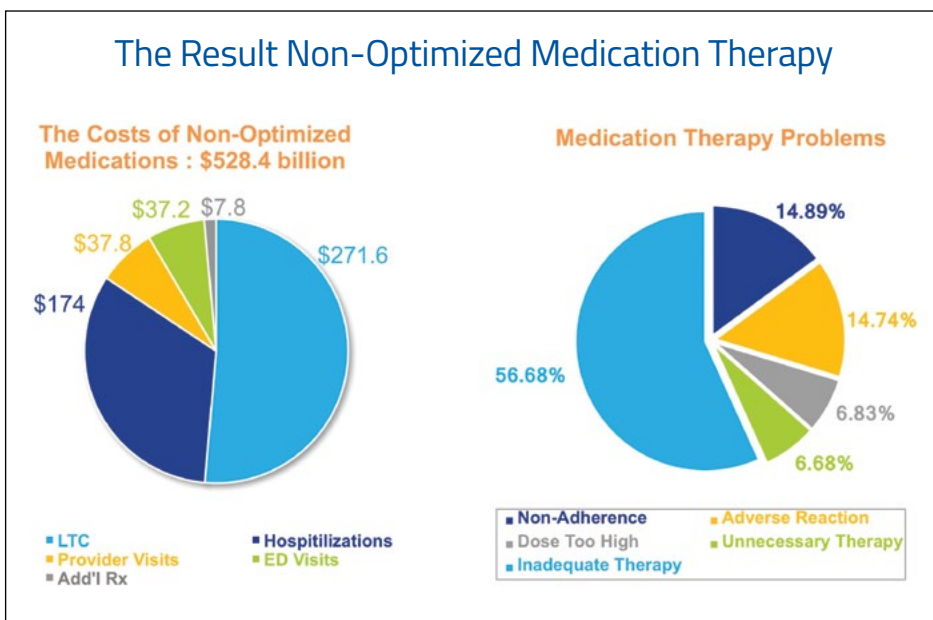
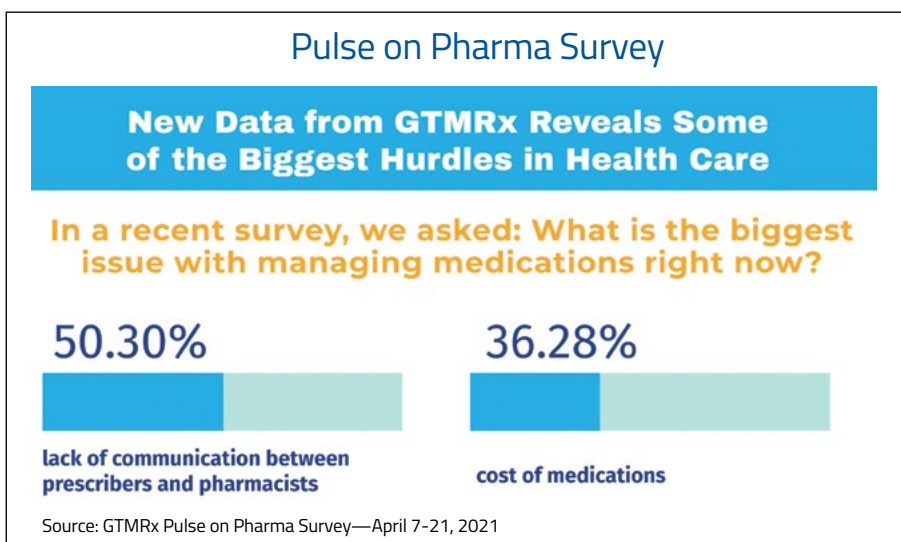


Figure 1

“That really means that you’re providing whole-person care around all of the medications the patient may be taking, not just the acute issues of the day or select medications,” McClurg says.

