

Value-Based Insurance Design Landscape Digest

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BRIDGING THE DIVIDE BETWEEN QUALITY IMPROVEMENT AND COST CONTAINMENT

As private and public purchasers of health care struggle to constrain rising costs, they must also strive to maximize the clinical benefit achieved for the money spent. Although expenditures are the driving force behind health care reform, concerns regarding access to medical services and quality of care also share the limelight. Thus, the need for meaningful cost containment and quality improvement has led to two prevailing trends in benefit design:

- 1) the use of financial incentives to alter behavior and to change utilization, and
- 2) the implementation of wellness and disease management (DM) initiatives to help individuals manage their health in an effort to avoid future costly events.

In addition, provider-based interventions are disseminating widely, such as Patient Centered Medical Homes (PCMH), Accountable Care Organizations (ACO) and Pay-for-Performance (P4P) programs, which pay bonuses to clinicians for adhering to evidence-based practices and attaining specific quality measures.

It is a critical challenge to develop strategies that simultaneously address the problem of spending growth and aim to improve population health. Value-Based Insurance Design (VBID) incorporates complementary features to produce effective and efficient care delivery, to ultimately **maximize health outcomes at any level of health care expenditure.**

This report, "Value-Based Insurance Design Landscape Digest," defines the VBID concept; outlines key objectives, design features and potential barriers to implementation, and describes evaluation tools for measuring the outcomes of VBID programs. In addition, the report provides examples of existing VBID programs and reviews the clinical and economic implications of VBID.

THE ROLE OF COST SHARING IN HEALTH INSURANCE

Patient cost sharing is one of the fundamental mechanisms available to change consumers' behavior and therefore will remain an important cost containment tool. It is widely accepted that higher patient cost sharing reduces utilization of health care services and consequently lowers health care spending, at least in the short-term. **Ideally, higher patient copayments would discourage only the utilization of low-value care.** However, for this important assumption to be achieved, patients must be able to distinguish between high-value and low-value interventions. When this ability to differentiate among services does not occur, increased cost sharing has the potential to cause negative clinical outcomes. A large and growing body of evidence demonstrates that in response to increased cost sharing, patients decrease the use of both high-value and low-value services.^{1,2,3}

The evidence linking modifications in patient cost sharing to changes in the use of prescription drugs is relatively unambiguous, consistent from the time of the Health Insurance Experiment undertaken in the 1970's.⁴ Specifically, increases in drug copayments and shifts to tiered formularies result in decreased use of medications and lower treatment adherence. Consequently, higher cost sharing for prescription drugs lowers pharmaceutical spending.

However, many observers have noted that reduced spending on prescription drugs does not necessarily result in lower total spending on health care because prescription drugs are only one of several important components of health care expenditure. Medications keep patients healthy. Healthy patients are less likely to use expensive non-drug services such as hospitalizations and emergency rooms. **Thus, the degree to which higher cost sharing for prescription drugs affects overall health care spending crucially depends on the magnitude of any cost-offsetting effects that result in other sectors of health care.** These offsets from increased use of non-drug services indicate that aggregate decreases in total health care spending will be less than the savings resulting from higher copayments in the pharmaceutical sector. In the extreme case, the increases in costs arising from increases in non-drug services may exceed the prescription drug savings achieved from lower utilization. The result is an association of higher copayments for prescription drugs with higher overall medical spending. A 2009 Canadian study reported that increases in patient cost-sharing for drugs to treat asthma led to an overall *increase* in total medical expenditures in that patient cohort.⁵

A 2007 *Journal of the American Medical Association* study examining the relationships among cost sharing, outcomes and utilization found that increased cost sharing was associated with lower rates of drug treatment, worse adherence among existing users and more frequent discontinuation of therapy. Although increased cost sharing highly correlated with reductions in pharmacy use, the study concluded that the long-term consequences of benefit changes on health were still uncertain.⁶ Therefore, while cost sharing is likely to continue as a benefit design strategy, it is ill-advised in certain clinical circumstances, and alternatives to high copayments should be considered.

VALUE-BASED INSURANCE DESIGN: “CLINICALLY SENSITIVE, FISCALLY RESPONSIBLE” COST SHARING

VBID offers a potential incremental solution to a key problem in the health care financing crisis – how to maximize health outcomes with available health care dollars. Instead of simply asking patients to pay more for all of their care, as is currently the case, a VBID plan adjusts out-of-pocket costs based on an assessment of the clinical benefit value – not simply the cost – to a specific patient population. **Thus, the more clinically beneficial the service for the patient, the lower that patient’s cost-share would be.** In a VBID program, this “clinically sensitive” cost sharing is explicitly applied to mitigate the adverse health consequences that result when high out-of-pocket expenditures lower utilization of high-value clinical services. By aligning financial incentives, this strategy encourages the use of high-value care while discouraging the use of low-value or unproven services.^{7,8,9,10}

VBID is centered on the theory that reducing or removing financial barriers to essential treatments and high performance providers will steer consumers toward value-based health care and improved health status. While a variety of stakeholders have defined VBID differently, there is consensus on the core element of VBID: **getting more health out of every health care dollar.** All parties also agree that benefit design changes must be accompanied by education and strategies for consumer engagement in order to have maximum impact.

VBID begins with its simplest definition: the lowering or elimination of financial barriers to the purchase of “high-value” drugs or services in hope of

raising compliance and avoiding more expensive future medical costs, such as hospitalization. As VBID becomes more widely adopted, the defining strategy is expanding from the targeting of high-value drugs and services for copayment reduction to the inclusion of an emphasis on the individual patient's condition and its severity, and a focus on providers of care. Next generation offerings are expected to incorporate aspects of wellness programs, disease management and patient centered medical homes.

As defined by the University of Michigan's Center for Value-Based Insurance Design, "value" is the amount of health gained per dollar spent on health care services or health benefits.¹¹ Therefore, assessing the value of a treatment or benefit package requires taking both cost and quality of services into consideration simultaneously. **"Value-based" does not necessarily equate to less expensive.** Contrary to popular opinion, less costly services may not always generate sufficient health benefits to be considered of value.

Regardless of the definition, VBID encompasses several key principles:

- Value equals the clinical benefit achieved for the money spent.
- Health care services differ in the health benefits they produce.
- The value of health care services depends upon the individual who receives them.

