National Business Coalition on Health

A Research Agenda For Value-Based Benefit Design: Recommendations From A Multi-Stakeholder Workshop

Table of Contents

1. Introduction and VBBD Background 3

- Value-Based Benefit Design
- About NBCH
- Developing a Research Agenda
- About the White Paper

2. What Is VBBD and the Evidence for VBBD? 4

- VBBD within the Larger Context of Value-Based Purchasing
- Evidence on Benefit Design Change
- Evidence on Provider Selection Strategies

3. Why are Employers Interested in VBBD: Evidence from VBBD Implementation 6

4. Challenges and Conditions for Advancing VBBD 8

5. Enhancing Receptiveness to VBBD: The Research Agenda 9

- Research Imperatives
- Methods Limitations
- Need for Sound Comparison Groups
- Developing Data Sources for VBBD Research

6. Next Steps: How the Employer and Research Community Can Move the VBBD Agenda Forward 12

- Getting Started with VBBD Experiments
- Conclusion

Appendix 1: Key VBBD Research Questions to Be Answered 15

Appendix 2: Acknowledgments 17

Appendix 3: What Employers Should Know about Value-Based Benefit Design: A Summary of Literature (From A Presentation by Coalition Directors to Employer Members) 19

References 21

1. Introduction and VBBD Background

Value-Based Benefit Design

The National Business Coalition on Health (NBCH) is a national membership organization representing almost 60 purchaser-based health coalitions dedicated to supporting employer engagement in value-based purchasing strategies. One such strategy, conceived to encourage consumer selection of high value clinical services and high performance providers, is "value-based benefit design (VBBD).[1]" In collaboration with NBCH's 501(c)3 non-profit research affiliate, the Community Coalitions Health Institute (CCHI) and the Agency for Healthcare Research and Quality (AHRQ), NBCH produced a one day workshop, entitled, "Building the Research Agenda for Value Based-Benefit Design" to examine perspectives on VBBD from multiple stakeholders, examine the current evidence supporting VBBD, and develop recommendations on future areas of investigation for employers, plans, and researchers.

VBBD has been broadly defined to mean benefit design that aligns coverage and consumer financial incentives with evidence-based services/interventions and high performance providers, (i.e. providing variable access according to variable value.) VBBD can potentially address a wide range of coverage issues – from preventive services, to treatments essential to chronic condition management, to acute care interventions (e.g. non-invasive vs. invasive surgery), to tiered provider networks – and the deployment of co-pay incentives to motivate and support targeted consumer behaviors.

During its relatively short life, VBBD has centered on the theory that reducing or removing financial barriers to essential treatments and high performance providers will steer consumers towards value-based health care and improved health status. While the scope of VBBD has been defined variously by different stakeholders, there is general consensus that benefit design changes must be accompanied by education and strategies for consumer engagement in order to have impact.

About NBCH

NBCH has a sustained interest in and portfolio around VBBD. NBCH has issued a number of white papers, "Promoting Consumerism Through Responsible Health Care Benefit Design (2006)," "Assessing Value in Pharmacy Benefits: Do Employers have the Right Tools (2007)," and "Voices of Value-Based Purchasing (2007)," a compendium of views of health care leaders on value in health care. In addition, NBCH developed a summary of evidence relating to value-based design elements incorporated in the NBCH "eValue8 Request for Information (eV8 RFI)." eValue8 is a national tool used to collect standard information for employers from health plans and for several years has included a series of questions to examine value-based design and leverage health plan adoption of VBBD.

Developing a Research Agenda

In November 2008, NBCH in collaboration with AHRQ convened VBBD stakeholders – employers and coalitions, health plans, and researchers – to discuss the approach and examine how to maximize value of VBBD. The one-day meeting highlighted current knowledge of VBBD from both the practice and academic perspectives, and engaged participants in discussion about "what we need to know." Workshop participants generated a series of recommendations for stakeholders: employers, plans, and researchers, on future directions for research and practical application of VBBD. While consumers were not directly part of the dialogue, the issue of engaging consumers is an important research and implementation priority.

1 Several inter-related terms are commonly used in discussions of value in health care purchasing. Value-based purchasing takes the perspective of purchaser actions. Value-based insurance design is the approach first developed by Drs Fendrick and Chernew that specifically targets benefit related incentives. The VBBD is often used to describe insurance design plus consumer engagement activities, though there is no universal understanding of the scope of VBBD. One of the recommendations generated at this workshop is the need to reach a more common definition and understanding of VBBD terminology.

The workshop agenda was developed collaboratively by NBCH with the input of AHRQ and a VBBD Advisory Committee that provided input and peer review of the program and program materials. The workshop was funded by multiple sponsors to support participation by academic experts, coalition directors, and coalition employer members. Appendix 1 provides a list of advisors and sponsors.

About the White Paper

This white paper is based primarily on presentations and discussion at the "Value-Based Benefit Design: Building a Research Agenda" workshop in November, 2008. This meeting highlighted the growing emergence of value-based benefit design (VBBD) as a means of encouraging appropriate health care choices by consumers and providers. It included a discussion of evidence and practical implementation of VBBD, along with a discussion of consumer perspectives. Following a review of existing knowledge, participants were asked to recommend both specific research questions and approaches to increasing the evidence base around VBBD.

