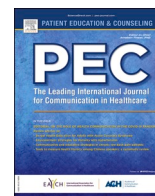




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Editorial

The role of accountability in adherence programs



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Adherence to medications for chronic conditions is suboptimal. Across numerous therapeutics and clinical conditions estimates of adherence hover at approximately 50% [1]. In this issue of Patient Education and Counseling, two articles address a novel factor associated with adherence – accountability [2,3]. In their respective articles, Christensen and Salisbury conducted well-constructed systematic literature reviews investigating the impact of accountability interventions on prescription medication adherence. Salisbury and colleagues defined accountability as “the expectation to later account for one’s own actions [3].” Christensen et. al further delineate accountability into two distinct types: *direct accountability* which results from an anticipated live social interaction with a provider versus *indirect accountability* that does not require an anticipated live interaction [2]. Interestingly, both articles highlight the importance of the role of the prescribing provider and their interaction with the patient in providing accountability as a factor impacting a patient’s medication-taking behaviors. Both reviews have the potential to create an impactful turning point in the adherence literature because little is known about the relationship between accountability and adherence. We comment on these reviews from the lens of three future implementation considerations for adherence interventions considering accountability.

Consideration 1: Accountability has logical validity but is not commonly used in adherence literature.

Over the past four decades, literature investigating medication adherence has grown resulting in variability in how adherence is defined and measured. The ABC Taxonomy was created to harmonize the multitude of different words and phrases for adherence [4]. Similarly, the EMERGE guidelines were created to enhance the quality of medication adherence research reporting [5]. The two reviews could have considered the taxonomy or guidelines to give context to the included adherence studies.

Additionally, there are several conceptual frameworks that can be used to explore factors related to medication adherence. Many of these frameworks identify social support as an important influence on adherence. Social support could be related to accountability, however,

there are no frameworks that explicitly include accountability as a construct. As Christensen, Salisbury, and their colleagues suggested, accountability could be an important consideration for medication adherence, however, further work is needed to ensure that another vaguely understood, provider-centered construct does not add confusion to the field. Furthermore, beyond clear understanding of operationalizing accountability, it will be essential to determine how to implement this construct into the clinical field if found to be predictive and useful.

Consideration 2: Long-term medication adherence is a patient-centered issue.

Taking a long-term medication for the management of a chronic condition is a three-phase process [4]. Phase 1 starts with the *initiation* of the treatment, when the patient takes the first dose of a prescribed medication. Phase 2 consists of the *implementation* of a dosing regimen and is defined as the extent to which a patient’s actual dosing corresponds to the prescribed regimen. Phase 3 is *discontinuation* which marks the end of medication therapy, either consistent with a provider’s recommendations or when a patient discontinues taking a medication independently [4]. To ensure optimal adherence, a patient must engage in different behaviors at each phase.

In addition to individual behaviors during the three phases of medication adherence, there are other influences that determine how a patient adheres to a medication regimen including social determinants of health considerations like the ability to take time off work and transportation to medical appointments and pharmacy visits [6,7]. Further, social support and cultural influences can impact a person’s likelihood of adherence.

Most of the “action” in adherence happens in between office visits with a provider. This is when a patient must take the medication as prescribed. There is some evidence for interventions like shared decision making to support medication adherence [8,9]. It is possible that accountability may be a component of shared decision making and is necessary to ensure full potential of the process of initiating, implementing, or persisting with medication adherence.

Additionally, while patient-generated data is increasingly common,

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it is generally not integrated into electronic health record (EHR) packages. Most providers do not have data about how a patient is taking their medication (including any symptoms, side effects, prescriptions from other providers) in between what may be infrequently scheduled office visits. In addition to considering these patient-centered factors that are essential to understanding adherence, accountability may stand alone or be a component of shared decision making that should be considered.

Consideration 3: Important predictors of medication adherence are not easily identified via electronic healthcare records.

As the authors define, accountability is based on the anticipated social interaction between a patient and their provider. An important underlying assumption of this definition is that the patient and their provider have established rapport or trust. Therefore, a significant portion of accountability is related to therapeutic alliance. There are some patients that have reduced trust in the health care system and those same groups (e.g., minority populations) may be less likely to feel strong rapport with their providers and more likely to have poor adherence [10,11]. However, therapeutic alliance is difficult to capture from EHR data. If we are to buy-in to the importance of a provider driven construct like accountability, then we need other ways to capture therapeutic alliance to identify patients who are at high risk of not taking their medications.

Potential ways to operationalize these concepts could be to identify provider continuity, care fragmentation, or multiple medication sources/pharmacies to capture high-risk patients. Predictive analytics could be used with EHR or claims data to identify patients who are most at risk for non-adherence [12,13]. These data could then be used to intervene with patients who may need more frequent office visits to help with rapport building and provide supportive accountability.

Conclusion: The authors conclude that using an accountability component is a promising approach for improving medication adherence. These reviews were comprehensive in their search strategy, spanned multiple conditions and medications, and investigated a novel construct. Future investigations should use existing frameworks or guidelines to report on adherence to further elucidate complex, multi-level interactions of influence so that we can better understand how to support patients.

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