The H-E-B Value-Based Health Management Program: Impact on Asthma Medication Adherence and Healthcare Cost

Anna O. D’Souza, PhD; Roshan Rahnama, MPH; Timothy S. Regan, BPharm, RPh; Beth Common, MBA; Steven Burch, PhD

Background: Recent publications have shown that copayment reductions increase medication adherence above the effects of existing disease management programs, demonstrating an additive effect of combining a value-based insurance design with a disease management program. This effect, however, has yet to be demonstrated for medications used for the treatment of asthma.

Objective: To evaluate the impact of a value-based health management asthma program—which included providing patient education and lowering copayments for select asthma controller medications—on medication adherence and healthcare utilization and costs.

Study Design: The study involved a quasi-experimental intervention versus control group design of insured patients diagnosed with asthma.

Method: After applying the inclusion/exclusion criteria for study participation, we obtained informed consent from the intervention group; those eligible to participate who did not return the forms served as the control group. The final sample size included 764 patients with asthma—298 in the intervention group and 466 in the control group. The intervention consisted of a reduction in copayment for select asthma controller medications from an average of $20 to $30 down to $5, as well as 3 mailings of educational materials for asthma management. Medical and pharmacy claims data for the study population were used to evaluate all study parameters and outcomes. Medication possession ratio was used to measure adherence to asthma controller medications. Statistical models were used to study differences in the 2 study groups during the 12-month follow-up period for adherence and cost outcomes.

Results: Participation in the value-based health management asthma program increased patients’ 12-month medication adherence by 10 absolute percentage points in the intervention group (53.9% for intervention vs 43.9% for control group, \(P < .001\)) and significantly decreased average monthly medical costs ($170 intervention vs $229 control, \(P = .004\)). This increase in adherence resulted in greater monthly pharmacy costs ($181 intervention vs $124 control, \(P < .001\)). However, the increase in pharmacy costs was offset by lower medical costs, leading to a nonsignificant increase in average monthly total healthcare costs ($362 intervention vs $337 control, \(P = .276\)).

Conclusion: Adoption of a value-based health management program that combines patient education with lowered copayments has a positive impact on medication adherence, resulting in a reduction in associated medical costs and no significant increase in total costs.

Disclosures are at end of text

Stakeholder Perspective, page 402

Asthma is one of the nation’s most common, costly, and increasingly prevalent diseases. In 2008, approximately 23.3 million people had asthma in the United States, of whom 12.7 million had experienced asthma attacks. The economic cost of asthma for 2010 is projected at $20.7 billion, of which $15.6 billion is expected to reflect direct costs of healthcare-related expenditures (ie, hospital care, physician services, and prescription drugs).

Asthma medications, combined with patient education, are the cornerstones of asthma management.
addition, the clinical effectiveness of asthma treatment depends on patient adherence to prescribed medications. However, only 37% of patients adhere to prescribed inhaled corticosteroids and adequately control their asthma. The consequences of nonadherence may include poor symptom control, excessive use of beta-agonist agents, increased emergency department use, hospitalization, and death. Recent drug benefit design trends, including increasing patient copayments, may also contribute to medication nonadherence. In the case of patients with asthma, high copayments have been associated with significant reductions in the use of necessary asthma medications as well as increases in emergency department visits and hospitalization days.

The adoption of a value-based health management (VBHM) approach that recognizes the role of preventive public health and patient education may help to reduce advanced health complications and control rising healthcare costs. VBHM includes disease state management (DM) and value-based insurance design (VBID). DM involves a system of coordinated interventions and communications, usually for patients with chronic conditions, with the ultimate goal of reducing avoidable complications, such as hospitalizations and emergency department visits.

The focus of VBID programs is to decrease patient cost-sharing for high-value services and increase cost-sharing for low-value services, thereby avoiding the demand-dampening advantages and lessening the adverse health consequences of increased cost-sharing. With 83% of health plans utilizing asthma DM programs, VBID programs are becoming a common means of augmenting provider-oriented strategies, aligning patient and provider incentives.