This White Paper provides a brief summary of the workshop discussions and lays out the case for continued experimentation and collaborative research that brings together the employer and research community. This paper is organized into the following sections:

- What is VBBD and the Evidence for VBBD?
- Why are Employers Interested in VBBD: Evidence from VBBD Implementation
- Challenges and Barriers to VBBD Understanding and Adoption
- Enhancing Receptiveness to VBBD: The Research Agenda
- Next Steps: How the Employer and Research Community Can Move the VBBD Agenda Forward

Appendices include a detailed list of key questions to be answered as a part of these research efforts, a list of individuals participating in development in the workshop, and a 2008 summary of evidence prepared by NBCH for its members.

2. What Is VBBD and the Evidence for VBBD?

In setting the stage for the workshop, Peter Lee, JD, the Executive Director for National Health Policy of the Pacific Business Group on Health (PBGH) noted that VBBD refers to the creation of consumer incentives—through the creative mix of health insurance designs and other employee benefits—to "nudge" or encourage individuals to make better decisions at all levels, including choosing high-value, high-performance plans, providers, treatments, and services. VBBD has been adopted by a number of employers as a component of benefit design to encourage uptake of behaviors and services associated with better outcomes.

There have been several high-profile adoptions of VBBD approaches by pioneering employers such as Pitney Bowes, Colorado School District 11, and the State of Maine. Representatives of these organizations participated in the meeting to discuss some of the motivating factors underlying the VBBD innovations and their experiences with the programs. In spite of some evidence from early adopters, many employers have voiced reservations about the potential for VBBD to impact cost trends or health outcomes. As such, employers are looking for a stronger evidence base that validates the existing programs, shows the impact of controlled interventions, and provides guidance on the criteria for a successful implementation.

VBBD within the Larger Context of Value-Based Purchasing

For NBCH and its member coalitions, VBBD fits into the broader goal of promoting value-based purchasing. The four core elements of value-based purchasing are:

- Standardized performance measurement
- Transparency through public reporting
- Payment that rewards the right care, done right
- Engaged consumers who have appropriate incentives to make informed choices

PBGH's framework includes a vision for value based purchasing and a definition of VBBD elements. VBBD incorporates measurement of effectiveness, reporting, incentives, and engagement. It aligns with the elements of value based purchasing but emanates from the consumer perspective, using evidence, incentives and tools that engage consumers around the specific decisions they face and target actions they undertake. The member or consumer is the center of VBBD, using information, tools, support, and incentives to make appropriate choices about their providers, self-care and treatment options. In this patient-centered model, "value" is defined through the eyes of the consumer (not just the provider or health plan).

According to Lee, the goal of VBBD is to provide the right information, evidence, and tools to help consumers make the choice that is right for them and consistent with evidence of high quality health care. What is considered essential health care for one person, moreover, may not be for another. Thus the key is to be sensitive to the individual. In addition, a broad array of strategies and tools (e.g., telephone coaching, web-based tools) should be developed to help consumers make decisions, as they vary significantly in their interests and ability to understand and act on information.

Evidence on Benefit Design Change

Expert participants at the meeting were asked to discuss a representative set of available academic and applied research on VBBD. The workshop included case examples from organizations that have implemented aspects of VBBD and a discussion of some findings published in the peer reviewed and "gray" (non-peer reviewed) literature. Prior to the meeting, NBCH prepared a review of evidence relating to aspects of VBBD, which is included as Appendix 2 of this paper. The Center for Value-Based Insurance Design also has a list of publications at www.sph.umich.edu/vbidcenter/publications.htm.

Mark Fendrick, MD, presented current research on the impact of value design. Dr. Fendrick first coined the term "value based insurance design," (VBID) linking insurance incentives to clinically effective services. Dr. Fendrick noted that VBID can be viewed as a potentially superior alternative to a commonly employed strategy today, increased cost sharing with consumers. There has been a substantial increase among employers in the use of "one-size-fits-all" cost sharing for clinician visits, diagnostic tests, and prescription drugs. Cost-sharing is recognized as a strategy to reduce utilization and is generally assumed to result in lower costs. Current cost-sharing approaches generally do not discriminate based on the underlying "value" of the service being provided. It treats essential and non essential services with the same broad brush. For example, in most plans out-of-pocket (OOP) costs for physician office visits are the same for a follow-up appointment after bypass surgery as they are for a visit to the dermatologist for acne.

In spite of the perception that cost-sharing equates with cost reduction, studies show that in many instances, cost-sharing is not effective in reducing total costs over a period of time. A growing body of evidence demonstrates that cost shifting leads to decreases in the provision of both essential and non-essential care, which may lead to more acute and emergency care for preventable conditions. High copayments have been demonstrated to reduce adherence to appropriate medication use and affect adherence to mammography screening guidelines. Theoretically, VBBD represents a solution that avoids many of the problems of increased cost sharing by adhering to the following basic principles:

- Medical services differ in the clinical benefit provided; a one-size-fits-all approach fails to address individual needs based on health status and demographic characteristics.
- Value-based packages adjust out-of-pocket costs based on an assessment of the clinical benefit achieved; high value services have lower out of pocket costs. This eliminates the major down side of generic cost sharing strategies that can lead to lower utilization and deleterious outcomes.
- Cost-sharing can increase for low-value services, thus encouraging reduced utilization and more rational use of services.