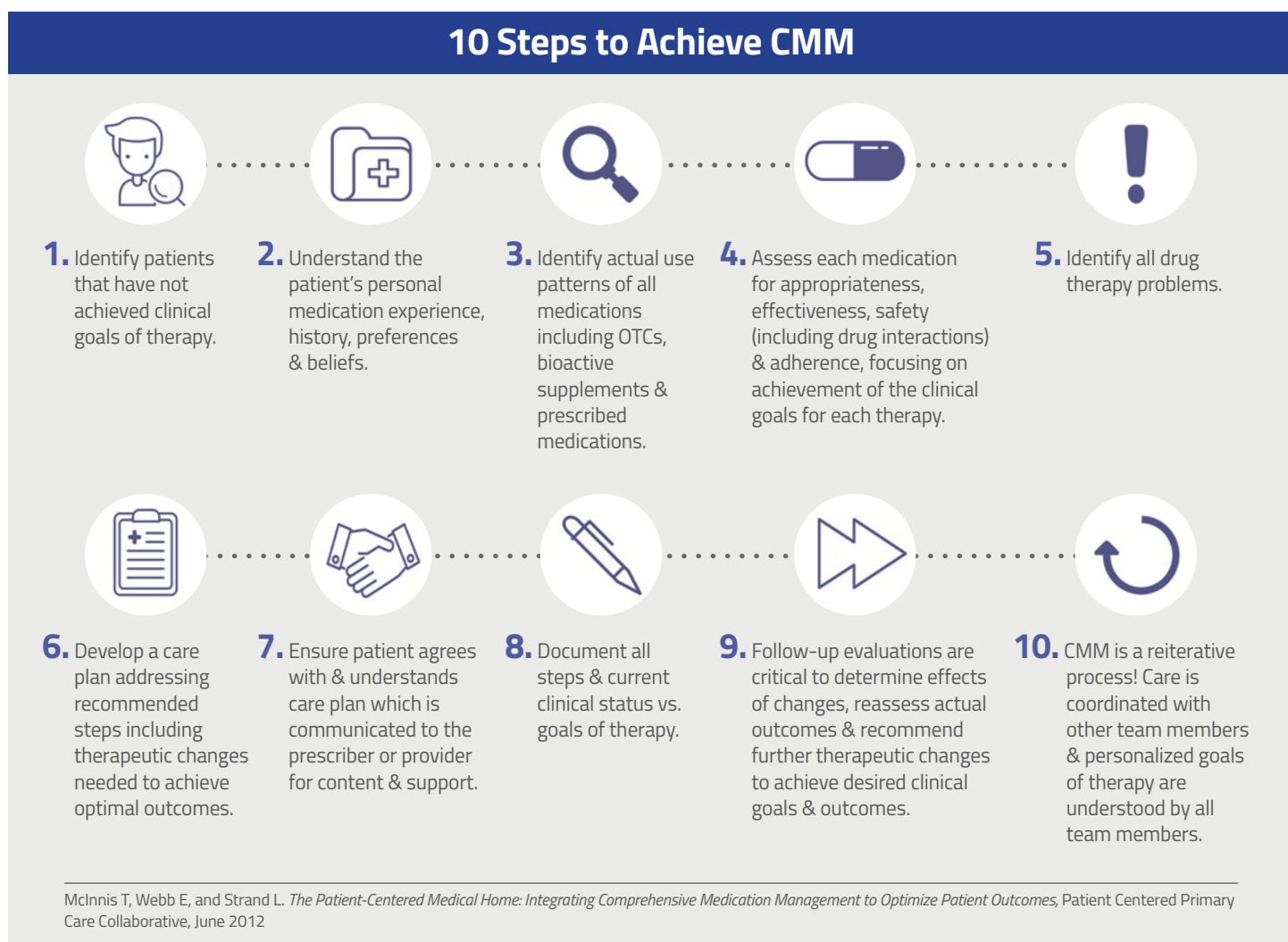
CMM is a 10-step process, as illustrated in Figure 3. It’s more than a good concept: It works.<sup>7</sup>

Research shows it helps to achieve the Quadruple Aim of better care, reduced health care costs, improved



7 McInnis, T. Capps, K. May 2016 op cit.

**Figure 2**



**Figure 3**

patient experience and improved provider well-being.<sup>8</sup> (See figure 4 on page 6.)

It also aligns with efforts to ensure high-quality primary care. A recent report from the [National Academies of Sciences, Engineering and Medicine](#) makes the case that ensuring

access to high-quality primary care for everyone in the US will require reforming payment models and supporting integrated, team-based care.<sup>9</sup> (McClurg was a member of the National Academies Committee on Implementing High-Quality Primary Care, which created the report.)