H-E-B—a large retail/grocery store chain in Texas and Mexico, with approximately 300 stores and 65,000 employees—has implemented aspects of a VBHM program, specifically the DM components, for their employees and employees’ dependents diagnosed with asthma. H-E-B subsequently partnered with GlaxoSmithKline to implement a VBID program, with the goal of improving medication adherence and healthcare utilization and reducing costs (asthma-related and overall). This present study assesses the impact of VBHM interventions within the H-E-B population, offering a real-world case study evaluation of a comprehensive VBHM program.

Study objectives were to compare the participants in the intervention group and the control group in terms of their adherence to select asthma controller medications, asthma-related healthcare costs and resource utilization, and overall (ie, any medical or pharmacy) healthcare costs.

**KEY POINTS**

- Adherence to asthma medication is key to patient outcomes but is often subpar.
- This study evaluated the effect of a value-based health management program on medication adherence and overall costs in patients with asthma who were employed at H-E-B.
- The program consisted of 2 main components—disease management and value-based insurance design. The latter reduced the cost of copayment for select asthma medications from an average of $20 to $5 for patients in the intervention group but not in the control group.
- During the 12-month follow-up period, medication adherence increased by 10 absolute percentage points in the intervention group (53.9% for intervention vs 43.9% for control group, P <.001).
- In addition, a significant reduction was found in overall medical cost, which offset the increase in pharmacy costs.
- This analysis contributes to the growing body of evidence demonstrating that decreases in copayment amounts may increase asthma medication adherence and reduce associated medical costs.

**Methodology**

**Study Design**

We used a quasi-experimental, intervention group versus control group design. The study period was 24 months, with the start of the intervention being the index date (June 1, 2006), the 12-month period before the index date being the preindex period (June 1, 2005-May 31, 2006), and the 12-month period after the index date (June 1, 2006-May 31, 2007) used as the follow-up period. Patients’ baseline characteristics were measured during the preindex period. Medication adherence and asthma-related resource utilization, costs, and overall healthcare costs were measured during the preindex and follow-up periods.

**Data Source**

Medical and pharmacy claims data of H-E-B employees and their dependents were used for this analysis. All patients were enrolled in a preferred provider organization plan. Claims data included inpatient and outpatient diagnoses, as well as prescription records classified by the National Drug Code. Paid and charged amounts, as well as dates of service, were available for all claims.
Study Inclusion and Exclusion Criteria

Insured H-E-B employees with asthma and their dependents with asthma who provided informed consent were eligible for inclusion in the intervention group; those who met the inclusion criteria but did not provide informed consent comprised the control group. Additional inclusion and exclusion criteria were applied to enhance the study’s validity. To be included, employees had to (1) have at least 1 pharmacy claim for the selected asthma controller medications in the preindex period, (2) have a diagnosis of asthma at baseline, (3) be between age 4 and 64 years at baseline, and (4) be continuously eligible during the preindex and follow-up periods.

Asthma diagnosis was defined as (1) a hospital or emergency department visit with a primary diagnosis of asthma (International Classification of Diseases, Ninth Revision, Clinical Modification [ICD-9-CM] code 493.xx), (2) at least 2 physician visits with asthma listed in any diagnostic field, or (3) at least 2 pharmacy claims for asthma-related medications, except oral corticosteroids and decongestants.

Exclusion criteria included (1) diagnosis of cystic fibrosis (ICD-9-CM code 277.0x) in the preindex period, (2) diagnosis of chronic obstructive pulmonary disease (ICD-9-CM codes 491.xx, 492.xx, 493.2x, 496) in the preindex period, or (3) age ≥45 years at baseline and having ≥2 pharmacy claims for ipratropium bromide or combination albuterol plus ipratropium in the preindex period.