VBBD challenges the assumption that increased cost-sharing lowers costs by noting in many instances, reduced utilization may not be a desirable goal: reduced use of medications for patients with chronic disease can result in exacerbations and higher costs of medical care. The same paradox may apply to preventive care: higher initial investment may result in gains of lower overall costs. While the evidence is strong that increasing costs to individuals reduces use, the evidence is incomplete on the premise of VBBD: investing in selected essential medications and services will

"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."—Mark Fendrick, MD

result in better outcomes or lower costs. Testing that hypothesis is criticall element of the research agenda for VBBD.

Evidence on Provider Selection Strategies

Meredith Rosenthal, ScD, of the Harvard School of Public Health addressed emerging VBBD approaches to steer consumers towards higher performing (or more efficient) physicians, hospitals, or other providers. A number of employers and health plans have developed high performance network approaches.

However, before these approaches are adopted in a widespread manner, better measurement techniques are needed to precisely differentiate high from low performing providers. In addition, more evidence is needed both to link high performance network to improved outcomes and to demonstrate the effectiveness of programs to steer patients to higher performing providers.

Dr. Rosenthal reviewed three recent experiments for workshop participants on use of incentives for employees to choose high-performing hospitals or physicians; these programs generally create performance "tiers" based on quality and cost performance.

- **Tiered hospital network:** A study by Scanlon et al evaluated hospital tiers set up by a large manufacturer. This company altered its benefit design to create an incentive for unionized workers to select hospitals meeting The Leapfrog Group's safe hospital standards. Under this arrangement, employees had to pay 5 percent coinsurance (roughly $400) if they chose a non-Leapfrog hospital, but the copayment was waived for Leapfrog hospitals. The study results were inconclusive. For medical admissions, employees in one union migrated to the Leapfrog facilities, while there was no impact for members of the other union. For surgical admissions, the program had no impact on hospital choice across both unions.
- **Tiered physician network:** A Taft-Hartley Fund examined its physician network using efficiency and quality metrics and claims data. Based on this analysis, approximately 5 percent of physicians were excluded from the preferred provider organization (PPO). After the incentives were put in place, 81 percent of patients who had seen an excluded physician in the prior year chose not to return to that doctor, compared to a baseline 54-percent attrition rate (a 27-percentage point difference). Most of these individuals got care elsewhere, and there was no evidence of increased emergency department (ED) use or other problems as a result of this program.
- **Physician performance profiles:** The Massachusetts Group Insurance Commission used all-payer data from six participating health plans to create physician performance profiles. Physicians (primarily specialists) were placed into tiers based largely on their individual cost and quality scores. Tier structures varied by health plan. A member survey found that roughly half of members knew about the tiers and 19 percent knew their doctor's tier. Among those who knew, nearly half (48 percent) said that this information mattered, while 40 percent trusted the tiers as a proxy for value. When asked about who they trusted to provide such information, consumers trusted medical societies the most, with both the health plan and providers being trusted by 20 percent of respondents.

Emma Hoo, Director of Value Based Purchasing, Pacific Business Group on Health discussed a PBGH/ California HealthCare Foundation report that evaluated existing academic and applied research on incentives designed to improve consumers' health care decisions by having them take into account cost and quality. The report concluded that incentives tend to drive "participation" rather than "outcomes." It also found that incentives are often small and therefore yield small effects. In addition, the report raised concerns that incentives tend to be most attractive to those who are already "on board" and thus would have made the same decision or acted the same way even in the absence of the incentive. Key issues include sustaining consumer activation and behavior change over time.

An effective VBBD strategy requires research to support a better understanding of the non-financial barriers to consumer engagement and adherence with evidence-based care. As the current studies and programs show, additional research is needed to better understand the drivers for non-compliance and the impact of best practice communication strategies, and to quantify the marginal gains from incremental incentives. [1]

3. Why are Employers Interested in VBBD: Evidence from VBBD Implementation

Interest in VBBD stems in large part from employers' responsibility for the escalating health and productivity costs of chronic disease. In fact, chronic diseases such as hypertension, heart disease, diabetes, depression, and asthma account for an estimated 45 million sick days and $7.4 billion in lost productivity each year. Including the cost of "presenteeism" (i.e., suboptimal performance while at work due to illness), these costs are even higher, with back/neck pain, depression, fatigue, and other chronic pain being the highest-cost conditions. This section provides a brief summary of employer initiatives presented to workshop participants.

The bulk of the evidence related to the impact of VBBD comes from organizations that have implemented various aspects of benefit design reform. While the results of these experiments have been promising, they also illustrate the need for rigorous evaluations to help users understand which elements of the program were effective. This information is necessary to inform future replications and implementations.