VBID packages adjust patients' out-of-pocket costs for health services based on an assessment of the clinical benefit to the individual patient. Thus, the more clinically beneficial a therapy is for a patient, the lower the patient's cost share. The same concept applies to lower copayments for using quality providers. VBID encourages demand for medically necessary utilization of evidence-based medical services through appropriate cost sharing, and reduces barriers to access for these services.

VBID challenges the postulation that increased cost sharing lowers costs by noting that in many instances, **reduced utilization – without consideration of health effects – may not be a desirable goal.** Reduced use of high-value clinician visits, medications, diagnostic tests, and procedures for patients with chronic disease can result in costly adverse events and, in some instances, higher aggregate medical care costs.

"Fifty-year olds should get a colonoscopy for free, but a healthy 29-year old who wants a colonoscopy should pay 100 percent of the cost and be fined \$500 for taking his or her mother's slot."

A. Mark Fendrick, M.D.,
Co-Director of the
Center for VBID
at the University
of Michigan

OBJECTIVES OF VBID

Cost savings should not be the exclusive goal applied to health care reform efforts, which is not to say that VBID principles cannot facilitate cost containment. Rather, VBID should be considered as a set of principles that can help guide an inevitable increased reliance on cost containment initiatives. Barriers for high-value services should remain low; but, on the other hand, services of lesser or uncertain value may be subject to higher cost sharing. VBID's objectives align with other strategies promoting cost savings and higher quality care, such as pay-for-performance initiatives; high-deductible consumer-directed health plans; and wellness, prevention and disease management programs. Although it remains uncertain whether short-term, direct medical cost savings result from a VBID program, studies have linked lower copayments for drugs to higher compliance, which ultimately has potential to yield long-term savings as a result of healthier members/employees.¹²

With multiple stakeholders involved in and affected by VBID programs, there is no one VBID design. Each program must address the cultural context in which it is implemented. Although all VBID programs should focus on value, the definition of value is subjective.

That being said, VBID programs strive to meet the following objectives:

- Obtain the greatest positive health impact from medical expenditures.
- Create an opportunity to restructure health benefits and to change the focus of the health care debate away from cost alone, to the clinical value of health services.
- Minimize the lack of adherence to evidence-based services that may result from setting across-the-board cost sharing levels.

APPROACHES TO VBID

There are four basic approaches to VBID:

1. Design by service. Waive or reduce copayments or coinsurance for select drugs or services, such as statins or cholesterol tests, no matter which patients are utilizing them. This is the strategy employed by Pitney Bowes, which in 2002 reduced the copayments for drugs that treat asthma, diabetes and hypertension.¹³ Marriott International, Inc., adopted a similar approach for drug classes used to treat diabetes, asthma and heart disease.

2. Design by condition. Waive or reduce copayments or coinsurance for medications or services, based on the specific clinical conditions with which patients have been diagnosed. This approach is illustrated by the University of Michigan Focus on Diabetes Program, which lowered copayments for selected evidence-based medications and services for all employees with diabetes.¹⁴

3. Design by condition severity. Waive or reduce copayments or coinsurance for high-risk members who would be eligible for engagement in a disease management program.

4. Design by disease management participation. An extension of the third design approach, this VBID solution provides reduced or waived copayments or coinsurance to high-risk members who actively participate in a disease management program. The City of Asheville Project highlighted this approach through offering free medications and testing equipment only for diabetics who attended educational seminars. Wisconsin-based QuadMed, a subsidiary of QuadGraphics, sponsors eight worksite clinics and three pharmacies that play an integral role in its value-based insurance design. Employees who utilize an onsite clinic have a lower copayment than that for alternative care sites. Moreover, if they choose a preferred PPO network, employees pay a lower coinsurance rate for an office visit than for non-preferred network physicians. In addition, employees earn financial incentives if healthy behaviors are achieved, such as exercising three times a week or reaching certain clinical benchmarks, like improvement in diabetes management measured by reductions in HbA1c levels.

“Value-based design is a viable and compelling approach that – when integrated with other employee initiatives such as focused communications, disease management, coaching and wellness programs – can better support and influence the interactions between patients and providers and enable positive patient behaviors while improving health outcomes.”

Jennifer Boehm,
Principal,
Hewitt Associates

FINANCIAL IMPACT OF VBID

The financial impact of VBID programs on health care spending depends on the level and precision of clinical targeting and the extent of the changes in copayments. Since many clinical services provide higher value for a select subset of patients, the better the system is at identifying those patients, the greater the likelihood of achieving a high financial return. More careful targeting of interventions results in lower program costs, because fewer individuals are eligible for copayment reductions.

Offsetting the added costs of collecting lower copayments and the related increased use of high-value services are the savings incurred by reductions in future adverse events, which are avoided by achievement of better clinical outcomes. For example, the increased direct costs of lower patient cost sharing for asthma control medications would be at least partially offset by savings resulting from fewer emergency room visits for acute asthma.

The net financial benefit of the VBID program improves if:

- the underlying risk of an adverse outcome is high;
- the cost of that adverse outcome is high;
- consumers are responsive to lower copayments; and,
- the service is effective at preventing the adverse outcome.

Additional return on investment accrues if the non-medical benefits of improved health are considered, such as reduced disability and absenteeism, and enhanced productivity.

A recent *Medical Care* editorial reviewed the literature on the financial impact of changes in patient copayments, and found that cost offsets do occur, particularly among those with chronic diseases. Several studies evaluated how decreases in prescription drug spending that resulted from higher patient copayments led to increases in utilization of non-drug services such as hospitalizations, emergency room visits, etc. Offsets tended to be higher in the more targeted populations with chronic medical diagnoses.¹⁵

Additional return on investment accrues if the non-medical benefits of improved health are considered, such as reduced disability and absenteeism, and enhanced productivity.

VBID EXPERIENCE

Several private and public sector employers, health plans, and pharmacy benefit managers have implemented VBID programs providing incentives to increase the use of high-value services. Notable early adopters include the City of Asheville, North Carolina; Pitney Bowes; Marriott International, Inc.; the State of Maine and the University of Michigan. In most cases, VBID programs simply lowered copayments on classes of medications identified as high value, typically those used for managing diabetes or heart disease, as in Approach 1, above. In other cases, such as the Asheville Project, the Focus on Diabetes program at the University of Michigan, and the UnitedHealthcare Diabetes Health Plan, the VBID program targets patients with a particular clinical condition.