Table 1

<table>
<thead>
<tr>
<th>Selected Asthma Controller Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advair Diskus (fluticasone propionate and salmeterol)</td>
</tr>
<tr>
<td>Flovent (fluticasone)</td>
</tr>
<tr>
<td>Flovent HFA (fluticasone)</td>
</tr>
<tr>
<td>Flovent Rotadisk (fluticasone)</td>
</tr>
<tr>
<td>Foradil (formoterol fumarate)</td>
</tr>
<tr>
<td>Gastrocrom (cromolyn)</td>
</tr>
<tr>
<td>Intal (cromolyn sodium)</td>
</tr>
<tr>
<td>Pulmicort (budesonide)</td>
</tr>
<tr>
<td>Qvar (beclomethasone dipropionate)</td>
</tr>
<tr>
<td>Serevent (salmeterol xinafoate)</td>
</tr>
<tr>
<td>Serevent Diskus (salmeterol xinafoate)</td>
</tr>
<tr>
<td>Singulair (montelukast sodium)</td>
</tr>
<tr>
<td>Slo-Bid 50 (theophylline)</td>
</tr>
<tr>
<td>Slo-Bid 75 (theophylline)</td>
</tr>
<tr>
<td>Theochron (theophylline)</td>
</tr>
<tr>
<td>Tilade (nedocromil sodium)</td>
</tr>
<tr>
<td>Uniphyl (theophylline)</td>
</tr>
</tbody>
</table>

Study Intervention

H-E-B employees and dependents with at least 1 medical claim for asthma during the preindex period were the target population. Participation was voluntary and was requested by an invitation letter that described the intervention and included consent and enrollment forms. The intervention consisted of 2 components:

1. An average reduction in the copayment from between $20 and $30 to $5 for selected (Table 1) asthma controller medications

2. Three mailings of educational materials for asthma management.

All asthma controller medications in the preferred formulary list were eligible for copayment reduction (Table 1). Educational topics included medication guides, asthma myths, patient–doctor action plan, asthma triggers, acute asthma management strategies, and the Asthma Control Test. Sources referenced in developing the patient communication materials included the Staywell Company, Asthma Action America, the Respiratory Institute, and QualityMetric Incorporated. English was the primary language, at an eighth-grade reading level, for all the educational materials.

Before the start of the study intervention in 2006, study participants were already enrolled in the Blue Care Connection (BCC) program, which provides patient-focused services to help H-E-B employees improve their health outcomes and manage their healthcare costs. The BCC program began in 2004 and was in effect until the end of the current study. Participation in the BCC program was voluntary. Among the final patient sample included in the current study, 99% of patients in the intervention group and 25% of those in the control group were enrolled in the BCC program.

The BCC program services included 24/7 access to health information for patients provided by licensed nurses for managing their disease, periodic calls from licensed nurses to monitor patients’ health, access to an online resource and information tool to manage their health, and discounts on health-related products and services that help to support healthy lifestyles (eg, gym membership).

Outcome Definitions

Adherence

Medication possession ratio (MPR) was used to measure adherence to asthma controller medications. MPR represents the proportion of time that an asthma controller medication was available to a patient during the duration of therapy, and was calculated as the sum of the total days’ supply of medication for all prescriptions, except the last prescription, divided by the duration of therapy (ie, total number of days from the first fill date to...
the last fill date). MPR usually ranges from 0%, indicating no adherence, to 100%, indicating perfect adherence. Therefore, a patient with a 50% MPR during a 90-day therapy duration had 45 days of treatment (90 days / 50% = 45 days).

All prescriptions had a start date (ie, fill date) and an end date (ie, fill date plus days' supply). When prescriptions overlapped (ie, a patient refilled an additional prescription before the end date of the preceding prescription), residual days were added to the end date of the next prescription. Therefore, patients were assumed to have consumed all medications acquired during the study period. With the addition of overlapped prescription claims, it was possible for adherence to be > 100%, particularly for patients who consistently received early refills; in these instances, adherence was truncated to 100%. For patients having only 1 prescription claim, MPR was assumed to be 0%. For patients who used >1 of the selected asthma controller drugs (Table 1) concomitantly, MPR was computed as the sum of total days' supply of each of the medications, divided by the sum of the total duration of therapy for each medication.