Jack Mahoney, MD, the recently retired corporate medical director for Pitney Bowes reviewed a number of employer based examples of value-based benefit design innovations designed to target drug spending most effectively. Program implementations examined in the workshop included:

Proctor & Gamble Value-Based Prescription Coinsurance Design

Proctor & Gamble (P&G) implemented a value-based prescription coinsurance design over a period of time. Under this plan, P&G stopped covering lifestyle drugs and put in place a two-tier system for covered drugs with medications for chronic conditions such as asthma, diabetes, and coronary artery disease placed in a higher tier with more generous coverage. As a result, drug compliance and persistency increased among those individuals with these chronic conditions. Pharmaceutical spending rose, but total costs per member have fallen for those with asthma, hypertension, high cholesterol, and diabetes.

State of Colorado, the Carle Clinic, and Pitney Bowes

The state of Colorado, Carle Clinic, and Pitney Bowes added "value-based" tiers, moved known-to-be-effective medications for targeted conditions to a more preferred status (with lower out of pocket costs for consumers), and/or put disease management programs in place. For asthma, these programs have led to significant increases in the number of controlled drug users and reductions in the exclusive use of rescue drugs.

Dr. Mahoney reported that these organizations have also seen significant increases in the percentage of diabetic patients who have achieved "optimal" compliance with drug regimens, including a 10.6 percent increase at the Carle Clinic (from 76 to 85 percent), a 12 percent increase for the state of Colorado (from 50 to 56 percent), and a 12.5 percent increase at Pitney Bowes (from 72 to 81 percent). At Pitney Bowes, the compound annual growth in costs has been much lower for those conditions that have been targeted by VBBD—hypertension, asthma, and diabetes—than for coronary artery disease and osteoarthritis, which were not a major focus for the company. Dr. Mahoney noted that employer support for value-based design may emanate either from their expectations of savings or their expectations for health improvement. He believes that it is important not to over-project savings based on the experience of Pitney Bowes as an early adopter. More realistically, employers that use VBBD approaches can expect to meet a goal of slowing the cost trend for chronic conditions, which translates to cost aversion rather than savings.

Employer participants in the workshop described other applied initiatives to add value to health spending:

Partners in Quality

Partners in Quality (PIQ) is an employer-driven incentive plan for primary care physicians. Under the theory that primary care often drives more costly inpatient care, PIQ focuses on encouraging primary care providers to deliver evidence-based medicine (as defined by protocols) to employees. High performing physicians are recognized as "distinguished quality physicians" or DQPs, and are eligible to receive a cash bonus of up to 20 percent of all charges for the year. (The percentage of eligible physicians who qualified as DQPs reached 42.3 percent in 2006, up from 10 percent in 2003.) Employees also have an incentive to go to high-performing physicians. The PIQ program has led to substantial improvements in the quality of care (it is too early to determine the cost savings). Improvements from 2003 to 2006 included the following improvements: an 11 percentage point increase in the generic dispensing rate, from 33 to 44 percent, a 12 percentage point increase in the percentage of diabetics getting two or more hemoglobin A1c tests each year, from 39 to 51 percent, a 17 percentage point increase in the percentage of women aged 21 and older

receiving a PAP test, from 37 to 54 percent, and a 5 percentage point increase in the percentage of women getting mammograms, from 44 to 49 percent.

Colorado Springs School District 11

Colorado Springs School District 11 provides health care coverage to 6,400 individuals, including 3,400 employees/retirees and 3,000 dependents. As part of a broad array of value-based purchasing initiatives (which also includes lifestyle and wellness programs, disease management, pharmacy benefit management, and participation in the national Bridges to Excellence program), District 11 has created financial incentives for members to have minimally invasive procedures, which are surgeries performed through small incisions or natural orifices. The goal of this program is to reduce the trauma associated with surgery, thus accelerating recovery. Under this program, members have lower copayments if they choose minimally invasive surgeries ($400 lower for inpatient procedures and $200 lower for outpatient procedures). In phase one of this initiative (implemented July 2007), incentives were created for minimally invasive colectomy, cholescystectomy, and hysterectomy. Phase two, initiated in July 2008, involved bariatric surgery and appendectomy. Future plans call for the inclusion of breast biopsy, anti-reflux surgery, capsule endoscopy, and hernia surgery. The program has saved roughly $500,000 a year over the last two years. Program results also show quality improvement gains resulting in shorter absences and improved return to activities of daily living post operatively.

Maine State Employee Health Commission

The Maine State Employee Health Commission (MSEHC) set up hospital tiers with differential benefits for each tier. The goal was to reduce the rapid growth in medical expenses and to drive quality improvement by encouraging the public disclosure of provider performance, establishing attainable performance benchmarks (that are adjusted periodically), and giving members tools and incentives to make better decisions. The Commission chose this approach as an alternative to traditional cost-shifting tactics. During the first phase, hospitals could achieve preferred tier status by completing the Leapfrog Group's safe practices survey, making "good early-stage progress" in implementing recommended safe practices from the Maine Health Management Coalition (MHMC) medication safety survey, and meeting or exceeding national averages on CMS core clinical measures. To encourage employees and dependents to seek care at these hospitals, any service provided by these hospitals is not subject to the annual deductible.

