

A Commentary on the Potential of Value-Based Insurance Design (VBID) to Contain Costs and Preserve Quality

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ABSTRACT

BACKGROUND: Value-Based Insurance Design (VBID) is an opportunity to restructure health benefits and change the focus of the health care debate away from cost or quality alone onto the value of health services. Although there is still cost-sharing with a VBID benefit, a “clinically sensitive” approach is designed to minimize the poor health outcomes that arise from high “across-the-board” out-of-pocket expenditures. VBID addresses the inconsistencies and misalignment of incentives in the current system and works synergistically with other initiatives to optimize health care effectiveness and efficiency.

OBJECTIVES: To (a) discuss 2 trends in benefit design: the first focusing on improving quality of care by using tools such as disease management (DM) and pay-for-performance (P4P) initiatives, and the second focusing on costs of care by increasing the share of expenses paid by beneficiaries (e.g., consumer-driven health plans [CDHPs] or increased copayments at the point of service); and (b) describe the 3 components of VBID.

SUMMARY: There are 3 key proposed features of VBID: (a) value equals the clinical benefit for the money spent, (b) value-based benefit packages should adjust patient out-of-pocket costs for health services based on assessment of the expected clinical benefit to the individual patient as reported in published studies, and (c) the more clinically beneficial the therapy is expected to be for the individual patient, the lower the cost-share will be for that patient.

CONCLUSIONS: VBID can address several important inconsistencies in the current system and work with other initiatives, such as CDHPs, DM, and P4P, to optimize health care effectiveness and efficiency, independent of the level of expenditures.

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The Benefit-Based Copay, now referred to as Value-Based Insurance Design (VBID), was first introduced by Fendrick et al. in 2001 as an idea to improve the amount of health care received per dollar spent.^{1,2} VBID is an opportunity to restructure health benefits and change the focus of the debate away from cost or quality alone onto the value of health services. The objective of the VBID concept is to minimize the potential of an adverse health outcome that may arise from high “across-the-board” out-of-pocket expenditures. VBID addresses the inconsistencies and misalignment of incentives in the current system and works synergistically with other initiatives to optimize health care effectiveness and efficiency. The concept has gained momentum and is being used by several employers, benefit consultants, and health plans around the country.³ However, the more pressing problem of controlling the growth of health care costs remains a limitation to the acceptance of this concept.

Bridge Between Cost Containment and Quality Improvement

The impact of health care costs on the U.S. economy is tremendous. In testimony before the Senate Budget Committee on June 12, 2007, Peter Orszag, Director of the Congressional Budget Office, stated that “the primary determinant of the nation’s long-term fiscal balance is health care costs.”⁴ What is sometimes omitted, however, is discussion of the clinical improvements resulting from increased spending such as successes in cancer treatment, decreases in mortality rates, and reductions in cardiovascular adverse events. At the highest levels of policymaking, it is important to consider both the cost and quality of health care, including the impact of benefit design. Many policymakers have fiscal responsibility and want to see the return on investment, such as for a disease management program. We embrace the evaluation of health outcomes per dollars spent in the way that we assess expenditures on education, manpower, and transportation. The authors of a 2007 article in the *Journal of the American Medical Association* stated that “The purpose of the health care system is not to minimize costs but to deliver value to patients, that is, better health per dollar spent.”⁵ Incremental increases in health care spending may be accepted if there are documented enhancements in health outcomes that result.

The current pressure is for payers to constrain health care costs while maintaining or increasing quality. This pressure occurs in the setting of substantial underutilization of essential services, such as immunizations and cancer screenings, and where rates of adherence to chronic medication treatments are reported to be as low as 30%-50%.^{6,7}

Rising health care costs are the main impetus for the redesign of health benefits, but concerns regarding quality of care are also important. These issues have led to 2 trends in benefit design: (a) focusing on improving quality of care by using tools such as

disease management (DM) and pay-for-performance (P4P) initiatives, and (b) addressing costs of care by focusing on increasing the share of expenses paid by beneficiaries (e.g., consumer-driven health plans [CDHPs] or increased copayments at the point of service [POS]).

Disease Management Programs

Involving everyone concerned with a patient's care, including pharmacists and nurses, in face-to-face patient education, telephonics, e-mails, and so forth will improve outcomes. Over the past decade, people bought into DM because they thought it would save money and improve outcomes. However, one study found that these interventions improved health but also increased costs.⁸

In looking at the need for VBID, we ask the following question: Is money better spent on (a) having a nurse (at a pay rate of >\$50/hour) call heart failure patients to ensure that they're taking their medications or (b) using that same money to reduce copayments for heart failure patients?

