Adherence: An Important Metric to Assess Pharmacist Value in Quality Care

Patrick J. Campbell, PhD, PharmD, RPh

Campbell's Viewpoint

Medication nonadherence negatively affects health outcomes, quality and length of life, and contributes to substantial, avoidable health care expenditures in the United States. It has been estimated that nonadherence represents a \$100-\$300 billion burden annually,¹ and nonoptimized medication therapy, inclusive of the effects of nonadherence, contributes \$500 billion annually.² These staggering figures have catalyzed a myriad of initiatives to measure and improve adherence rates, which is reflected in the inclusion of 3 adherence measures in the Centers for Medicare & Medicaid Services (CMS) Star Ratings Program.³ As one of the most accessible health care providers in the United States, pharmacists have a unique opportunity to address this important and complex issue.

Albeit simple, nonadherence profoundly compromises the effectiveness of therapies—medications do not work if they are not taken. However, nonadherence is a modifiable behavior, not a fixed patient attribute. As experts in optimizing medication therapy outcomes, pharmacists can work with patients to ascertain the root causes of nonadherence and provide services to support their needs. The assumption that adherence is solely due to an individual's decision to take medications as prescribed is a gross generalization and an oversimplification of a complex behavioral phenomenon that abdicates responsibility of the health care system to support patient needs.

Medication adherence is characterized by the confluence of multiple factors, including those that are patient-, provider-, condition-, therapy-, and health system-related.⁴ Despite the complexity of medication adherence, pharmacists are highly effective at improving adherence rates. The effect of pharmacists on adherence is well documented, with decades of research articulating the value of pharmacists to the health care system with improvements in adherence rates and other health outcomes.^{5,6} Pharmacists who are diligent to include patients as partners in their own care and engage in effective counseling can contribute to improved outcomes. Developing trusting relationships with patients, where barriers can be ascertained

and addressed, is a pivotal mechanism for pharmacists to affect care and advocate for patients.

Pharmacists can leverage dispensing data to gauge levels of adherence and identify patient engagement opportunities. A common way to characterize medication adherence is to calculate the proportion of days covered (PDC) for medications. PDC, and other claims-based adherence measures, may not perfectly represent actual medication consumption, but patients cannot be adherent to their medication regimens if they have not picked up their prescriptions. Nevertheless, claims-based adherence measures such as PDC are feasible, use data that are widely available, and are the dominant mechanism to characterize medication-taking behavior.^{7,8} The limitation that PDC does not fully reflect an individual's consumption of medication is known; however, PDC as a measure of adherence has been consistently associated with beneficial health and economic outcomes.⁹⁻¹¹

Most commonly, a threshold of 80% is used to classify individuals as adherent or nonadherent. The use of this threshold to categorize adherence dates back to the 1970s and dominates adherence literature by its use in more than 90% of published studies.^{12,13} Notwithstanding differences in disease, drug, and patient characteristics, the 80% threshold has consistently been used and has been deemed suitable for population-level assessments.¹⁴ Akin to clinical guideline recommendations, based off evidence and used at the population level, the 80% threshold used to classify adherence may not be suitable for each individual, but the threshold is useful to measure adherence at the population level.

Adherence is a readily available metric that pharmacists can leverage to affect the trajectory of disease and optimize outcomes. An advantage of adherence in a quality metric context is the ability to standardize measurement and reporting. Some have noted and criticized the opaque and varied operational definitions used to calculate adherence in the literature^{14,15}; however, quality measure specifications are standardized, explicit, and evaluated to ensure that inferences are appropriate and meaningful. For example, the Pharmacy Quality Alliance adherence measure specifications, used in the CMS Star Ratings Program as intermediate outcome measures, are transparent and allow for consistent reporting of adherence quality assessments for health plans.³

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Given this information, should medication adherence be used to assess the quality of a community pharmacy or pharmacist care? In short, yes—but it should not be the only indicator of quality. When assessing vehicle safety, would a single metric on how well the brakes work be sufficient to describe a vehicle's safety? Obviously not. Similarly, pharmacist quality should be assessed in a multifaceted, cross-cutting way that recognizes the many critical roles pharmacists play in patient care.

The National Quality Forum uses 5 criteria to evaluate the appropriateness of a measure to assess quality. These criteria ensure that the measure is important, meaningful, feasible, useful, and has appropriate scientific acceptability.¹⁶ Adherence, through a standardized calculation such as PDC, would satisfy these criteria and be suitable for assessing pharmacist/pharmacy quality. We know adherence is important. Current adherence rates are less than optimal and contribute to excessive costs and poor outcomes. We know the PDC methodology is feasible and has adequate scientific acceptability. We know adherence quality measures are routinely used as intermediate outcome measures. But most importantly, we know pharmacists can influence adherence rates. Pharmacists can move the needle on adherence to improve the quality of care. So, the question is why shouldn't adherence be used to evaluate pharmacist/pharmacy quality?

We know that, when pharmacists are engaged in services outside of dispensing, outcomes improve and costs can be contained. Through counseling, medication therapy management, point-of-care testing, disease-state management, and other innovative pharmacy services, pharmacists can play a pivotal role in patient care. The changing landscape of pharmacy requires careful consideration in the selection, development, and testing of pharmacy-level quality measures. A multistakeholder, consensus-based, transparent approach should be used to develop pharmacist/pharmacy quality measures. Adherence is one outcome that demonstrates the effect of pharmacist services and should be adapted for pharmacy-level quality measurement.

Authors

PATRICK J. CAMPBELL, PhD, PharmD, RPh, Pharmacy Quality Alliance, Alexandria, Virginia.

AUTHOR CORRESPONDENCE: Patrick J. Campbell, PhD, PharmD, RPh, Pharmacy Quality Alliance, 5911 Kingstowne Village Pkwy., Ste. 130, Alexandria, VA 22315. Tel.: 703.347.7963; E-mail: pcampbell@pqaalliance.org

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