From the experience of these early programs and efforts that followed, it is clear that to be successful, VBID programs need to adhere to the “clinically sensitive” principle, recognizing that the value of various services differs and the value of any specific intervention likely varies among patients. Allocation of resources is more efficient when the amount of patient cost sharing is based on the value of the specific health care service to a targeted patient group. The archaic “one-size-fits-all” approach, in which employers focus exclusively on reducing costs by increasing copayments across the board, fails to acknowledge the unique differences in clinical value among medical interventions and among patients.

POTENTIAL BARRIERS TO VBID

Although there is growing interest from employer groups and health plans in VBID programs, their uptake is gradual, indicating that there are some barriers to implementation. Recognition of these possible obstacles is part of the solution to overcoming them.⁹

Potential for short-term increase in utilization and cost. Lowering costs for targeted drugs will increase short-term pharmacy spending and utilization. Yet, the expectation is that better adherence will result in better health and fewer adverse complications in chronic conditions. There is a concern, however, that when copayments are reduced and costs rise, clinical status may not improve for enough of the targeted population to offset the costs associated with increased use of benefits.

Need for sophisticated data systems to identify high-value services, specific patient groups using them, and compliance. Broader data are the key to understanding opportunities and integrating VBID into existing and emerging health information systems and disease management programs.

Negative reactions from plan members whose copayments are higher than those of other members for the same medical service or drug. VBID programs that target specific diagnoses or high-risk patients may encounter this problem, but clear communication of VBID objectives can engender a positive response from employees.

Privacy issues. The transfer of data and communications efforts must comply with the Health Insurance Portability and Accountability Act (HIPAA), the same compliance issue that arises with disease management programs.

Quantifying clinical and economic return on investment (ROI). Although there is an ongoing debate about whether VBID strategies produce a short-term positive ROI, expanded use of VBID and improved adherence to beneficial therapy hold the prospect of improved health outcomes, lower costs, and healthier, more productive employees.

Measuring outcomes. There are few studies on the impact of decreased copayments on utilization of and adherence to clinically sensitive health care services. It is critical, however, to measure outcomes, specifically increased utilization and adherence, with the appropriate clinical outcome metrics associated with targeted therapy.

Unintended incentives. If copayments are lowered for all products to treat the conditions targeted by the VBID program, use of some products for other conditions that would otherwise provide high value for the health care plan may, in effect, be discouraged.

Adverse selection. VBID may attract a disproportionate number of patients with chronic conditions by specifically targeting those patients or the services they use. Adverse selection will be less of an issue when the health plan population is relatively stable.

Difficulty in accurately determining the value of services. Measuring value requires using a blend of clinical judgment, health economics, and actuarial techniques. Setting copayments appropriately takes robust actuarial analysis. VBID programs become easier to create as we learn more about high-value services through comparative effectiveness research.

Potential for fraud. VBID programs may have difficulty in differentiating between patients who qualify for lower copayments and those who do not, encouraging some providers and patients to misreport information in order to qualify for the reduced copayment. Information that identifies and classifies patients could prevent this type of fraud.

VBID CASE STUDIES

As VBID matures, a variety of organizations – business coalitions, health insurers, employers, managed care organizations, and labor unions – have created programs that reflect the ideals of value-based design: clinically sensitive to the variation in benefits both across medical services and among patients, and yielding the most value out of each health care dollar spent. Some of the case studies presented here describe programs that are in their development stages; other examples have a longer track record.

WellPoint, Inc.

BUSINESS DESCRIPTION: Headquartered in Indianapolis, Indiana, WellPoint is a health benefits company serving the needs of approximately 35 million medical members nationwide.

INITIATION OF VBID PROGRAM/STRATEGY: Late 2002.

PROGRAM OBJECTIVE: To determine the effect toward improving member health care of increased member education and waived or reduced copayments for drugs used to treat chronic disease states.

VBID PROGRAM COMPONENTS: WellPoint developed four similar pilot programs testing the benefits of a VBID model: the State of Maine, with 40,000 employees, targeting diabetes; a large retailer, with 24,000 employees, addressing diabetes and transplant medications; a large laboratory company, with 25,000 employees, targeting diabetes; and a midwestern city, with 5,000 employees, targeting diabetes and hypertension. WellPoint waived or reduced copayments for all four pilots. In the case of the retailer, WellPoint waived the copayment for transplant drugs for the first year, with a 10 percent coinsurance during subsequent years. The rationale, says Brian Sweet, WellPoint's chief pharmacy officer, is based on the expense and quality-of-care consequences of organ rejection without appropriate medications.

In addition, for 2009, WellPoint is offering four value-based benefit designs that correspond to the four basic VBID models: 1) design by service, 2) design by condition, 3) design by condition severity, and 4) design by disease management participation. Four groups have adopted model #1, and one group is using model #4, with other clients exploring various models expected to be available in 2010.

PROGRAM RESULTS: Preliminary results for the City of Maine pilot, the Telephonic Diabetes Education and Support program, show an improvement in medication possession rate (MPR), jumping from 77 percent to 86 percent after the program. In addition, compared to a randomly matched control group, members who participate in this program have an adjusted average cost of \$1,300 less over 12 months of follow-up, according to HealthCore, WellPoint's outcomes research subsidiary.

Caterpillar, Inc.

BUSINESS DESCRIPTION: Based in Peoria, Illinois, Caterpillar is a Fortune 50 company specializing in forestry, construction and mining equipment, and energy solutions, with 80,000 employees and 120,000 covered lives.

INITIATION OF VBID PROGRAM/STRATEGY: January, 2005.

PROGRAM OBJECTIVE: To develop a risk management strategy to identify those at highest risk for coronary, diabetes or stroke events. These conditions were not only contributing to claims costs, but also to disability and unscheduled absences. Direct health care costs had increased 20 percent over four years.

PROGRAM COMPONENTS: According to Michael Taylor, M.D., medical director for health promotion at Caterpillar, the program, although not yet entirely founded on value, encompasses:

- One hundred percent coverage for well-women and well-baby care; zero copayments for drugs for diabetes and its associated co-morbidities, and free colorectal screenings for those at high-risk for colon cancer.
- Tracking of both financial and clinical outcomes over time.
- Health Risk Assessment (HRA), which earns employees, spouses and retirees under 65 a \$900 reduction on their yearly insurance premium. Disease management programs to reflect HRA information.
- Risk stratification by cardio-metabolic indicators for diabetes, such as blood pressure, lipids, triglycerides and fasting glucose, in order to target members most at-risk for an adverse event.
- A Healthy Lifestyle index to encourage employees to make behavioral changes.
- Onsite nurse coaches who schedule one-on-one meetings with program participants, offer classes, and coordinate awareness and screening campaigns.