In phase two, Maine required that preferred hospitals achieve "blue-ribbon status" with respect to patient safety and clinical quality, according to criteria set by MHMC. The member incentive to seek care at these facilities remained the same. Results from this phase show that 27 hospitals have achieved preferred status (despite the more challenging performance benchmarks), nearly double the 14 hospitals that achieved it in phase one. The number of hospitals improving their medication safety scores also increased substantially, as did scores on CMS core measures. Most importantly, perhaps, evidence suggests that state employees and dependents are responding to the incentives. Claims data show a five percent shift in outpatient services from non-preferred to preferred hospitals. Beginning October 1, 2008, patient incentives to choose a preferred hospital increased. Employees and dependents now face a $100 per day copayment for inpatient admissions, but this fee is waived for those who seek care at a preferred hospital.

4. Challenges and Conditions for Advancing VBBD

Employer participants in the workshop recognized the challenges to wide scale implementation of VBBD. Although the approach is conceptually appealing, Employers and health plans will not fully embrace without credible additional evidence on its impact on outcome, costs, absenteeism, and productivity. Many employers, particularly smaller ones, remain skeptical. Employers also recognize that employees must be effectively engaged in order for VBBD to be successful. Identifying effective communication vehicles and decision support tools is an important part of the VBBD evaluation process.

Research is emerging on effective implementation strategies and the communications challenges to VBBD[2]. In mid-2008, the Midwest Business Group on Health (MBGH) conducted focus groups with employees to determine their understanding and reaction to VBBD . Key findings from these focus groups suggest that the transition from concept to effective widespread implementation may be challenging in the context of consumers' prevailing health beliefs and behaviors:

- The premise of VBBD programs, that higher quality yields lower cost, remains counterintuitive to employees' perceptions of the consumer marketplace, which associates higher quality with higher cost. As a result, many employees do not trust the validity of the programs or their employer's motivations in offering them.
- Employees have the desire and confidence to play an active role in managing their health, but their motivation to act is hindered by time, money, and lack of knowledge.
- Employees want flexibility to choose from different employer-provided programs to help them manage their health and the costs of care but remain skeptical of employer efforts to steer them toward or away from a particular program.
- While a monetary incentive can encourage employees to get started in managing their health, it is not enough to ensure ongoing participation in health management programs.
- Levels of employee awareness and understanding of existing benefits programs, including those with VBBD features, remain low; misinformation from the "grapevine" can add to this confusion.
- An individual's perceptions and motivation to participate in a VBBD program is influenced by his or her health status. Newly diagnosed individuals may be more receptive both to new approaches to using benefits and to changing health behaviors.

Widespread, effective adoption of VBBD requires a number of conditions to be present to advance purchaser, consumer, and provider engagement. These are:

- Conditions to advance purchaser engagement include creating and communicating the business case, quantifying the value, documenting the evidence, and enhancing the availability of performance information.
- Conditions to advance consumer engagement include price and quality transparency, product choice, communication and health education, and consumer decision support infrastructure and services based on trusted information. Performance reports alone are not enough; actionable information must be supported by user-friendly tools.
- Conditions to advance provider engagement include documenting the evidence, demonstrating a clear link to quality improvement, and getting health plans, employers, and other sponsors to effectively collaborate with the provider community.

5. Enhancing Knowledge of VBBD: The Research Agenda

Creating conditions in which VBBD can be wisely implemented requires a more compelling evidence base, developing methods for measuring "value" at the provider, plan and patient level, and addressing operational challenges. These issues are highlighted briefly here:

Research Imperatives

Research Imperative 1: Evidence of Effectiveness

The previous section laid out the limited evidence to date on the effectiveness of VBBD. At present, this data set is not robust enough to inform or stimulate widespread employer or plan adoption. VBBD represents a very different kind of approach to cost savings and quality improvement. Employer and plan leaders will not invest in VBBD until they are convinced that a long-term business case can be made for the program and that evidence exist on how to implement VBBD successfully. At best, VBBD requires an upfront investment and must be cost neutral in the near term. Research is needed on the long and short term costs and benefit of VBBD in varying settings, with different populations, and with different incentive designs. In addition, because VBBD is seldom implemented in isolation, further research is needed to determine the impact of VBBD versus these other programs, such as disease management. Research is also needed to determine the synergistic effect of combining VBBD with other programs, such as decision support tools.

Research Imperative 2: Meaningful Performance Information to Guide Incentives

Little information is available about those things that consumers care most about—the relative performance of hospitals, medical groups, treatments, and individual physicians. While the performance information that is needed to guide the creation of incentives often exists at the health plan level (e.g., information on costs, network limits, value pricing), methods to produce reliable data at other levels are not yet available. As a result, it can be quite difficult to set up tiered networks, incentives, and other VBBD-related activities. Research

is needed on valid performance metrics for different entities in the health care system. Ongoing research is needed on how to present information to users to guide quality-based decision making as well as how to use performance information with incentives to improve provider quality.