Pay for Performance Initiatives

P4P initiatives attempt to pay clinicians and hospitals based on quality measures. Health care administrators are increasingly supporting P4P initiatives as a mechanism to increase preventive services, decrease overuse, and utilize evidence-based medicine.⁹ P4P provides another example of a method that may have some merit in payment reform.

Consumer-Driven Health Plans

CDHPs are health benefit plans that engage covered individuals in choosing their own health care providers, managing their own health expenses, and improving their own health with respect to factors that they can control. CDHPs are often designed so that a portion of the employer's tax-deductible contribution to health benefits is put into a Personal Care Account (PCA) from which the employee purchases services.¹⁰ Major medical coverage is also a part of the benefits design. If an employee spends all of the dollars in the PCA in a given year, the employee would spend his or her own money until meeting the deductible requirement in the major medical coverage. Expenses in excess of the deductible are covered by the major medical plan. The benefit design may cover all or part of the excess expenditures. Additionally, many CDHPs cover 100% of preventive services, such as immunizations and some cancer screenings. Plan members use money in their PCA to pay for medications.¹⁰ Employees are often provided with information from the Internet about health care providers in the area (e.g., their education, experience, quality rankings, charges for services). Aetna, UnitedHealth Group, and Wellpoint have used CDHPs.

The goal of these plans is to induce consumers to be more cost conscious when obtaining health care, with the expectation that enhanced patient accountability and consumer pressure for high-

quality service will result in overall cost savings and improved quality. However, an association between higher out-of-pocket expenditures for prescription medications and lower prescription drug utilization has been shown in some studies, raising questions about the effects of across-the-board cost-sharing change on health care utilization.¹¹ Ideally, higher copayments would discourage only the consumption of low-value care. To achieve this objective, it is necessary to enable patients to distinguish between high-value and low-value interventions. If this distinction does not occur, increased cost-sharing may have a negative outcome if patients unknowingly choose not to purchase needed health care products or services.

The clinical and financial impact of CDHPs will depend on their designs (e.g., deductible costs).¹² It is not clear whether CDHP savings will result in one-time reductions in spending or long-term reductions. Parente et al. studied an early CDHP model and found that CDHP enrollees had lower total expenditures than enrollees in preferred provider organizations (PPOs) but higher expenditures than a health maintenance organization (HMO) cohort.¹³ Physician visits as well as pharmaceutical use and costs were lower in the CDHP cohort than in the other 2 groups. However, hospital costs for CDHP enrollees and total physician expenditures were significantly higher. CDHP hospital expenses increased from \$1,370 per contract (employee plus covered family members) in the pre-implementation year (2000) to \$1,999 in 2001 and \$3,469 in 2002. Pharmacy expenses in the CDHP increased from \$935 per contract in 2000 to \$1,342 in 2002 compared with HMO and PPO increases from \$1,108 to \$1,640 and \$1,008 to \$1,789, respectively.¹³ Enrollees in this plan may have been somewhat atypical because they chose their plan, had higher incomes than did HMO or PPO enrollees, and were comparatively healthier at baseline. CDHP enrollees paid higher premiums than HMO enrollees, but many preventive services were covered at 100%.

Questions exist regarding the use of CDHPs. For instance, one small nonpeer-reviewed Web-based survey reported that individuals with CDHPs were less satisfied with their health plan than individuals with more comprehensive health insurance coverage.¹⁴ Another question to investigate is whether high cost-sharing CDHPs lead to risk segmentation in an employer group, with sicker patients facing higher premiums.

Increased Cost-Sharing at Point of Service

Use of 3-tier drug formulary designs (generic drugs with the lowest copayment, preferred brands in the middle, and nonpreferred brands with the highest copayments) has increased dramatically, from 27% of covered workers in 2000 to 74% in 2006.¹⁵ We argue that, as currently designed, many tiered-copayment benefit plans may not achieve the goal of promoting overall health value. We also argue that life-saving medications (brand and generic), such as statins, should have lower copayments than medications that are less essential, such as hair growth or onychomycosis medi-

cations. Certainly, less-expensive generic medications should be used when available and when they meet the need of the patient.