PROGRAM RESULTS: Caterpillar's diabetes program has rendered positive results:

- Fifty percent of enrollees experience HbA1c reduction, from 8.7 to 7.2, on average, over the course of a year;
- Ninety-six percent of enrollees measure their HbA1c levels.
- Seventy-two percent meet activity recommendations promoted by the Surgeon General.

Service Employees International Union (SEIU) Health Care Access Trust

BUSINESS DESCRIPTION: Headquartered in Washington, D.C., the two million-member union represents workers in three sectors: health care, including hospitals, nursing homes, and home care; property services, including building cleaning and security; and public services.

INITIATION OF VBID PROGRAM/STRATEGY: Spring, 2009.

PROGRAM OBJECTIVES:

- Expand first-dollar coverage for building cleaning and security personnel.
- Provide insurance for all union members.
- Improve quality of health care.
- Help members better manage health.

PROGRAM COMPONENTS: SEIU introduced a pilot program in Minneapolis, Minnesota, and Milwaukee, Wisconsin, addressing janitorial and security employees. The program established a zero copayment tier for drugs for asthma, hypertension and diabetes, based on information gleaned from health risk assessments. In addition, if employees participated in a disease management program, they were reimbursed for their doctor visit copayment or received a free debit card to cover copayments. Those without a chronic disease but who participated in telephonic coaching for weight loss or smoking cessation received the same debit card or reimbursement benefits. The benefits will be expanded to other conditions.

PROGRAM RESULTS: Although results for the program are not yet available, Dania Palanker, deputy administrator of the SEIU Health Care Access Trust, expects the program to be cost-neutral, while improving the health of members.

***“We want to make our members as healthy as possible.*”**

We don’t provide insurance to make money but rather to get the most value for each health care dollar spent.”

Dania Palanker, Deputy
Administrator, SEIU
Health Care Access Trust

Mid-America Coalition on Health Care (MACHC)

BUSINESS DESCRIPTION: MACHC is an employer-driven, non-profit collaboration of stakeholders in the bi-state Kansas City region, including 465,000 covered lives.

INITIATION OF VBID PROGRAM/STRATEGY: November, 2008.

PROGRAM OBJECTIVES: Use value-based design principles to develop data-driven tools and resources to:

- Help employers improve the health of employees and their families.
- Promote employee wellness.
- Manage longer-term health care costs.

PROGRAM COMPONENTS: Called the Kansas City Collaborative (KC2), this two year collaborative, employer-based national pilot program is not simply an insurance program, but also one that encompasses health and wellness. "KC2 aims to educate employers on the value of aligning incentives for desired health behaviors and removing health care barriers for their employees. It also seeks to build data-driven resources and tools to demonstrate how Value Based Benefits concepts can be implemented across a broad range of workforces and corporate cultures to improve employee health and manage health care costs. Key learnings from Kansas City employers will be shared so that Value Based Benefits concepts can be replicated by other employers across the country." The National Business Coalition on Health (NBCH) will disseminate the strategies; Pfizer Inc. is providing technical and financial assistance.¹⁶

Prior to launch, KC2 offered a series of educational sessions to support employers in implementing value-based benefit initiatives, which will be introduced during the second year of the project. The collaboration also is developing an Employer Guide, which will track informational content gathered during the project and highlight the experience of coalition members in applying the value-based strategies to their organizations.

PROGRAM RESULTS: Results are not yet available.

"The program is not just a drug design, but we are putting our arms around the total health care spend and return."

Bill Bruning, President and
CEO, MACHC

Health Alliance Medical Plans, Inc. (HAMP)

BUSINESS DESCRIPTION: Health Alliance Medical Plans, based in Urbana, Illinois, is a provider-sponsored health insurer providing health care coverage to more than 310,000 members in Illinois and Iowa.¹⁷

INITIATION OF VBID PROGRAM/STRATEGY: October, 2008.

PROGRAM OBJECTIVES:

- Increase medication compliance.
- Reduce cost barriers to accessing drugs.
- Achieve better health outcomes.
- Manage disease states more effectively.
- Reduce medical costs for asthma and diabetes.

PROGRAM COMPONENTS: Available to 86,000 fully insured members and dependents, the HAMP program has developed a fourth copayment tier called the Value Based Benefit tier, which addresses members with diabetes, hypertension and asthma. The new benefit makes specific drugs related to the three conditions available for a 10 percent copayment (10 percent of the retail cost), a copayment less than HAMP's second tier \$22 copayment. All statins are available for \$10 or less. Health Alliance expects to expand the program to include drugs for multiple sclerosis, rheumatoid arthritis and other rare diseases, using incentives based on compliance, both to encourage compliance and to reward it. It also moved lower value drugs to higher tiers and chose not to cover over-the-counter non-sedating antihistamines, the latter decision saving \$2 million.

PROGRAM RESULTS: A pilot group demonstrated increased compliance due to the new fourth tier; better blood sugar control; a move from rescue to control drugs for asthma; and fewer heart attacks, strokes, and kidney failures. Although utilization and monthly prescription drug costs increased for diabetes and asthma, medication adherence (medication possession rates) for diabetics and asthmatics increased 10.6 percent and 32.7 percent, respectively. Christina Barrington, HAMP's director of pharmacy, anticipates that the program will generate long-term medical savings.

Hannaford Brothers Company

BUSINESS DESCRIPTION: Founded in 1883 and based in Maine, Hannaford Brothers Company operates 167 supermarkets in the northeastern United States, employing more than 27,000 associates. Hannaford is a part of the Brussels-based Delhaize Group, a global food retailer with \$27.8 billion in annual sales.¹⁸

INITIATION OF VBID PROGRAM/STRATEGY: January, 2004, for the VBID program addressing incentives for selecting top-quality providers; January, 2008, for the non-invasive surgery program.

PROGRAM OBJECTIVES:

- Improve quality of care for employees.
- Provide safer care by promoting the use of minimally invasive surgery.
- Deliver care more efficiently.
- Reward employees for using higher performing providers.