Research Imperative 3: Evidence on What Does and Does Not Work in Benefit Design

More granular information is needed on what specifically does and does not work with respect to benefit design. Researchers must help users to recognize which findings can be extrapolated to other populations and settings, and which may not be generalized. Operational research needed includes VBBD approaches to:

- Health plan options, eligibility, and contributions
- Provider selection and performance differentiation
- Inpatient and outpatient benefit design
- Pharmacy benefit design
- Health promotion, risk reduction, and chronic care management
- Consumer engagement tools and incentives, with particular need for information on effective approaches in differing populations of age, gender, race ethnicity, or occupation

Perhaps the biggest benefit design research issue of interest is determining the level of out of pocket contributions (e.g., copayments, deductibles, for preventive, diagnostic, and therapeutic services.) Employers want to establish a benefit design strategy that creates incentives "to do the right thing" while not creating perverse incentives that might drive poorer health outcomes. Appropriate out of pocket costs may vary by clinical condition and/or by individual, and thus will not be uniform across an entire group.

Research Imperative 4: Knowledge of Effective Communication and Education Strategies

As the MBGH focus groups make clear, much work needs to be done in understanding employee motivation and educating employees to maximize the value of their benefits and their own health behaviors. To that end, further study is needed on the role of communications in making VBBD initiatives (such as provider tiers combined with incentives) effective, including which communication strategies and vehicles work best with particular populations. More research is needed to ensure that VBBD strategies can be implemented in a culturally and linguistically appropriate manner and in a way that will reduce, not exacerbate, health disparities.

Research Imperative 5: Addressing Operational Challenges: Administrative, Legal, and Human Resource Barriers

Applied research is needed to assist employers in designing strategies that address other administrative, legal, and human resource issues related to VBBD. Some operational needs include:

- **Need for design/administration assistance:** Employers need a health plan and/or vendor to help design and administer VBBD. Until recently, it was difficult to find a health plan willing to do this. Pitney Bowes has used a pharmacy benefits manager to help. Recently, more health plans have started working with employers on VBBD, including Aetna and Wellpoint.
- **Integrating incentives into standard plan design (SPD):** Incentives must be integrated into the SPD, with appropriate legal protections. They cannot be "add-ons" to a plan (e.g., a gift certificate). Because incentives must be built in, there is a ramp up time frame and a long term commitment that may be a concern to some plan sponsors.
- **Legal issues:** Privacy issues exist with VBBD, particularly those related to HIPAA (Health Insurance Portability and Accountability Act) requirements. Employers must be sure to design programs that are compliant with HIPAA and other state and federal legal requirements.
- **Difficulties of "mass customization":** VBBD will work best if benefit designs are "mass customized" so that structures vary according to individual needs. Health plans and employers need operational support to administer differential incentives and other "personalized" benefit designs.
- **Potential human resources issues:** Human resource issues can arise if employees perceive inequality due to one member having different benefits or discounts than others (which can occur if benefits are customized to individual needs). Employers need support in proactively communicating with employees to avert human resources challenges.
- **Potential provider challenges:** Employers and plans need to work collaboratively with providers to ensure they are comfortable with the methodologies used to create tiers. The failure to take this step can lead to significant challenges, including potential legal action.
- **Potential need for multiple tiers:** There may be a need to create multiple tiers to reflect different performance characteristics of providers. Providers—particularly medical groups and hospitals—are often good at one aspect of care, but not at others. Plans may need to create separate quality / efficiency separate tiers for each condition. This approach can be complicated and has the risk of being confusing to consumers.

Methods Limitations

Workshop participants discussed some of the methodological weaknesses of specific VBBD studies and the general problem of conducting research in settings not designed for that function. Methodological challenges are one reason that solid, academic-based evidence on benefit design is relatively limited. Many studies have small sample sizes and no control group - rather, results are based on pre- and post-implementation comparisons of key metrics. In addition, issues exist with respect to disease classification and progression and use of administrative (rather than medical record) data. In these non-experimental settings it is sometimes challenging to attribute observed changes solely to the intervention – in this case, VBBD – since many other changes are occurring in the health and workplace environment. As a result, even existing published studies have many limitations that make it difficult to generalize findings.

Need for Sound Comparison Groups

Researchers and participants concurred that it is critical to employ appropriate comparisons in VBBD research design. Meredith Rosenthal discussed some practical research design options that may result in valid effectiveness measurements in spite of research limitations. A comparison group is always needed to determine effect of an intervention, but this does not necessarily have to be a randomly assigned control group. Pre and post-implementation data, now commonly used to show an effect, are not adequate because environmental factors other than the research intervention may have been the true cause of a measured change. Dr. Rosenthal suggested that employers and researchers pioneering VBBD initiatives look for "natural experiments" that provide for a comparison group, such as local groups that are not involved in the initiative or even comparisons with national averages. Ideally, similar data should be collected across sites to facilitate aggregate learning.

Developing Data Sources for VBBD Research

Researchers also recommended looking at a variety of data sources and types of changes to evaluate the impact of a benefit design intervention. National datasets such as the Medical Expenditures Panel Survey (MEPS) are available as a source to identify any statistical correlations between particular benefit packages and improved utilization and outcomes related to care for chronic conditions. The MEPS database tracks copayments, deductibles, inpatient and outpatient utilization, expenditures, and other factors. It could theoretically be used to examine potential unintended consequences from VBBD activities.