Some researchers have questioned the use of MPR as a measure of adherence for inhaled medications, particularly short-acting medications, because these are often used on an as-needed basis, which renders the days' supply variable inaccurate for MPR calculations. However, we do not believe this applies to the asthma controller medications, because they are not indicated to be used on an as-needed basis and have specific dosage instructions.

### Healthcare Resource Utilization and Costs

Resource utilization in this study refers to the number of different types of healthcare visits and/or prescription units. These include the number of physician visits, hospitalizations, emergency department visits, short-acting beta-agonist (SABA) canisters, and oral corticosteroid prescriptions. An asthma controller ratio was calculated as the ratio of the number of controller medications (ie,
inhaled corticosteroid, cromolyn, nedocromil canisters, and oral leukotriene) dispensed, divided by the sum of the number of controller medications and canisters of inhaled SABAs dispensed during the study period.6

Costs were defined as the total amount paid for physician visits, hospitalizations, emergency department visits, and prescription drugs. Asthma-specific and overall healthcare costs were obtained for each patient during the 12-month follow-up period.

Asthma-specific medical resource utilization and costs were identified by the presence of a primary diagnosis code for asthma (ICD-9-CM 493.xx) on a claim. Asthma-related prescription drugs included reliever and controller medications (SABAs, oral corticosteroids, xanthines, long-acting beta-agonists, leukotriene antagonists, cromolyn/nedocromil, and inhaled corticosteroids). Monthly cost, rather than total costs incurred during the study period, was used as the target outcome to permit comparison of baseline and follow-up periods.

Covariate and Statistical Analyses

Covariates included in multivariate analyses were age, sex, comorbidity, preindex healthcare costs, and asthma severity. For overall comorbidity, a Dartmouth-Manitoba model adaptation of the Charlson Comorbidity Index score was calculated for each patient, based on the presence of ICD-9-CM codes during the 12-month preindex period,10 with greater scores representing a greater burden of comorbidity. The Dartmouth-Manitoba adaptation of the Charlson Comorbidity Index uses ICD-9-CM codes to represent etiologies and manifestations or sequelae of the 19 comorbidities specified in the original Charlson index. Overall healthcare costs for the preindex period were computed and categorized as medical or pharmacy costs and were included in the model as separate variables. For determining asthma severity, prescription and medical utilization metrics were used (Table 2).

Demographic and other baseline characteristics were summarized by group using measures such as means and percentages. Inferential statistics were used to assess intergroup differences in these parameters. Differences between groups in adherence, resource utilization, and costs were tested for statistical significance. Parametric or nonparametric tests were used, depending on distributional characteristics of these outcomes. Parametric tests for continuous variables included t-tests, and nonparametric tests included Mann-Whitney tests. Chi-square tests were used for categorical variables. Differences between baseline and follow-up measures were assessed by paired t-tests or Wilcoxon signed-rank tests, as appropriate. Ordinary least square (OLS) regression models, semi-log OLS models, or generalized linear models with a gamma distribution and log-link were used for assessing differences in groups during follow-up for adherence and cost outcomes, after controlling for baseline covariates.

