The Medication Optimization Value Proposition: Aligning Teams and Education to Improve Care

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United States health care lags behind other countries in quality and cost. The present health care system is unsustainable, and there is now a quick movement toward value-based care. This article lays out essential care delivery elements, and makes the case for medication optimization to enable new value-based models. Success factors include enhancing team-based care and interdisciplinary education to achieve patient-centered care.

A Checkup on the United States Health Care System

For years, there has been an incredible amount of dialogue about value within the context of health care, but until recently, payments for health care products and services haven't been linked to value. This is changing, and changing rapidly, for one critical reason: our current level of spending and spending increases are unsustainable, and are related to overuse of low-value services. The United States (US) consumed 16% of our gross domestic product (GDP) on health care in 2015—nearly twice the average of other industrialized countries [1]—and the percentage is rising. The most recent projections put health care spending at 20% by 2025 [2]. That means $1 out of every $5 that the US economy produces will be spent on health care.

We know that increased health care spending puts financial pressure on businesses, comprises larger shares of state and federal budgets, and consumes more of family budgets. Though we spend more, the US lags behind other industrialized countries in care quality and health outcomes [3]. In fact, the US ranked 11th out of 11 countries in a recent report, when compared to other industrialized countries on factors of health care quality, efficiency, and equity [4]. In addition to the desire to manage spending increases, these data provide proof of the need to evolve the system to focus on both cost and quality. Aligning payments to value-based outcomes is one key strategy to get there.

We do not believe that underperformance in our health care system is an indictment of the quality of service of health care providers, but is instead a result of a dysfunctional system. The US has well-trained, brilliant providers of care who happen to work in a fragmented and uncoordinated health care ecosystem that reimburses for services delivered, not problems avoided.

To succeed in delivering both cost efficiency and health benefits, the value-based payment movement must learn from past mistakes. In the 1990s, the dominant focus of health care payment reform was on cost avoidance, restricted access to providers through gatekeeping, and reduction of the unit price of health care services. Stories of arbitrary denials of coverage and compromised health outcomes led patients, providers, and policy makers to revolt. To succeed, value-driven payment models must reward more than cost containment, and balance quality and cost from a patient-centric perspective with an emphasis on health-related outcomes.

Supporting a conceptual definition of value and implementing it are two different things. With all the consternation about the US health care system moving to a value-based system, making value-based care feasible depends on a successful confluence of the following foundational elements: outcomes-based payment models; optimal use of health care information (including health information technology); population health management; care coordination; clinical integration across care settings; and team-based care. Adequate operationalization of these foundational elements requires leadership that brings patients, providers, pharmacists, and payers together with a shared vision. This article will focus on the importance of team-based care, particularly in the area of medication optimization, which provides an example and path to success for all of these foundational elements.

Current State of Health Care Reform

The Affordable Care Act (ACA), enacted in March 2010, accelerated the pay-for-value movement in a large scale, systematic way by setting up the Center for Medicare

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and Medicaid Services (CMS) to lead the charge. New payment models, such as the Medicare Shared Savings Program, which drove the development of Accountable Care Organizations (ACOs), came out of the ACA. The ACA also created the Center for Medicare and Medicaid Innovation (CMMI); much of the experimentation and testing of new care delivery and payment models are CMMI-funded projects. To signal the importance of rapid payment reform, in 2015 then US Department of Health and Human Services Secretary Sylvia Burwell announced that CMS would begin quickly shifting Medicare payments to 90% value-based, including 50% alternative payment models by 2018 [5] (see Figure 1). In addition, independent of the ACA, the Medicare Access and CHIP Reauthorization Act of 2015 replaced Medicare’s existing provider volume-based Sustainable Growth Rate reimbursement with a value-based payment model called the Quality Payment Program [6]. Beginning in 2017, Medicare providers choose between Advanced Alternate payment models (APMs) or the Merit-based Incentive Payment System (MIPS). Providers that select APMs with both upside and downside risk arrangements will be given a yearly 5% bonus in addition to the built-in shared savings incentive of the APM. Providers that choose MIPS will have their fee-for-service payments vary up to 9% higher or lower based on performance across 4 domains: clinical quality, cost of care, advancing care information, and quality improvement activities. The Quality Payment Program, which Congress passed with extensive bipartisan support, sets a clear path toward APMs over the next 5 years. Medicare is not the only payer moving aggressively toward value-based payment models. Most major insurance companies and numerous states have committed to the same goals as Medicare for APMs through the Health Care Payment Learning and Action Network [7].