VBBD research initiatives should clearly state the metrics for evaluation and use a variety of evaluation points. For example, VBBD evaluation data could include the following as measures of success:

- Short- and long-term clinical outcomes
- Short- and long-term changes in employer and employee health care costs
- Changes in productivity
- Changes in indirect costs, such as absenteeism and presenteeism

"There are lots of opportunities to find comparison groups without randomizing anyone. There are many ways to conduct useful applied research, but doing so requires careful consideration and user input at the design phase. PhDs do not have a monopoly on this kind of research. Plenty of people are available to provide guidance on how to design an experiment without charging a lot of money for this advice, and there are many ways to do an evaluation well without spending a lot of money or getting sued."—Meredith Rosenthal, Ph.D.

- Administrative costs (e.g., data collection)
- Unintended consequences (e.g., adverse selection) or increased demand

Finally, because the success of different strategies could potentially vary depending on a myriad of variables, qualitative research such as surveys or interviews with employees and employers can be used to identify and explore variables of interest, including the following:

- **Payer:** Do program results vary by payer (e.g., private insurance, Medicare, Medicaid)?
- **Beneficiary turnover:** What impact does employee or beneficiary turnover have on a program's success? How high can turnover be before strategies will be rendered ineffective?
- **Supporting strategies:** What is required administratively to support the program and to reduce the risk of employee rebellion and other barriers? What role, if any, do employee and family education, communication, health literacy, on-site wellness programs, and community collaboration play in supporting VBBD initiatives (such as incentives to choose high-value providers)?
- **Target diseases:** Does the program work better for some diseases than others?
- **Target benefits:** Does the program work better in some benefit areas than others, such as for preventive care visits, medication adherence, and smoking cessation?

Participants recognized that it may never be possible to conduct randomized double blind trials in employer settings. However, some limitations of research can be overcome through early collaborations between employers and researchers, using multiple databases and data sets, and by validating quantitative findings with quantitative and supplemental research.

6. Next Steps: How the Employer and Research Community Can Move the VBBD Agenda Forward

In spite of challenges, workshop participants remained intrigued by the concept of VBBD. They noted that research – even with methodologic limitations, is critical to moving the VBBD agenda forward. There are many questions that need to be answered before employers, health plans, employees, and providers will embrace the concept and be able to implement it successfully. To address this need, participants identified some available approaches for collaborative research and identified key questions of interest. AHRQ and NBCH are committed to working together to promote this research going forward, as outlined below. (See the Appendix for a list of the major questions that need to be answered.)

Participants in the workshop recognized that even with limited evidence, VBBD implementation is occurring "in the field." New models of research are needed to provide evidence needed to support employer decision making in the near term. While it will not be possible to conduct true randomized experiments, introduction of more academic research models could inject needed objectivity and independence as assured through peer review, and systematic identification of caveats and challenges. Participants recommended that employers strive to partner with researchers in a model of "demand-driven research." For employers moving forward with benefit design innovations, a partnership with researchers in both the design and dissemination phase can provide a platform for more robust evaluation data.

"The key issue is not can VBBD work, but when and how does it work—that is, what structures need to be place and what issues need to be resolved in order to make it work? Answering this question requires a formal, comprehensive strategy for evaluation."—Irene Fraser, Ph.D.

Getting Started with VBBD Experiments

Effective VBBD research also requires cross-site collaboration to identify patterns in the conditions for success and to enable would-be adopters to determine if an approach is likely to work in their environment. NBCH and AHRQ could play a facilitative role in this area, encouraging sites to collaborate, bringing together those with the questions (employers) and those with the expertise in answering them (researchers), and creating a learning environment and meeting place to share information on potential best practices.

From a practical perspective, the recent MBGH study provides practical advice to employers and researchers that are interested in getting started with VBBD experiments. This study's recommendations include the following:

- Design and administer programs with the real lives of employees in mind. More specifically:
  - ➢ Understand the pressures and limitations employees face by spending time out in the field with them. Know what keeps them up at night.
  - ➢ Keep things simple, and make it easy, yet worthwhile, for employees to participate.
  - ➢ Know how employees want to receive information about programs.
  - ➢ Give employees a sense of control by providing "choice" in program design and helping them understand "where to go for what."
  - ➢ Consider what employees will or will not "give up" (e.g., when introducing a tiered physician program, gauge how willing they will be to change doctors, especially if most already have a primary care physician).
  - ➢ Partner with vendors who will tailor their programs according to what employees need and value.
- Raise awareness of VBBD design features and the rationale behind them through early and ongoing communication efforts.
- Reframe employees' perceptions of the health care marketplace (i.e., explain that higher quality can equal lower cost).
- Consider monetary incentives to get employees "in the store" (e.g., to take an online health assessment, get preventive care), but consider the human side of motivation for ongoing participation, such as communication efforts, team challenges at the local level, peer persuasion, management participation in programs, and social support networks (e.g., for smoking cessation, weight loss, physical fitness).
- Align the right incentive with the right message at the right time (e.g., target the newly diagnosed as soon as possible when they are eager for information and support).

