In Brief

Although medication costs pose a very real barrier to diabetic patients’ adherence, decisions to forgo treatment due to cost pressures often reflect other issues, including patients’ suspicions about medication safety and efficacy. Clinicians should inquire about cost pressures for each treatment in their patients’ regimens and open a discussion about potential medication-related concerns that may be driving patients’ adherence behavior.

Cost-Related Medication Underuse: A Window Into Patients’ Medication-Related Concerns

Cost-related medication adherence problems are common and affect not only patients without insurance, but also low-income patients regardless of their insurance coverage, as well as those with high out-of-pocket costs for multiple treatments. In a nationally representative study of diabetic patients >50 years of age, 19% reported cost-related underuse of some medication. Of those reporting medication underuse, 11% reported underusing their diabetes medications, and 7% reported cutting back on their diabetes medications at least once per month. Multiple other studies have confirmed the important role that medication costs play as a barrier to adherence. Low-income patients are especially sensitive to even small increases in cost-sharing, and these financial barriers may well contribute to disparities in health across socioeconomic groups.

This article synthesizes information from some key studies of medication-related adherence problems to identify points that may help providers in understanding this problem and counseling their patients. To illustrate the potentially important role of medication-related beliefs in patients’ response to cost pressures, data are presented from a recently completed survey of African-American and white diabetic patients recruited from safety-net health care systems in Flint, Mich., an economically distressed urban area (the “Flint Study,” described below).

Key studies published in peer-reviewed journals focusing on cost-related adherence problems were reviewed. The review emphasized studies published since 2000, those focusing on diabetes or related cardiovascular risk factors, and studies focused on noncost factors that may exacerbate the impact of costs on adherence (e.g., depression) or that may serve as a buffer to promote adherence, even when costs are a concern (e.g., clinician-patient communication).

Also, analyses are presented from the recently completed Flint Study, in which >800 low- and middle-income diabetic patients were surveyed about their medication cost problems. Details about the larger study are published elsewhere. In brief, patients were identified from medical records and surveyed in person about their cost-related underuse of medications for diabetes and 13 potentially comorbid chronic conditions. Patients also were surveyed about their medication-related beliefs and communication with clinicians about medication cost pressures.

Points for Health Professionals to Keep In Mind

1. Patients often make tough choices among their medications when costs become a concern.

Most clinicians think of adherence as a patient-level characteristic, with “adherent patients” and “nonadherent patients” in their practice. However, data from the Flint Study and others suggest that patients are selective in the treatments they forgo. In the Flint Study, roughly 17% of respondents...
reported one or more episodes of cost-related medication underuse in the prior year. However, in the subset of Flint Study participants taking medication for both diabetes and depression, 27% reported cost-related underuse of at least one of these two treatment types, including 20% who reported cost-related underuse of their diabetes treatments and 14% who reported cost-related underuse of their antidepressants. Of the patients with comorbid depression (less than one-third of those reporting cost-related adherence problems) said they had cut back on both medication types (Figure 1), with the remaining patients selectively forgoing either their diabetes medication or their antidepressants. Similarly, we observed a diverse array of adherence responses to cost pressures among patients taking medication for both diabetes and hypertension (Figure 1). Although more information is needed about how patients make these decisions, preliminary analyses from the Flint Study suggest that those who cut back selectively may be the ones who are the most likely to take into account non-cost factors, such as whether they trust their prescriber or are satisfied with the information they have received about their pharmacotherapy.

2. Patients who forgo medication due to a cost problem often do not tell their clinician.

A nationwide study of older adults found that two-thirds of patients did not tell a clinician in advance that they planned to underuse their medication due to cost, and 35% never discussed medication costs with their clinicians at all. Among the subset of patients with diabetes, 37% reported that they never discussed medication cost problems with their doctors. Among those who did not have such discussions, 70% reported that one of the main reasons was that clinicians never asked them, and half stated that they did not think clinicians could help. Among the patients who reported cutting back on their diabetes medication in the Flint Study, 65% said that they never told a doctor or nurse in advance that they were going to have to take less medication or not fill a prescription because of the cost. Nearly half of Flint Study patients who cut back on their diabetes treatment said that they never asked a doctor or nurse for help in reducing their medication costs.

3. It is seldom just about the cost; patients’ decisions to forgo treatment are often influenced by other factors. Even when diabetic patients have fewer financial resources or higher out-of-pocket costs, studies consistently indicate that the majority will not forego treatment due to cost concerns. So why do some financially stressed patients cut back due to cost, whereas others with similar means do not? Studies suggest that patient characteristics such as race, age, and depressive symptoms may influence patients’ behavioral responses to cost pressures.

Some of the factors influencing patients’ adherence when faced with medication cost pressures may be amenable to influence by clinicians. In a recent report from the Flint Study, we found that patients’ concerns about the potential harmfulness of their diabetes medications were significantly associated with their risk of foregoing treatment due to cost and that negative medication-related beliefs were also associated with higher blood pressures. An earlier study found that when diabetic patients trust their clinicians, they are more willing to persevere with their adherence despite cost barriers.

More generally, patterns of patient-clinician communication have been shown to be a significant predictor of cost-related underuse, even when controlling for patients’ ability to pay.