Regardless of the future of the ACA, value-based payment models are here to stay, making coordination, collaboration, and team-based care a must-have in clinical practice. Value-based payment models create incentives to manage population health within a clinical practice, with a goal of identifying and proactively managing complex patients across all settings of care in order to lower overall health care costs while meeting clinical quality measures. As health care providers look for ways to demonstrate value and improve the health of their patients, particularly those with complex health needs, incorporating team-based medication optimization should be at the top of the list.

Making the Case for Medication Optimization

In 2015, the United States spent $3.2 billion on medications, which is 10% of the total cost of care; annually, we spend almost $290 billion each year fixing medication problems [8, 9]. We can do better at getting medications right—right patient, right dose, and right support to achieve the right outcome. The root cause of medication mismanagement is not a skill problem; it is a problem of poor communication and coordination that results in missed opportunities, needless hospitalizations, and billions of dollars of avoidable costs. Given the value-based incentives to improve patient outcomes and to lower costs, medication optimization provides physicians, nurses, and pharmacists with an impetus to build out communication protocols, workflows, handoffs, and role definitions.

To achieve consistent and reliable medication optimization, a common definition of what is meant by “medication optimization” is needed. To fill that need, the Center for Medication Optimization through Practice and Policy (CMOPP) at the UNC Eshelman School of Pharmacy at The University of North Carolina at Chapel Hill defines medication optimization as a patient-centered, collaborative approach to managing medication therapy that is applied co-
sistently and holistically across care settings to improve patient care and reduce overall health care costs. CMOPP goals are to engage in medication optimization research across all settings of care to produce evidence that quantifies the impact on patient outcomes and cost reductions, thus leading to medication optimization integration into value-based payment models (see Figure 2).

Community Care of North Carolina (CCNC) is working with CMOPP to develop enhanced medication optimization services in the community pharmacy setting that are designed to support local primary care providers in their care of complex patients. This Community Pharmacy Enhanced Services Network (CPESN) [10] includes over 250 pharmacies across North Carolina. The CPESN is actively engaged with a variety of providers and care settings, including primary care, specialists, home health care, behavioral health, and hospital systems. Through a federal grant, these pharmacies are providing ongoing patient-centered care management services to support local physicians. The grant also enables pharmacies to receive value-based payments determined by patient complexity and how well the pharmacist reduces total health care costs for that population. The hypothesis is that value-based payments for pharmacists will produce benefits for patients, local providers, and payers. A formal evaluation is underway with results projected later this year.

CMOPP is also working with a practice-based research network of primary care clinics across the United States that have embedded pharmacists in clinics to perform medication optimization clinical services [11]. Together, these practices determine how to best implement medication optimization clinical services within the health care team, and how to identify best practices that enable others to replicate models that work. Medication optimization within primary care clinics, called Comprehensive Medication Management [12], has been shown to improve clinical outcomes in patients with chronic diseases such as diabetes [13]. This project takes another step by developing flexible Return on Investment (ROI) models so that health systems and provider organizations can make informed decisions on how, when, and where to implement medication optimization solutions to achieve profitability within their value-based payment contracts. In other words, we want to develop a medication optimization business case to help provider organizations know when to embed a pharmacist in a primary care clinic, partner with a local community pharmacy, and/or set up a telehealth or telephonic service with a virtual pharmacist. This research agenda charts a path to integrated, team-based care across settings that will be needed for success in value-based care.