Impact of Increased Cost-Sharing on Utilization

Prescription copayments have steadily increased over the last 10 years. Some have argued that cost-shifting may lead to decreases in essential and nonessential care.¹⁶⁻²⁰ Increases in copayments of essential drugs may cause decreases in utilization rates. For example, in a study of compliance rates with statin therapy stratified by mean prescription copayment, higher copayments were associated with lower compliance levels.²¹ In a small nonpeer-reviewed study of privately insured adults in 9 firms taking oral antidiabetic medications, higher levels of coinsurance or copayment were associated with lower levels of refill rates (based on refills within 90 days after an initial prescription ran out).²² A contradictory study by Pilote et al. conducted in a population of elderly enrollees of a publicly funded health care system in Canada found no relationship between the introduction of a 25% coinsurance charge (up to a cap) and adherence to cardiac medications after discharge from the hospital following acute myocardial infarction (MI).²³ This difference in study findings may have occurred because patients surviving an acute MI are more likely to be price insensitive and, consequently, adherent to cardiac medications when facing a price increase. A similar “copay effect” may impact the utilization of nondrug services such as visits, diagnostic tests, and cancer screenings. A recent study found that increases in copayments (>\$10) or coinsurance (>10%) in Medicare health plans reduced the utilization of preventive mammography services by 5.5% versus a 3.4% increase in utilization in a matched comparison group with full coverage ($P<0.001$) among women aged 65-69 years.²⁴ However, even if medications are free, patients still might not take them as prescribed. Interventions, such as pharmacist consultation at POS, telephonics, e-mail, and DM programs, may be needed to improve persistence.

Value-Based Insurance Designs

There are 3 components to VBID: (a) value equals the clinical benefit for the money spent, (b) value-based benefit packages adjust patient out-of-pocket costs for health services based on assessment of the expected clinical benefit to the individual patient as reported in published studies, and (c) the more clinically beneficial the therapy is expected to be for the patient, the lower the cost share will be for that patient. Higher cost-sharing will apply to interventions with little or no proven benefit.

Insurance Design Targeting

There are 2 approaches to VBID targeting. The first is to target services that are known to be of high value, such as angiotensin-converting enzyme (ACE) inhibitors or statins. This approach does not attempt to differentiate among individuals who receive

a specific intervention (e.g., for congestive heart failure or MI vs. essential hypertension). The second approach selects patients with specific diagnoses (e.g., coronary heart disease) and lowers copayments for specific high-value services (e.g., statins or beta-blockers). This approach creates different copayments based on the indication for a specific medical intervention.

Financial Modeling

It is difficult to estimate the bottom-line effects of VBID because there are many potential VBID interventions. Aggregate costs (employer plus employee) may increase because lower copayments may result in the utilization of services that would not have been used previously.²⁵ Employers may pick up additional costs because they are now covering a share of copayments for services that employees would have utilized anyway. Therefore, in a VBID implementation that only provides copayment relief, employer expenses will often exceed the aggregate costs because employee savings with lower copayments are borne as expenses by the employer.

The net cost of a VBID program depends on whether higher expenditures in high-value services can be offset through a decrease in adverse events as a result of increased utilization. These savings may be increased if VBID services are targeted to specific patients at high risk of a preventable adverse event. Some reports have suggested that the savings are large enough to offset the extra employer spending²⁶; however, controlled studies have suggested that the health benefits are not sufficient to finance the entire investment in lower copayments.²⁷ For more information on the financial equations used in VBID, please see the reference by Fendrick and Chernew.²⁵

Role for “Soft Paternalism”

Unlike other industries, the health care consumer (i.e., the patient) often does not fully understand the value of a product or service and does not make the decision whether a product or service is needed. Instead, health care providers make that decision on the patient's behalf. Once a decision is made, the patient must then purchase and maintain the prescribed regimen. Many variables play a role in the patient's decision to be compliant including cost, side effects, and the patient's comprehension of the value of the prescribed regimen. With VBID, the cost variable is decreased for high-value services in an effort to assist in patient compliance and persistence with therapy. Determination of high-value services is evidence based. For example, in people who take statins for primary prevention, the number needed to treat (NNT) is as much as 429 to prevent 1 cardiovascular event. However, to prevent a secondary event, the NNT is as low as 63.²⁸ In a study of statin users, compliance rates of primary- and secondary-prevention patients did not differ significantly; these groups went without medication 20.4% and 21.5% of the time, respectively ($P=0.149$).²¹ It seems that the more clinically beneficial the therapy for the patient, the lower the patient's cost-share

should be. Thus, in the VBID model, statin copayments for prevention of a secondary event would be lower than copayments for prevention of a primary event.