Results

Figure 1 illustrates the sample selection procedure, which yielded a final sample size of 764 patients with asthma, 298 in the intervention group and 466 in the
control group. Table 2 describes the study sample at baseline. Intervention group participants were significantly older than those in the control group, by an average of 3.4 years ($P = .016$), but gender proportions were similar ($P = .500$). A significantly greater proportion of the intervention group than the control group filled an inhaled corticosteroid prescription (73.5% vs 64.2%, respectively; $P = .007$) and had a greater mean number of asthma-related outpatient visits in the preindex period (1.68 vs 1.25, respectively; $P = .311$). Compared with the control group, the intervention group had significantly greater mean total copayments for asthma-related medications ($192 vs $158, respectively; $P < .001$) and non–asthma-related medications ($313 vs $262, respectively; $P = .003$) during the preindex period. In general, asthma severity for the intervention group was greater than for the control group, which might have led to greater patient activation during the study intervention; adjustments for differences in asthma severity were made in the analysis.

**Adherence.** During the 12-month preindex period, the control group had an average MPR of 45.7% compared with 52.4% in the intervention group ($P = .002$). During the 1-year follow-up period, adherence rates in the intervention group increased by 4.5 absolute percentage points compared with a decrease of 3.7 absolute percentage points for the control group, which resulted in the intervention group having a significantly higher MPR during the 12-month postindex than the control group (56.9% vs 42.0%, respectively; $P < .001$). After controlling for other covariates, the intervention group had a statistically higher adjusted MPR of 53.9% at the end of 1 year, compared with 43.9% for the control group (Figure 2).

**Asthma-related costs, utilization.** Monthly asthma-related costs were compared between the intervention and the control groups. The intervention group had significantly greater asthma-related monthly medical costs at baseline ($43 vs $23, respectively; $P = .030$); however, by study end, the average monthly cost reduction was greater in the intervention group compared with the control group ($–$15 vs $–$6, respectively). After controlling for covariates and baseline differences in costs, the intervention group had a lower (but not significant) adjusted monthly cost at 12 months of follow-up compared with the control group ($18 vs $23, respectively; $P = .067$).

Asthma-related hospitalization and emergency department visit costs were incurred by a very small number of patients (1 patient in the intervention and 1 in the control group had 1 hospitalization each, and 6 patients in the control cohort and 2 in the intervention cohort had 1 emergency department visit each), precluding stable mean estimates of number of visits, cost, and multivariate analyses. At baseline, the intervention cohort had a nonsignificant greater mean number of physician visits than the control group (1.38 vs 1.08, respectively; $P = .123$). At follow-up, no differences were seen between the 2 groups in the mean number of physician visits (1.20 vs 0.96, respectively; $P = .108$).

In contrast to asthma-related medical costs, asthma-related monthly pharmacy costs were significantly greater in the intervention group compared with the control group during follow-up ($89 vs $53, respectively; $P < .001$); however, was expected with the reduced copayment for the intervention group. The reduced copayment essentially increased the cost per prescription for the health plan for the intervention group compared with the control cohort after the intervention (data not shown).

The number of SABA canisters was greater in the intervention group compared with the control cohort, but this difference was not significant at baseline (1.72 vs 1.57, respectively; $P = .324$) or after 12 months of follow-up (1.76 vs 1.49, respectively; $P = .114$). However, both cohorts had asthma controller ratios close to 1, indicating a good ratio of controller to SABA use. The asthma controller ratio was significantly greater in the intervention cohort compared with the control cohort at 6 months of follow-up (0.80 vs 0.74, respectively; $P = .014$), but not at 12 months (0.79 vs 0.76, respectively; $P = .051$). The number of oral corticosteroid prescriptions was similar between cohorts at baseline (0.64 vs 0.61, respectively; $P = .756$) and at 12 months of follow-up (0.68 vs 0.60, respectively; $P = .314$).

**Overall healthcare costs.** At baseline, the intervention cohort had significantly greater overall medical ($224 vs $155, respectively; $P = .002$) and pharmacy ($145 vs $113, respectively; $P < .001$) costs compared with the control cohort. At follow-up, differences in
Overall medical costs between the intervention and control groups were similar to the asthma-related medical costs. After controlling for covariates, the intervention group had significantly smaller overall monthly medical costs compared with the control group during 12 months of follow-up ($170 vs $229, respectively; \( P = .004 \)) (Figure 3). Although overall pharmacy costs were higher ($181 vs $124, respectively; \( P < .001 \)), total overall costs were not statistically different between the intervention group and the control group ($362 vs $337, respectively; \( P = .276 \)).