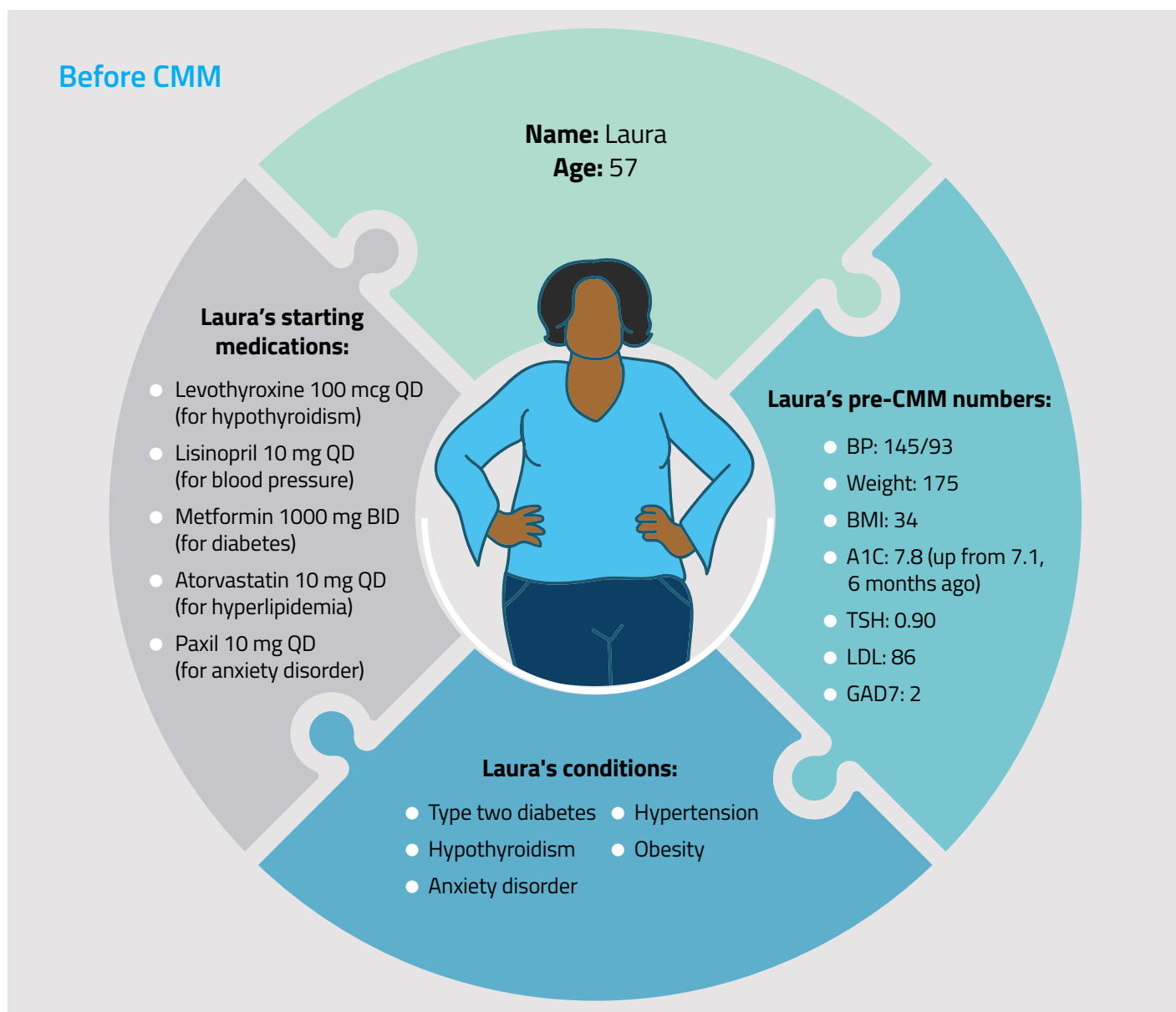
Looking at the example of a typical patient experience at the primary care level drives this home.

## Putting it in practice

Annie Ideker, MD, senior medical advisor for clinician experience and for clinician/patient relationships (ambulatory), HealthPartners, describes a typical patient in her practice below.

8 Assessing the Impact of Comprehensive Medication Management on Achievement of the Quadruple Aim. *Am J Med* 2021;134:456-461

9 National Academies of Sciences, Engineering, and Medicine. 2021. Implementing High-Quality Primary Care: Rebuilding the Foundation of Health Care. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25983>.