PROGRAM COMPONENTS: Hannaford has promoted richer benefits for individuals using top-tier providers; reduced copayments for certain disease states; offered healthy behavior credits; maintained real-time data on biometric outcomes for patients and providers and offered incentives for using certain providers for minimally invasive procedures. Hannaford has pushed for changes in surgical standard practice in Maine hospitals toward less-invasive techniques. Because minimally invasive surgery for hysterectomies, appendectomies and gastric bypass can shorten the length of hospital stay, reduce complications and speed up return to work, Hannaford wanted to make these procedures more available to its workers.

Hannaford worked with Eastern Maine Healthcare Systems on the project. Surgeons at the system's 337-bed Eastern Maine Medical Center in Bangor now use minimally invasive surgery as the default for hysterectomies and a number of other procedures.

PROGRAM RESULTS: According Peter Hayes, Hannaford's director of associate health and wellness, Hannaford has realized improvements in diabetes biometrics and decreased the risk of heart attacks, and has saved both employees and the company money through incentives for choosing top-tier providers.

“For every medical dollar saved, we could save two to three dollars in absenteeism and productivity.”

Peter Hayes, Director of Associate Health and Wellness, Hannaford Brothers Company

City of Springfield, Oregon

BUSINESS DESCRIPTION: Springfield is a municipality with 241 employees, excluding fire and police, and 1,140 covered lives with a fully insured benefit plan.

INITIATION OF VBID PROGRAM/STRATEGY: December, 2005.

PROGRAM OBJECTIVES:

- Promote a value-based benefit design similar to the successful one embraced by the City of Asheville.
- Produce evidence that the model, which waives copayments and provides pharmacist counseling for diabetics, could positively affect business.

PROGRAM COMPONENTS: Based on the Asheville model, the city conducted a study called EMPOWER for patients with both type 1 and type 2 diabetes. Patients were enrolled from December, 2005, through February, 2006. Copayments and coinsurance were waived for drugs and physician office visits related to diabetes control, and the intervention group also received referrals to a participating pharmacist for individualized consultation. The program focused on improvement in HbA1c and cholesterol levels, medication adherence, and sick leave.

PROGRAM RESULTS: Upon entry into the program, the mean HbA1c levels were 7.25 percent and 7.32 percent for those in the control and intervention groups, respectively. After the waived copayment for both groups and additional counseling for the intervention patients, HbA1c levels decreased 30 percent and 50 percent for control and intervention groups, respectively.

The study also looked at the percentage of patients at an HbA1c target level of less than or equal to 7 percent, as recommended by the American Diabetes Association. Data showed that in the control group the percentage that achieved the target level decreased from 50 percent to 48 percent before and after the program, but for the intervention patients the percentage rose from 46 percent to 63 percent.

Mean serum cholesterol dropped by 8.7 mg/dL for the control group and 13.5 mg/dL for the intervention group, while LDL decreased by 1.6 mg/dL and 5.8 mg/dL for the two groups, respectively. On the other hand, HDL decreased in both groups. Sick leave decreased dramatically for those in the intervention group, from 83.7 hours to 68.4 hours, but rose for the control group, from 87.7 hours to 90.4 hours. Although the average cost per intervention patient was \$950, compared to \$500 per patient in the control group, intervention patients showed better glycemetic control and took fewer days off work.

Ardis Belknap, human resources manager for the City of Springfield, Oregon, is optimistic that the program may translate into improved health for those with diabetes – not immediately, but in the future – and remove barriers to access to care. She says that the value-based design has been adopted by other employers and organizations and is slated to include more diseases, such as depression. Because of the success of the program, the benefit became a regular offering available to all covered lives with diabetes in early 2008.

Midwest Business Group on Health (MBGH)

BUSINESS DESCRIPTION: Based in Chicago, the Midwest Business Group on Health is a not-for-profit coalition of 90-plus private and public employers that promotes collaboration to improve the cost and quality of health care.

INITIATION OF VBID PROGRAM/STRATEGY: Summer, 2007.

PROGRAM OBJECTIVES:

- Adopt a VBID program.
- Improve diabetes chronic disease management.
- Balance quality and costs.
- Demonstrate clinical improvements in employees with diabetes.

PROGRAM COMPONENTS: MBGH's VBID program, "Taking Control of Your Health," is part of the Diabetes Ten City Challenge in which employers provide employees, dependents and retirees who have diabetes with a voluntary health benefit, waive the copayments for diabetes medications and supplies, and help people manage their diabetes with the help of a specially-trained pharmacist "coach." "Taking Control of Your Health" is a multi-year effort to address diabetes and other conditions that represent a significant health issue in the seven-county Chicago metropolitan area and in North Carolina. About 200 people are participating in the program, representing employees from Hospira, Inc., the Jewish Federation of Metropolitan Chicago, and Pactiv Corporation. Jessica Westhoff, director of projects and communications at MBGH, says the consultations with pharmacists have been a positive addition to the waived copayments. MBGH is actively recruiting other employers to participate.

PROGRAM RESULTS: Although statistics on adherence to medications and costs associated with the program are not yet available, MBGH does indicate positive process measures after a year in the program: on average, patients' HbA1c levels dropped from 7.1 percent to 6.9 percent; systolic and diastolic blood pressure decreased from 129 and 78 to 125 and 76, respectively; LDL cholesterol fell from 92 to 87; and body mass index (BMI) fell from 32.3 to 31.

UnitedHealthcare

BUSINESS DESCRIPTION: UnitedHealthcare, part of the UnitedHealthcare Group, provides benefit plans and service solutions on a dedicated basis to large, multi-site employers, and coordinates network-based health care benefits and services on behalf of small to mid-sized employers, as well as individuals and families. UnitedHealthcare offers a full spectrum of consumer-oriented health benefit plans and services to 26 million covered lives.¹⁹

INITIATION OF VBID PROGRAM/STRATEGY: January, 2009.

PROGRAM OBJECTIVES:

- Help diabetics and pre-diabetics manage their conditions more effectively.
- Control employers' escalating costs in insuring this diabetes population.
- Delay the progression of the disease in people with diabetes.