**Challenges for Implementation and Sustainment**

As is often the case in complex health care environments, implementing and sustaining medication optimization through team-based care has challenges to overcome. Similar challenges will exist for other team-based care strategies. The first challenge is that pharmacy and medical costs are viewed separately. Currently, most health plans and health systems set goals for pharmacy and medical utilization independently, which creates disincentives to coordination and management of the whole patient and total cost of care. The objective is to control costs within a silo, not invest in one silo to bring down the costs in the other. Better medication adherence by people with chronic conditions, for example, is shown to reduce hospital admissions, reduce emergency department visits, and lower the total cost of care. Pharmacy spending, however, often increases as patients actually take their medicines as prescribed. Investing in medication optimization services will likely increase costs on the pharmacy side, but it has the potential to bring down medical costs, significantly lowering the total cost of care [14]. ACOs that are executing commercial payer contracts are beginning to go at risk for pharmacy and medical costs [15], but more health systems need to move in this direction. This is where flexible, real world ROI models can help drive decision-making.

The second challenge is inertia. There is a limited amount of capacity for change. With everything going on in health care transformation, whether it is integrating technology, reporting quality, or managing costs, it is very tough to focus on other process improvements and new ways of working. Medication optimization is often felt to be part of the individual provider’s responsibility and is not addressed in sys-

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**FIGURE 2.**

Center for Medication Optimization through Practice and Policy (CMOPP): Four Critical Areas/Priorities

1. **Advancing practice research**
   - Evidence creation to transform care delivery

2. **Creating strategic collaborations**
   - Community Care of North Carolina Payer & Policy Advisory Board

3. **Enhancing education**
   - Curricular
   - Experiential
   - Research (RASP)

4. **Shaping health policy**
   - Independence
   - Thought leadership
   - Evidence dissemination

Source. Data on file at Center for Medication Optimization through Practice and Policy (CMOPP), UNC Eshelman School of Pharmacy, University of North Carolina at Chapel Hill.
tem changes. In the UNC system, we have actively invested in medication optimization as we hone our team-based care strategies, because optimization leads to higher performance and can reduce complications. For example, one of the most vulnerable times for the patient is discharge from the hospital and follow-up care. We frequently identify important medication errors in follow-up after discharge that would not have been identified if we did not have specific medication optimization protocols in place. Remembering important care delivery elements requires strong health care leaders to provide the vision and resources across all settings of care.

The third challenge is a lack of education on team-based care. Despite the need for team-based care, we do not do a good job with interdisciplinary training because current ways of providing services derive from training in silos and working in silos with no incentives to do otherwise. Given the move to value, we have an opportunity to break down those educational silos by integrating experiential training of our medical, pharmacy, social work, and nursing students. At UNC, we are actively engaging teams of interdisciplinary students to work together in the care of patients within our system. We have found that socialization of team-based care leads to greater understanding of the contributions of each discipline; working together also creates synergies that don’t exist when we stay in silos. This approach will not only prepare future practitioners for value-based care coordination, but it will also establish the next generation of team-based leaders.

Conclusion

Health outcomes have always depended on the actions and inputs of multiple players—physicians, nurses, pharmacists, social workers, patients, caregivers—but seldom have we actually worked as a cohesive team with common patient-centered goals. During a health care crisis, an all hands approach to care can save countless lives. During the day-to-day management needed to avoid those crises, however, we tend to go back to practicing independently and miss opportunities to help patients. Team-based care is a prerequisite to success in the new value-driven paradigm. Many teams have been loaded with talent, but have fallen short of winning championships because they failed to learn how to work together as a team. Through intentional leadership at the state and national level, through focused clinician experiential education, as well as through grass roots innovation within clinics at the local level, we can advance team-based care to improve outcomes and lower health care costs. Our patients are waiting. NCJM

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