## After CMM

Laura is engaged and follows her care plan. She's taking her medications as prescribed, checking her blood pressure and doing her own research. During a visit with Dr. Ideker, Laura raises several concerns:

- She is worried about diarrhea and weight gain.
- She is concerned that Paxil may be contributing to the weight gain.
- She expresses concern about her thyroid.
- She is aware her blood pressure, diabetes and high cholesterol are not under control which is confirmed by her blood work and by Dr. Ideker.

Clearly, Laura would benefit from CMM.

Ideker increases both lisinopril and atorvastatin to 20 mg daily, counsels Laura on stepwise augmentation of therapy and the importance of getting to goal. She also confirms that Laura is using an appropriate blood pressure monitoring technique. Then, she schedules an appointment with the pharmacist. "We set the expectation with her that she's going to be seeing an expert member of my team to talk about next steps in terms of her diabetes management and overall management of her medications."

During the CMM visit two weeks later, the pharmacist assesses the potential side effects of the medication changes and determines that Laura is tolerating the changes without any difficulty. The pharmacist reminds her to get an updated lipid profile in four to six weeks so they can monitor effectiveness of the treatment.

But her blood pressure is still not at goal. So, the pharmacist—who asked Laura to bring in her blood pressure cuff—takes the additional step to again confirm that Laura is using it correctly and that the readings are accurate. She is, and they are.

Then, after a process of shared decision making and education, the pharmacist says, "You know what, let's go ahead and bump that lisinopril dose up to 40, and we'll see if that higher dose of blood pressure medication can help get you to the goal." Laura is comfortable with that, and they agree on that plan.

And then the pharmacist talks with Laura about the diarrhea—something Dr. Ideker didn't have much time to do during her visit. "But the pharmacist really hones in on the diarrhea, gets a little bit more information and determines that maybe this is a side effect of the short-acting formulation of Metformin. So, she very appropriately suggests to this patient that maybe we should try the XR formulation of Metformin instead." They agree to make that change.

Then, they have a detailed conversation about possibly adding a GLP-1 agonist, including a discussion of whether it's covered and/or affordable. The pharmacist and Laura ultimately agree to add Trulicity, and the pharmacist teaches her how to administer it.

### PCP visit – 6 weeks later:

- **BP:** at goal (126/72). Creatinine 0.9, potassium 3.9.
- **Lipids:** at goal. (LDL 64)
- **Diarrhea:** has resolved with switch to XR formulation of metformin
- **Diabetes:** improving (A1C 7.2)
- **GAD7:** 2
- **Weight:** down 5 lbs.

Six weeks later, she has another visit with Dr. Ideker. Laura's blood pressure and lipids are at goal, and the A1C is improving. Because the pharmacist changed the formulation of Metformin, the diarrhea has stopped. And she's lost five pounds.

"So she's happy; I'm happy. The pharmacist is happy because we've really met this patient where she's at," Ideker says. "And she now has another trusted member of her team that she can look to for guidance and support in place of/or in partnership with me to better support her care."

Laura's story illustrates one of the most important aspects of CMM—one that sets it apart from other approaches: **Follow up matters.**

It also illustrates the power of collaboration—a team-based, patient-centered care that integrates CMM into the care delivery. The result—for Laura and, as the evidence shows, for others is better outcomes, lower cost, improved patient engagement and fewer side effects.