**Discussion**

This study demonstrates that the VBHM asthma program significantly improved adherence, as measured by MPR, and reduced overall medical costs for the sample of H-E-B employees and their dependents with asthma. During the 12-month follow-up study period, asthma medication adherence rates for patients in the intervention group were substantially greater than those in the control group. In addition, asthma-related medical costs decreased for the intervention group after adjusting for covariates, whereas asthma-related pharmacy costs increased.

When the impact on overall healthcare costs was calculated, a significant reduction in overall medical costs was successful in offsetting the higher overall pharmacy costs, resulting in no significant differences for the intervention group compared with the control group in total overall healthcare costs.

Increased asthma-related pharmacy expenditure is particularly significant, because it implies that patients were refilling their asthma medications, adhering to therapy, and improving asthma management. The higher pharmacy costs found in this study reflect the effects of the DM and VBID components of the VBHM program found in other studies. \( ^{8,12,13,20,21} \) DM programs in asthma have been reported to increase awareness of the effectiveness of controller medications, as well as increase use and costs. \(^{20,21} \) Similarly, changes in copayment policies have been shown to influence medication adherence. \( ^{8,12,13} \) A recent study evaluated the effect of a VBID program by reducing the cost of inhaled corticosteroids, resulting in a small positive (although not significant) increase in medication adherence. \( ^{22} \) The authors attributed the insignificant result to the difficulty of measuring adherence to inhaled medications that involve multiple doses in a single inhaler compared with other medications with individual doses, such as oral tablets. \( ^{22} \) In the present study, copayment was reduced for inhaled and for oral asthma medications.

In effect, a lower copayment for patients with certain chronic conditions requiring ongoing medication use may be a preventive public health measure. Despite the initial higher short-term drug costs for insurers, a reduced copayment may increase patient adherence and improve health status and, in turn, decrease long-term healthcare costs for insurers. This study shows that a VBHM intervention can improve patient medication adherence and decrease medical costs. Even with an increase in pharmacy costs as a result of improved adherence, the overall healthcare costs in this study were similar between the intervention and the control groups of insured H-E-B employees and their dependents.

**Practice/Policy Implications**

Reduced medication adherence because of high copayments is a complex issue that requires a multifaceted strategy and collaborative approach. \( ^{10} \) Research suggests that adherence to inhaled corticosteroids diminishes over time, \( ^{21} \) but patient education on the regular use of asthma medications can be critical to increasing adherence. Developing mechanisms to report adherence status on a regular basis to providers and patients may also improve medication adherence and asthma control. \( ^{4} \) Furthermore, providers and payers may help to reduce costs by taking a more proactive role in assessing patient medication need against any financial constraints and communicating potential approaches to confront these issues. \( ^{24} \)

**Limitations**

Interpretation of the study results must consider several potential limitations. First, adherence to asthma medications was determined based on pharmacy...
claims; as such, actual consumption of a medication was not available.

In addition, it was not determined in this study if patients read and understood the educational materials.

Because the study’s sample population was only selected from insured employees and their dependents from the H-E-B grocery store chain in Texas, the geographical concentration and health insurance status may pose a problem for the ability to generalize this study’s results to other populations. Further research is necessary to understand if and how barriers to adherence may vary for other populations.

Finally, the voluntary participation in the VBHM program could possibly have influenced the findings in the intervention cohort, because these patients were perhaps more motivated to manage their disease. However, despite an almost 100% participation rate in the intervention cohort in the BCC program—demonstrating significant motivation—the intervention cohort still had more severe disease than the control group before the study intervention. However, selection of a control group from another source to avoid self-selection bias could have resulted in comparing patients in a different geographic, economic, and social environment, all of which are minimized in this study.