PROGRAM COMPONENTS: The Diabetes Health Plan, a first-of-its-kind program, rewards diabetics and pre-diabetics who routinely follow medically proven steps to help manage their condition, including regular blood sugar checks, routine exams, preventive screenings and wellness coaching. The benefit incentives include some diabetes-related supplies and prescription drugs at no charge (insulin, oral anti-glycemics, anti-depressants, statins, angiotensin receptor blockers and ACE inhibitors), lower copayments for related doctor visits, and a voluntary screening model to help members determine if they have undiagnosed diabetes or suffer from pre-diabetes conditions. Participants also have access to online monitoring and education tools at no cost, and they must comply with diabetes and preventive care evidence-based guidelines to remain in the plan.

PROGRAM RESULTS: UnitedHealthcare anticipates that the Diabetes Health Plan will result in a savings of \$500 a year per member. According to UnitedHealthcare data, treating pre-diabetic patients costs \$5,000, while the average annual cost of diagnosed diabetics with complications, such as heart disease or kidney failure, can be as high as \$30,000.²⁰

“The Diabetes Health Plan provides incentives to empower diabetics and pre-diabetics to take charge of their health and well-being, helping them delay or prevent the onset of dangerous diabetic complications later in life, which in turn should help employers lower the cost of providing health benefits.”

Sam Ho, M.D.,
Executive
Vice President and
Chief Medical Officer,
UnitedHealthcare

EVIDENCE-BASED VBID PROGRAM EVALUATION

As employers seek to become more prudent purchasers of health care, they need value-based measurement tools to help assess the benefits of their expenditures. Avalere Health and its research partners – the Center for Value-Based Insurance Design, the National Business Coalition on Health and Pfizer Inc. – concluded in an analysis published in November, 2007, that employers lacked reliable ways to evaluate the value of the pharmacy benefits they purchase. Of the more than 175 existing pharmacy benefit-related measures identified in the analysis, only 4 percent focused on value. The researchers' white paper, "Assessing Value in Pharmacy Benefits/Do Employers Have the Right Tools?" studied the landscape of measures used to evaluate the U.S. health care system. The paper classified the measures according to whether they assess cost, quality or value, the latter defined as taking into account both cost and quality.²¹ In light of the current lack of value measures, the report recommends five areas for employers to consider:

- Acknowledge the tension between cost constraint and quality improvement by encouraging the development of measures of value.
- Acknowledge that health care services differ in the value they provide; thus, treat high-value services differently.
- Attain information on value across the health care system by investing in information technology and linking all claims data.
- Acknowledge that patients respond to both financial and non-financial incentives when it comes to medication adherence.
- Understand the value of benefits offered in terms of the entire health care spectrum.

MEASURING THE EFFECTS OF VBID PROGRAMS

An essential yet underestimated component of the VBID agenda is the requirement for rigorous evaluations of both the clinical and economic aspects of these innovative programs. An ideal evaluation should:

- Measure patient-reported clinical outcomes in addition to process measures that predict high-quality care.
- Use appropriate control groups. Controls make it possible to determine the extent to which observed clinical and economic changes are the result of the VBID design.
- Incorporate long-term follow-up to more effectively reveal the clinical gains of high-value services.
- Measure the non-medical benefits of health improvement, such as effects on productivity and disability.

The reported clinical and economic effects of VBID programs – from studies with marked variation in scientific rigor and often published in non-peer reviewed sources – shed some preliminary light on the impact of different cost sharing arrangements on health outcomes and utilization of services. These studies, for the most part, use a “pre-post” research design without a control group, are of short duration, and focus on process measures. One study, the “Impact of Decreasing Copayments on Medication Adherence Within a Disease Management Environment,” did use an appropriate control group to assess the effects of reducing copayments for five chronic medication classes in the context of a disease management program.¹² This study found increased adherence in four of the five classes and a decrease in non-adherence by 7 percent to 14 percent. It also concluded that the full financial and clinical consequences were difficult to assess because health gains and financial offsets associated with better adherence may accrue over time.

“In developing a value-based design, you have to consider the impact of productivity, not just the design’s effect on pharmacy or medical costs. The impact of lost time from presenteeism is significantly larger than time lost from incidental absence and must be measured.”

Thomas Parry, PhD,
President, Integrated
Benefits Institute

MODELS FOR EMPLOYERS

San Francisco-based Integrated Benefits Institute (IBI) offers a variety of tools to help employers benchmark their benefits programs and assess the health and productivity of their workforces. IBI President Thomas Parry, PhD, is concerned about conditions that may not incur high medical costs but do have a huge impact on productivity, such as depression, which is a large driver of presenteeism (working at impaired levels). IBI's models can measure a medical condition's contribution to lost productivity and identify interventions to increase productivity. Parry supports the use of valid employee self-reported data, such as health risk assessments, as a means of uncovering medical conditions that affect productivity. With this information in hand, he believes that employers can align benefits with employee needs.

Based on data from 10 corporations, a 2009 study reported in the *Journal of Occupational and Environmental Medicine* indicates that health-related lost productivity costs are 2 to 3 times greater than measures of direct spending alone. Researchers found that, when full costs are measured rather than medical costs alone, health conditions such as depression, obesity, arthritis, and other musculoskeletal problems have a stronger influence on driving up health care costs. To fully gauge health-related productivity costs, researchers measured direct medical and pharmaceutical spending along with calculations of the monetary value of lost productivity when employees were absent or working at impaired levels known as "presenteeism." The study notes that employers have not historically assessed costs in this way, preferring instead a "siloed" approach that seeks to manage single health-cost categories, such as medical visits or pharmaceuticals, through benefit-package design.²²

Additionally, Hewitt Associates has developed a real-time Value-Based Design Model that analyzes the effect of reducing employee cost sharing for specific health care services and increasing employee cost sharing for others. The consulting group is helping companies develop evidence-based VBID programs that reduce or remove financial barriers for health care services proven to be effective for treating certain conditions, while potentially increasing cost sharing for services that have proven to be less effective. The model's objective is to create value-based designs that enable employers to minimize costs while ensuring that their employees receive the highest quality health care. Hewitt creates ROI scenarios for employers based on specific diseases, employee participation in disease management programs, and focus on target audiences.