Acknowledge and Respond to Heterogeneity

Medical services differ in the clinical benefit provided. Clinical benefit derived from a specific medical intervention depends on the patient using it. In a VBID model, patient out-of-pocket costs are adjusted for specific services based on assessment of the clinical benefit expected. The more clinically beneficial the therapy is expected to be for the patient (as determined by published studies), the lower the cost-share for that patient.

VBID: “Fiscally Responsible, Clinically Sensitive”

Potential barriers to successful implementation of VBID programs include concerns regarding the costs of increased utilization, cost of implementation, legal antidiscrimination barriers, and privacy concerns. Many of these barriers can be overcome. Incremental costs of the increased use of high-value services may be subsidized by (a) medical cost offsets (e.g., reductions in hospitalizations, emergency room visits, unnecessary doctor visits); however, the offset may not be 1:1 (i.e., dollar spent to dollar returned)²⁷; (b) reduction in absenteeism/disability costs²⁹; and (c) higher cost-sharing for low-value services.

Studies are needed to show that a healthier work force will lead to decreased absenteeism and increased productivity. A recent randomized controlled trial to evaluate the effects of a depression outreach treatment program on workplace outcomes was conducted using telephonic outreach and care management compared with usual care. When data were combined across the 6- and 12-month assessments, the intervention group had significantly lower depression severity as measured by a Quick Inventory of Depressive Symptomatology score ($P=0.009$), significantly higher job retention ($P=0.02$), and significantly more hours worked among the intervention group (equivalent to an annualized effect of 2 weeks of work, $P=0.02$) compared with the usual care control groups. The authors concluded that a “systematic program to identify depression and promote effective treatment” significantly improves both clinical and workplace outcomes.³⁰

VBID Consumer-Directed Hybrid: “Fiscally Responsible, Clinically Sensitive”

In the VBID model, insurance benefits are restructured to allow all services of high value—not just preventive services—to be provided with little or no out-of-pocket expense to patients. To offset lower copayments for beneficial, high-value drugs (e.g., statins, ACE inhibitors), copayments for lower-value drugs are increased. One study suggests this model to be effective³¹; however, additional comparative effectiveness research is needed.

Experience with VBID

Several companies are putting together various forms of VBID, including Pitney Bowes and ActiveHealth Management, using the first approach mentioned earlier in which users of certain classes of drugs have lower copayments, regardless of indication.

The Asheville project, a pharmacist-driven diabetes program first implemented in 1996 for the City of Asheville, North Carolina (a self-insured employer), continues to deliver clinical and financial dividends.³²⁻³⁶ As a follow-up to the initial project, the city of Asheville created a program currently underway named the Hickory Project that couples a community pharmacist-led coaching program with lowered copayments for their employees with diabetes.³⁶

Currently, the Diabetes Ten City Challenge (DTCC) is underway in which community pharmacists are working with patients to gain better control of their diabetes.³⁷ In this trial, 914 patients with diabetes covered by self-insured employer health plans received pharmacist care. Features of the DTCC program include waivers of prescription copayments for diabetes-related medications or supplies for patients who continue the program and reimbursement to community pharmacists for clinical services. Employers demonstrated a willingness to offer a voluntary health benefit to employees and their dependents with diabetes that uses pharmacists to help participants achieve self-management goals. After the first year of DTCC, patients had measurable improvement in clinical indicators of diabetes management, higher rates of self-management in goal setting, and increased satisfaction with diabetes care. Based on results of previous studies, these positive trends are expected to drive a corresponding decline in projected total direct patient medical costs.³⁷

The University of Michigan also implemented a pilot program for its employees and dependents with diabetes, using copayment reductions and highly beneficial targeted interventions.³⁸ In this program, employees with diabetes are eligible for copayment reductions (amount not specified) on antidiabetics, insulin, beta-blockers, calcium-channel blockers, antihypertensives, diuretics, antihyperlipidemics, and antidepressants. Effects of the pilot program will be evaluated to determine whether reducing the cost barrier for drug products increases adherence to medication regimens and reduces overall health expenditures. Results of the evaluation will help determine whether the program continues.

Conclusion

VBID addresses several important inconsistencies in the current system and may work synergistically with other initiatives, such as CDHPs, DM, and P4P, to optimize health care effectiveness and efficiency. With the VBID concept, health benefits are structured to reduce financial barriers to products and services of high value. As VBID programs are implemented and evaluated, more data will be available to assess the financial impact of value-based insurance design.

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