**Conclusions**

This study indicates that the H-E-B asthma program improved patient adherence to controller medications, reduced medical costs, and increased prescription costs. Specifically, the program increased adherence by 10 absolute percentage points without a significant increase in asthma-related resource utilization and total overall healthcare costs.

The H-E-B VBHM asthma program analysis contributes to the growing body of research evidence demonstrating that decreases in copayment amounts may yield increased asthma medication adherence and reduce associated medical costs. Rapidly increasing copayment costs can create a financial barrier and differential access to necessary medications, affect patient adherence ability, and contribute to widening the economically driven disparities of health outcomes that currently exist. Adopting a VBHM approach can minimize advanced medical complications and rising healthcare costs associated with asthma management.

**Acknowledgments**

We sincerely appreciate the original vision for this study provided by Sandy Debussey and contributions from other GlaxoSmithKline, H-E-B, and Xcenda team members.

**Source of Funding**

This research was funded in part by GlaxoSmithKline. H-E-B was responsible for all healthcare services reimbursement, including copayments.

**Disclosure Statement**

Dr D’Souza, Ms Rahnama, and Mr Regan are consultants to GlaxoSmithKline; Dr Burch is an employee of GlaxoSmithKline. Ms Common has nothing to disclose.

**References**


**Stakeholder Perspective next page**
Value-Based Insurance Design: Evolving Strategies to Improve Medication Adherence, Control Healthcare Utilization

Payers: Value-based health management strives to optimize the medical benefit received for the healthcare resource purchased. It is frequently introduced to individuals by what is now referred to as value-based insurance design (VBID), through a member’s employer or health plan. This benefit design rewards the use of evidence-based practices through incentives such as waived or reduced copayment/coinsurance to individuals for services purchased or supplemental payment to providers for services rendered. VBID typically focuses on benefits by a specific service (eg, cost waiver/reduction for specific drugs or services for all patients); condition (eg, cost waiver/reduction for drug or service related to a specific medical condition); condition severity (eg, cost waiver/reduction for drugs or services for an individual classified as high risk); or as mentioned in the present article by D’Souza and colleagues, by involving “health management participation” (eg, cost waiver/reduction for drugs or services with participation in a particular program).1

Such strategies are thought to overcome the issues demonstrated by the increase in individuals’ cost-sharing of prescription drugs through the rise in drug copayments/coinsurance by means of improving drug adherence and reducing potentially preventable healthcare resource utilization (eg, emergency department visits). Increased access to medications is an important tool in improving care. Rates of nonadherence to asthma medication have been reported to be as high as 70%.2 Reduced inpatient and emergency department visits have been associated with adherence to asthma controller medication.3

Additional access to medication must also be tempered with the opportunity for increased fraud or abuse of the new benefits. Providers or individuals may be encouraged to misrepresent information to benefit from reduced copayment/coinsurance or supplemental reimbursement for services. Expansion in fraud detection services may be necessary. Organizations will also need to be vigilant in monitoring shifts in healthcare resource utilization, in particular the purchase of low-value or less clinically supported medical services, because individuals may then have increased capacity to purchase such services.

Patients: Patients will need to understand that value-based benefit offerings, such as the H-E-B program, are meant to optimize the quality of care they receive. Members/patients should be encouraged to engage in the process and take full advantage of the opportunity presented to help improve their health. Patients should also be on alert for potential abuse of the process and advise their organization if they suspect that abuse of services may have occurred. Value-based benefit strategies that provide a “carrot” to the individual through reduced out-of-pocket expenses have not been embraced by all organizations, but they continue to grow in acceptance. Abuse of the system could slow the use of such benefits and shift incentives away from the carrot and more toward the use of the “stick” (eg, excluded coverage, higher out-of-pocket expenses).


Richard F. Radzin, PharmD
Executive Consultant
CGI Federal
Cleveland, OH