Prime Therapeutics, a pharmacy benefits manager owned by 10 Blue Cross and Blue Shield plans, and subsidiaries and affiliates of those plans, has developed its Efficiency Program. The program stratifies members by risk for a future adverse medical event, provides a metric to understand how well pharmacy dollars are being spent, and allows for the implementation of targeted clinical programs and benefit designs based on member needs. The program focuses on therapeutic categories in which there are proven health outcomes, using predictive modeling and medical claims data to identify the high-risk members, and pharmacy claims data to determine who is adherent to their medications. An efficiency report documents utilization and spending; an efficiency ratio displays how effective an employer is in spending pharmacy dollars. Prime Therapeutics designs value-based benefits and clinical intervention programs aligned with certain conditions. They include exemption from step therapy and prior authorization for high-risk members, a lower cost share for drugs and services for those at high-risk, and inclusion of disease management and compliance programs.

Aetna is in the midst of a multi-year prospective study that is looking at a group of heart attack patients who have no copayments for their cardiac drugs versus a control group that has a normal copayment for the drugs. The objective is to measure the effect of the copayment on compliance and on the incidence of second heart attacks.

ALIGNING INCENTIVES: THE EFFECT OF VBID

If an immediate monetary return on investment (ROI) on direct medical expenditures is a major objective of a value-based insurance design, then the program sponsors may be disappointed. The VBID proposition implies that all benefits that come from improvement in health are to be considered, encompassing benefits beyond those in expenditure on health care. Value implies cost effectiveness, not cost savings, although VBID offers a set of principles that can help guide the inevitable increased reliance on demand-side containment initiatives. **The goal of the health care system is to improve health, not save money.**⁹

In the long run, VBID will guarantee more health per dollar spent by increasing the use of highly valued services and decreasing use of those of lesser value. The economic impact of a VBID program, however, largely depends on the details of each program. The likelihood of lowering medical expenditures is directly related to the decreased use of medical interventions that do not produce value.²³

The goal of the health care system is to improve health, not save money.

WAYS TO MEET COST TARGETS

Assuming that high-value and low-value services can be adequately distinguished, it is possible to achieve any cost target by financing the costs of lower copayments for high-value services through higher copayments for those services of lesser value. Distributing costs over a wide list of services helps minimize the copayment increase for any one service. However, because health and financial outcomes are dependent not only on benefit structure, but also on such elements as care management initiatives, pricing, and provider reimbursement and incentives, it is difficult to determine ROI exclusively as a result of VBID.

VBID will not necessarily save money by reducing the use of expensive services; however, there is a possibility that it could succeed if services are well targeted to those patients at high risk for expensive adverse outcomes. Employers with more targeted programs incur lower costs because only a limited number of services are eligible for lower copayments. Most of the financial and clinical gains are still realized because patients who benefit most from the services pay the lower copayment.

One concern is whether or not health status from extra health services will improve enough in the targeted population to offset the costs associated with lower copayments and more use. Measuring adherence to therapy and clinical outcomes against baseline measures for the therapy would help quantify and qualify ROI. Other savings may be accrued through improved productivity and lower disability resulting from increased utilization of highly valued services.

The following financial scenarios are likely to occur, depending on the goals of the VBID program and the willingness to raise copayments on low-value services:

- Targeted copayment reductions only. Result: higher value for each market basket of services because of incentives to use services that produce high levels of health benefit. Uncertain effect on total health care cost trend.
- Targeted copayment reductions and targeted copayment increases to offset short-term costs of increased utilization of high-value services (actuarial equivalence). Result: higher value for each market basket of services because of incentives to use services that produce high levels of health benefit. Equal or lower costs, depending on the extent of savings arising from offsets from improved health and lower utilization of low-value services because of higher copayments.

EVALUATING ROI

The Pacific Business Group on Health, a San Francisco-based employer coalition, and the California HealthCare Foundation engaged PricewaterhouseCoopers (PwC) to assess the state of research evidence regarding quality-based benefit design, which they define as, “a process of designing a health plan that explicitly takes into account the effect that a design element will have on the delivery of health care and health outcomes of covered individuals.” PwC reviewed about 100 articles published since the year 2000, both from health services research (HSR), or academic, peer-reviewed literature, and from applied health benefits research (AHBR), or what is called “gray literature.” In general, PwC concluded that the HSR literature yielded few studies that were specific to benefit design tactics, while the AHBR literature lacked sufficient disclosure for employers to judge the quality and strength of the evidence.²⁴

The study focused on six elements of quality-based tactics/benefit design strategies that seek to increase the net value of health care spending: 1) health plan options, eligibility and premium contributions; 2) provider selection and differentiation of provider performance; 3) inpatient/outpatient benefit design; 4) pharmacy benefit design; 5) health promotion/risk reduction and chronic care management; and 6) provision of price and quality information to health care consumers. In general, the study found that for four of the six tactics – excluding pharmacy benefit design and health promotion programs – there was only partial evidence that they improved the quality of care and limited or reduced costs. The study also found that there was little good evidence in the reviewed literature indicating a positive ROI, a factor that is one of the challenges facing employers who are determining whether they should implement value-based insurance designs.

Other findings include:

- Employees’ share of premium costs is still the most important factor in their choice of a health plan.
- Consumers are generally willing to accept less choice of providers if their share of costs is lower, which can lead to short-term savings. In turn, employers are less interested in offering benefits plans that have high-quality providers but cost more.
- Case studies suggest that high-deductible plans can lead to lower claims in the short term, over a two- or three-year period.

- Some evidence indicates that greater cost sharing reduces spending, but none demonstrates maintenance of, or improvement in, quality of care.
- Health promotion programs can improve workers' health and productivity, but only over many years.
- Evidence that consumers' use of health care information has an impact on their health or their health care purchasing decisions is limited.

It may be safe to say that, although there is no conclusive evidence as to ROI accrued through VBID programs, **a plan design that aligns incentives to encourage use of high-value services and discourage use of services of marginal value will improve the effectiveness and efficiency of utilization of health care resources.**

ESTABLISHING A SYNERGY WITH ONGOING HEALTH CARE REFORM

Balancing cost growth and quality gaps in health care is no easy task, but there are several tools being tried to address quality improvement while containing costs on regional and national levels. Frequently mentioned reform platforms include: health information technology (HIT), consumer-directed health plans (CDHPs), pay-for-performance (P4P), comparative effectiveness research (CER), and patient centered medical homes (PCMH).