## Defining the pharmacist role

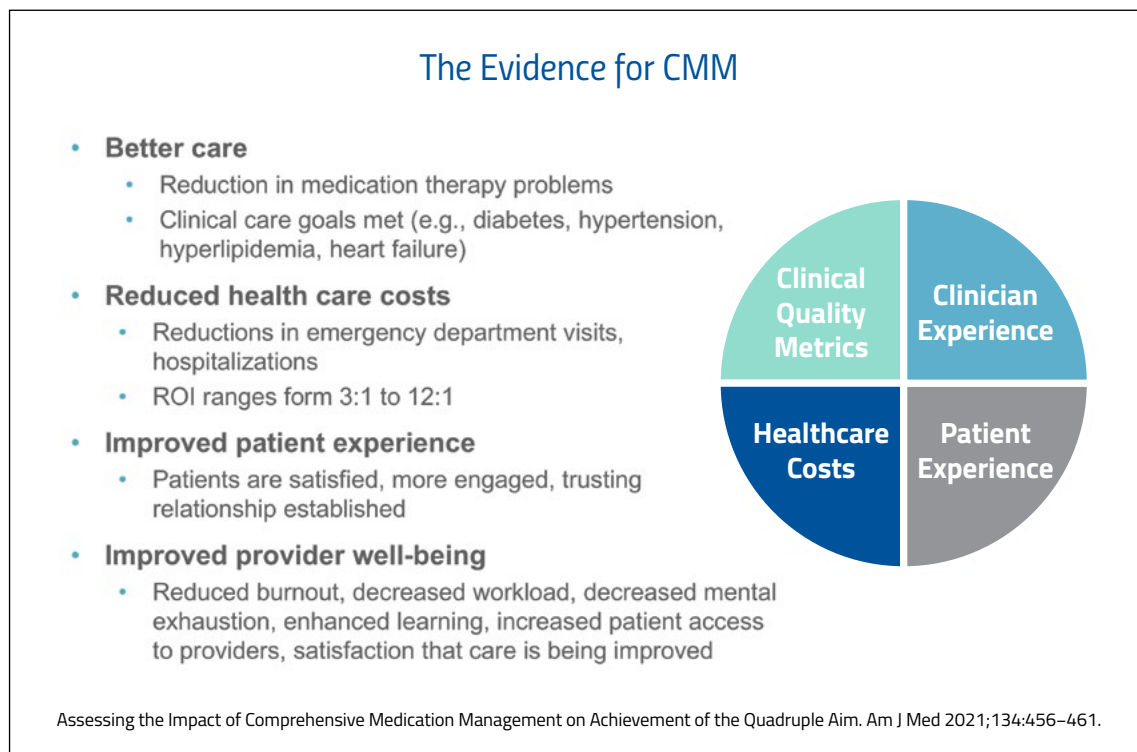
In the CMM process, a clinical pharmacist works in collaborative practice with the patient’s physician and collaboratively with other care team members to develop an individualized medication plan that achieves the intended goals of therapy. On that team, the clinical pharmacist has the expertise around medications and medication

management. “Pharmacists have unique expertise in optimizing medication use for patients and are key members of the health care team,” says McClurg.

If your primary care physician suspects cancer or some other condition, she’ll refer you to an oncologist or another specialist. Similarly, some patients need the specialized services of a clinical pharmacist. Through collaborative practice agreements with the physician, the clinical pharmacist—who has the most current knowledge and experience in understanding medications—works with the patient and the rest of the care team to address medication issues and manage medication complexities.

Pharmacists typically work under what’s called a “collaborative practice agreement.” Updated regularly, it creates a formal practice relationship between a pharmacist and a prescriber, outlining the scope of practice for the clinical pharmacist.

It’s a way to standardize the care that’s being delivered by the pharmacist, Ideker says. “This has been a huge part of getting buy-in and acceptance from our clinicians,” she says. “They can feel confident that we don’t have a pharmacist who’s just going to go rogue and do whatever they feel like, but that they’re actually going to be practicing within the guidelines we as a care group have established.” She’s also found that by educating



**Figure 4**

clinicians on what that scope of practice looks like, it helps them better understand which of their patients need CMM services.

Precisely how the arrangement works varies by practice and by the needs of the patient population you are serving, McClurg says.

“The physician-pharmacist relationships are critical to how you operationalize any of this. And I think it has to be tailored to those you’re working with.”

### Broad access to CMM services: What do we do now?

Unfortunately, we have a long way to go before CMM becomes a standard of care. But that doesn’t mean individual practices cannot move forward.

It starts with making sure clinicians and care teams are aware of CMM as a process of care with its own philosophy of practice.<sup>10</sup> It is also important to understand its value to their patients and their practice. “There may be primary care clinicians, case managers and others who don’t even know that this exists or what it could look like in their practice,” says Ideker. “So I think we start from a place of let’s get us all on board in terms of understanding what this is. Because honestly, once you understand what it is, the service really sells itself for most primary care clinicians.”