Although diabetic patients can have multiple concerns about the safety and efficacy of their treatment, one unrecognized area of concern relates to patients’ suspicions about generic substitutes. Generic medications are one of the cornerstones of efforts to save money on prescription drugs, both for patients and third-party payers. However, in the Flint Study, 31% of patients agreed with the statement that generics are “not as good as brand-named drugs,” 29% agreed that “brand-name medications are safer,” and 15% agreed that “generics contain dangerous additives.” Perhaps most worrisome, the majority of respondents—65%—agreed that “insurance companies push generics to save money at the expense of my health.”

Concerns about generic medications were even higher among patients with low functional-health literacy (FHL) (Table 1). In that subgroup, roughly half agreed that generics are “not the real thing,” and 38% agreed that brand-name medications are safer. Concerns about generics were even more prevalent than suggested by the table because many patients who did not endorse a given statement reported that they were “unsure.” For example, nearly half of patients with limited health literacy (48%) either
ask about potential cost concerns
forego, providers should periodically
treatments they have other concerns about the
cut back selectively on their treatments
of the implications for their health in
choices represent a clear understanding
be part of patients’ decision-

Table 1. Negative Beliefs About Generic Medications Among Diabetic Patients with Low and Adequate FHL Levels in the Flint Study

<table>
<thead>
<tr>
<th></th>
<th>Low FHL (%)</th>
<th>Adequate FHL (%)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generics are not as good as the original, brand-name medicines.</td>
<td>40.0</td>
<td>25.6</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>Generics are OK for some people, but they’re not the real thing.</td>
<td>49.7</td>
<td>37.8</td>
<td>0.0004</td>
</tr>
<tr>
<td>Most generic medicines are less effective than the brand-name originals.</td>
<td>39.3</td>
<td>27.4</td>
<td>0.0006</td>
</tr>
<tr>
<td>Brand-name medicines are safer than generic medicines.</td>
<td>38.4</td>
<td>22.7</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>Generic medicines contain dangerous additives.</td>
<td>21.6</td>
<td>11.5</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>Insurance plans push generics to save themselves money at the expense of my health.</td>
<td>70.8</td>
<td>61.4</td>
<td>&lt; 0.0001</td>
</tr>
</tbody>
</table>

Notes: Patients who reported “difficulty reading and filling out forms” when they go for medical care were considered to have FHL deficits. Cell entries are the percentage of patients in each group who agreed with the statement, when given the choices of “agree,” “uncertain,” and “disagree.”

agreed that or were uncertain about whether generic drugs contained dangerous additives, and 84% of low FHL patients were at least unsure whether insurance plans were pushing generics to save money at the expense of patients’ health.

Discussion
Although the rates of cost-related medication underuse among diabetic patients in the Flint Study are unsettling (especially in subgroups such as those with comorbid depression), that study and earlier efforts suggest that providers may be able to intervene to assist patients in taking their treatments as prescribed despite cost concerns. As shown in Figure 1, diabetic patients often make tough choices among their treatments in response to cost pressures. When patients have very limited ability to pay, it may be difficult for them to justify filling all prescriptions at the expense of a mortgage payment or home-heating payment.

Prescribers and diabetes educators should be part of patients’ decision-making process, ensuring that patients’ choices represent a clear understanding of the implications for their health in the short and long term. Patients who cut back selectively on their treatments because of cost concerns may place a low value on certain treatments, either because they attribute a symptom they experience to side effects or because they have other concerns about the treatments’ efficacy and safety. Given that patients are heterogeneous in whether and which treatments they forego, providers should periodically ask about potential cost concerns specifically about each drug in the regimen rather than estimating patients’ overall adherence based only on their use of one drug or (worse) on their sociodemographic characteristics.

Concerns about generic medications were particularly common among patients in the Flint Study, especially among those with limited FHL. The pharmacological equivalence and obvious financial benefits of generic substitutions are so well understood by clinicians that it may be easy to overlook these potential concerns when prescribing a generic alternative. Outside of the world of pharmacotherapy, however, lower-cost or generic products often mean lower quality and sometimes lower safety as well. One only has to compare the quality of many generic items to brand name alternatives in a supermarket or to compare a Yugo to a Lexus to know how true that is. Some patients may not be persuaded by reassurances that generics are “just as good as the real thing.” But acknowledging these potential concerns and opening up the dialogue may engender greater trust in providers, decreasing the large number of patients who believe that generics are “just as good as the real thing.”

Conclusion
Out-of-pocket medication costs will continue to pose a barrier to diabetic patients’ adherence for the foreseeable future. Given the growing strain on third-party payers and the large number of patients receiving pharmacotherapy for comorbid illnesses, these cost pressures will likely increase. Finding the most cost-effective treatments should be a priority, and asking patients about cost problems can help to identify when a regimen change could improve adherence and outcomes.

However, although money does matter, increasing evidence suggests that patients value their treatments differently, and effective dialogue with clinicians could address concerns and misunderstandings that lead some to decide that a given medication is not worth the price. Longstanding goals of the clinician-patient relationship, including honesty, trust, and information sharing, may help patients to continue to use their treatments effectively despite the cost, improving adherence in ways that drug payment reforms cannot.

Acknowledgment
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