Providing Information Through Technology. Ultimately, sophisticated information systems will tie together electronic medical records, clinical information (e.g., comparative effectiveness research, evidence-based guidelines, etc.), and financial data to create “personalized benefits” that encourage value and discourage waste. An IT infrastructure is not yet established that will allow consumers better access to unbiased information on quality and cost of care, a situation that causes unwanted clinical effects that are directly related to misaligned financial incentives. Access to more information in and of itself doesn't produce value, but combining an HIT infrastructure with VBID principles should facilitate attainment of this goal. Such health information technology, which the Obama administration and the U.S. Congress have deemed crucial to an economic recovery, is clearly consistent with the objectives of VBID and other health care reform initiatives.

In a 2007 *Health Affairs* article, Troyen Brennan, M.D., executive vice president and chief medical officer of CVS Caremark, and Lonny Reisman, M.D., chief medical officer of Aetna, wrote that information technology should be “fused” into benefit design and used to identify by reported claims which patients have suffered a medical event or what medications patients are taking. Then it would be possible to change the benefits to reflect individual needs.²⁵

VBID/CDHPs: Complementing Each Other. Consumer-directed health plans and VBID complement each other by aligning clinical and financial incentives to encourage the use of high-value services and discourage services of lesser value. Similar to VBID programs, some CDHPs offer no deductible, first-dollar coverage for certain medications, preventive care, and services that are critical for chronic disease patients. Both models promote greater consumer responsibility and use evidence-based information to induce consumers to be more cost-conscious and purchase clinically appropriate, high-value care. The next generation of consumer-driven care will require more attention to value-based insurance design so as to ensure that patients have access to appropriate and high-quality care. This can be accomplished so long as insurers carefully integrate financial incentives into benefit design, build advice about evidence-based medicine into their plans and thoroughly use the increased facility of information technology in their efforts.²⁶

Physician Payment Reform. One primary principle behind P4P and PCMH is to reward providers for achieving quality measures, increase preventive care, and decrease overuse of services, all based on evidence-based medicine. For the health care system to become efficient, it must achieve an alignment of incentives, both non-financial and financial, for all stakeholders. Patients should have minimal or no barriers to accessing those services for which providers receive incentives; if they do, this constitutes a direct conflict with the fundamental tenets of these initiatives.

Patient centered medical homes, an idea which has been in formation for several decades, also shares many of the same features as VBID: evidence-based support for clinical decisions, information systems, provider incentives and quality improvement along with cost effectiveness. The medical home concept endorses the delivery of primary care that is accessible, continuous, comprehensive, family-centered, coordinated, compassionate and culturally effective. It emphasizes collaboration between patients and personal physicians. Several organizations have put forth basic principles for medical

homes that focus on practice redesign that is delivered in response to patients' needs and preferences; adoption of health information technology to facilitate evidence-based integrated care; structuring of payment to align with measurable improvement in care; and accountability.

Comparative Effectiveness Research. Comparative effectiveness research assesses how various procedures or interventions compare with each other for a given medical condition for a specific group of patients, and thus contributes to maximizing the value realized from those procedures or interventions. In 2007, the Institute of Medicine published "Learning What Works Best: The Nation's Need for Evidence on Comparative Effectiveness in Health Care." The report states:

"Within the overall umbrella of clinical effectiveness research, the most practical need is for studies of comparative effectiveness, the comparison of one diagnostic or treatment option to one or more others. In this respect, CER involves the direct generation of clinical information on the relative merits or outcomes of one intervention in comparison to one or more others."

Without a strong investment in CER, patients and providers are more likely to face unintended "across-the-board" restrictions on the provision of valuable care. Although some have argued that CER should include cost-effectiveness analysis, recent legislative efforts to expand the national capacity for CER have focused on outcomes and effectiveness, and not cost.²⁷

VBID's synergism with key reform initiatives – health information technology, CDHPs, P4P, comparative effectiveness and medical homes – is indicative of the new role that value is playing in the utilization and purchase of health care. It also is indicative of a trend toward integrated health care, away from the siloed perspective of traditional health care and an emphasis on individual consumers and their responsibility for their own well being.¹⁵

"Within the overall umbrella of clinical effectiveness research, the most practical need is for studies of comparative effectiveness, the comparison of one diagnostic or treatment option to one or more others."

Learning What Works Best:
The Nation's Need for
Evidence on Comparative
Effectiveness in Health Care,
Institute of Medicine, 2007

VBID IN A TRANSFORMED HEALTH CARE SYSTEM

Payers desiring to optimize health gains per dollar spent should adopt a “clinically sensitive” design that removes barriers and provides incentives to encourage desired behaviors. VBID programs become easier to create as more is learned about high-value services through comparative effectiveness research, and easier to implement with the wider dissemination of health information technology.

While barriers to VBID implementation certainly exist, such as concern over beneficiary reaction to the program and implementation costs, private purchasers are increasingly adopting VBID programs as they acknowledge that **efforts to control health spending through patient cost sharing should not produce preventable reductions in quality of care.** This realization also has spread to the Medicare program; legislation entitled, “Seniors’ Medication Copayment Reduction Act of 2009,” was introduced in Congress (S.1040) to require Medicare to test the impact of reduced cost sharing for medications used to treat 15 common clinical conditions in the Medicare population.²⁸ Moreover, the June, 2009, MedPAC Commissioners Report acknowledges VBID as an important part of a more efficient Medicare system.²⁹

Experience in the field indicates that VBID programs are feasible, acceptable by all vested stakeholders, and have been very well received by beneficiaries. VBID can address several important inconsistencies in the current system and work synergistically with other initiatives such as HDHP, DM, PCMH, and P4P programs. By allowing different cost sharing provisions for different services, value can be enhanced without removing the role of cost sharing in the system overall. Targeted efforts to reduce utilization of low-value services are more likely to contain cost growth while maintaining quality of care.

We do not expect VBID to solve our health care crisis. Technological advances will continue to generate upward pressure on costs, and the ability of individuals and their employers to afford such coverage will be increasingly strained. However, the inability to construct the perfect benefit design should not lead to abandonment of key VBID principles that explicitly aim for more efficient allocation of health care resources. **The alignment of financial incentives – for patients and providers – would encourage the use of high-value care, while discouraging the use of low-value or unproven services, and ultimately produce more health at any level of health care expenditure.** The cost of maintaining the status quo, in terms of higher spending and worse health outcomes, is undesirable.

The alignment of financial incentives – for patients and providers – would encourage the use of high-value care, while discouraging the use of low-value or unproven services, and ultimately produce more health at any level of health care expenditure.

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