<sup>10</sup> The Patient Care Process for Delivering Comprehensive Medication Management (CMM): Optimizing Medication Use in Patient-Centered, Team-Based Care Settings. CMM in Primary Care Research Team. July 2018. [www.accp.com/cmm\\_care\\_process](http://www.accp.com/cmm_care_process)

Making CMM broadly available will require a sustainable business model. There is real evidence that supports the value of CMM and payment models from public and private payors that pay for these services.<sup>11</sup> That means payment reform, namely a move to value-based models.<sup>12</sup> However, in the interim, a committed practice can make CMM work operationally and financially in today’s hybrid fee-for-service/value-based world. It’s been done.<sup>13,14</sup>

### Payment models, new modalities and advocates

McClurg described a unique study ongoing around telehealth/telepharmacy and the use of chronic care management fee-for-service codes as part of the collaborative practice model. The providers are able to access a pharmacist to work with their highest risk patients via telehealth.

Often, it starts with making the case to the organization’s leaders, says Ideker. “I think there are different levers you can pull to justify the use case for why you’d want this in your practice.” The compelling evidence for higher quality and lower cost of care is important. But so is the evidence that CMM reduces

<sup>11</sup> McFarland MS, Buck M, et al. The Outcomes of Implementing and Integrating Comprehensive Medication Management in Team-Based Care: [A Review of the Evidence on Quality, Access and Costs](#), Oct. 2020.

<sup>12</sup> McFarland, et. al. for the Get the Medications Right Institute “Medication Optimization: Integration of Comprehensive Medication Management into Practice” American Health & Drug Benefits September 2021 Vol 14, No 3

<sup>13</sup> Op cit.

<sup>14</sup> <https://gtmr.org/use-cases/>

burnout and increases provider satisfaction.<sup>15,16</sup> “A big part of the work I do is around clinician experience where that really is this notion of clinician burnout and how do we create joyful, sustainable practices. That has become part of the conversation in a way it never was before.”

Physicians can be the best advocates for CMM. How do we do this? Clinicians need to be advocates within their own care systems and tell leaders this is a service we want for ourselves, our patients and the services we can provide, she says.

In fact, she says, it’s become easier for them to make it happen. Like McClurg, she points to telehealth. “This whole explosion of telemedicine has been huge for us in terms of being able to bring this service to more patients that had transportation barriers, time off work barriers, etc.,” she says. “I think the time is really ripe to expand the reach and breadth of what we can do with comprehensive medication management—and to use the expansion of telemedicine as an opportunity to accomplish that.” **GTMR**

<sup>15</sup> McFarland, MS., Lamb, K., et al. J. Perceptions of Integration of the Clinical Pharmacist into the PCMH Model by the PCMH Team. *Journal for Healthcare Quality*. 2017. doi:10.1097/JHQ.000000000000114.

<sup>16</sup> Funk KA, Pestka DL, Roth McClurg MT, Carroll JK, Sorensen TD. Primary Care Providers Believe That Comprehensive Medication Management Improves Their Work-Life. *J Am Board Fam Med*. 2019 Jul-Aug;32(4):462-473

## About the Experts



**Annie Ideker, MD**

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ANNIE IDEKER, MD, is a graduate of the University of South Dakota School of Medicine and completed her residency in family medicine at Bayfront Medical Center in St. Petersburg, FL. She served as a medical officer in the United States Navy at Marine Corps Base Camp Lejeune in North Carolina for 4 years prior to joining HealthPartners in 2006. She practices at the HealthPartners Arden Hills clinic where she also served as the clinic medical director for several years before stepping down to take her current leadership role. She is currently the Senior Medical Advisor for Clinician/Patient relationships and Senior Medical Advisor for Clinician Experience.



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MARY ROTH MCCLURG, PHARM.D., MHS, is professor and executive vice dean-chief academic officer at the UNC Eshelman School of Pharmacy. Roth McClurg practiced for 12 years as a clinical pharmacist in primary care practice within the VA Health System and in the interdisciplinary geriatric clinic within the Department of Geriatrics at UNC Health-care, providing direct patient care as part of an inter-professional care team. Roth McClurg has focused her research efforts on advancing comprehensive medication management and the role of the clinical pharmacist as an integral member of the primary care team, with the goal of optimizing medication use and improving care in patients with multiple chronic diseases. Roth McClurg is a fellow of the American College of Clinical Pharmacy and a distinguished fellow of the GTMRx Institute.

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](http://gtmr.org).*