Conclusion

VBBD has the theoretical potential to address many of the perverse incentives or non-incentives in the health care system, and by doing so, better engages consumers in more effective benefit and health management. VBBD could:

- Increase compliance with evidence-based care, thus leading to improved health status and the potential for direct and indirect cost savings most likely through trend modification.
- Serve as a complement to disease management programs, which generate lingering doubts among company executives.
- Drive greater employee engagement in managing their care by lowering barriers to managing disease and creating incentives for wellness.
- Create closer partnerships and working relationships with the

A Potential Model for This Type of Research

One potential model for making this type of research a reality can be found in AHRQ's ACTION (Accelerating Change and Transformation in Organizations and Networks) initiative, a model field-based research network designed to promote innovation in health care delivery by accelerating the diffusion of research into practice. The ACTION network includes partnerships with 15 large provider networks that collectively provide health care to more than 100 million Americans. These organizations, which include health plans, hospitals, medical practices, and long-term care facilities, often have onsite researchers or research groups associated with them. They perform research on a task order basis, providing very quick turnaround (usually about a year between the time the initial questions are asked and answers are generated). The results tend to be quite pragmatic, and often are implemented before official completion of the study. For example, Denver Health developed an initiative to reduce waste through use of Toyota's Lean methodologies, quickly implementing those ideas that were found to be effective, and then developing a toolkit to help others do the same.

This type of approach might work well in the area of benefits design and VBBD. ACTION research is still carefully done but tends to be more applied in nature and to involve potential users of the research in the initial design, including employers, health plans, and providers. In fact, users often generate the research questions to be answered (which tend to be very practical in nature). The results focus more on the details of how programs are implemented, with correspondingly less attention to describing study methodologies (which nevertheless are quite sound). In most cases attempts are made to replicate the program in various types of sites, so as to refute and/or prevent the "it-won't-work-here" argument. More information on ACTION can be found at http://www.ahrq.gov/research/action.htm.

healthcare provider/practitioner community.

The health benefit structure now in place has its own incentives, many of which are not fully acknowledged. In deciding whether to adopt VBBD, employers should recognize:

- Benefit design and reimbursement methods have incentives built into them (for consumers and providers, respectively).
- Incentives interact with one another and drive all stakeholders' behaviors, including those of providers. The impact of incentives on all stakeholders should be considered.
- Most of the key challenges today have to do with the alignment of incentives, including discouraging "bad" and encouraging "good" behaviors; efficiently targeting incentives to reward changes in behavior while still encouraging those who are already "there"; and facilitating good patient-doctor relationships without adding excessive burdens.

Company leaders must assess current and pending evidence on VBBD within their organization's own context before deciding whether to implement and/or expand a particular program. When there is conflicting or insufficient evidence, remember that the absence of good evidence neither proves nor disproves claims or assumptions about innovations. To assess the relevance of VBBD in their own covered population, employers must dig into their own data and review evidence on the approach under consideration. Employers should consider methodology of prior studies, potential biases, what facts, assumptions, or beliefs are presented in the study, and how the research examined the views of multiple stakeholders. Employees should also be engaged early in understanding their role in VBBD and its potential value for them.

A handful of large employers and health plans have adopted VBBD as a way to reduce healthcare costs. Many, however, remained unconvinced of the merits. Early adopters among health plans are most often first working on removing barriers to essential pharmaceuticals by reducing out of pocket expenses. Most health plans have not developed the full infrastructure —information technology, new pricing systems, and other structures—that is needed for VBBD. Plans may well be waiting for clear signals from customers—or strong evidence of effectiveness before jumping wholeheartedly into a VBBD strategy.

Employers also vary in their degree of interest in VBBD. Those who remain unconvinced of the merits will likely not change their views until they see evidence that the strategy can yield a positive return on investment. Many employers have a short time horizon (particularly given the average four-year tenure of a corporate CEO), and thus are less likely to be interested. Employers that tend to retain their employees for many years are more likely to be interested, as they take a long-term view and are willing to evaluate the impact of VBBD over a decade or more.

Looking forward, employer and health plan interest in VBBD seems likely to grow. Chief financial offers (CFOs) are starting to appreciate the potential of VBBD, as they understand the impact of poor health on their companies. Nearly half of CFOs believe that poor employee health has forced the company to hire a larger workforce than would otherwise be needed. While some companies continue to rely on higher cost sharing through use of high-deductible plans and higher co-pays, more employers are recognizing that there is more to cost-cutting than just shifting costs. The leaders of these companies realize that a handful of major chronic conditions are responsible for the lion's share of cost increases; they are searching for benefit solutions that address both direct costs of providing health care benefits and indirect costs of absenteeism and lost productivity.

This workshop produced by NBCH with input from AHRQ examined the available, published, and experiential evidence to support employer decision-making around VBBD. The group recognized the VBBD is in its infancy, with many gaps both in published research and in our understanding of which practices have an impact on outcomes. The group acknowledged the conceptual attractiveness of VBBD and the fact that many employers and plans are moving forward with adoption of VBBD strategies. They recommended collaboration between employers, coalitions, and researchers to proactively design evaluation into natural VBBD experiments in the field. The group also identified data and expert resources that might be available to plans and employers as they move forward. Lastly, participants in the workshop generated an extensive list of questions that could guide future research on VBBD.

Appendix 1: Key VBBD Research Questions to Be Answered

Key questions that need to be answered through future research on VBBD are categorized and listed below:

Developing a Common Definition and Vision of VBBD

- What is the common definition of VBBD, and what are its key elements?
- What is the goal for VBBD? How does this align with the need for broader health system reform?
- What is the best name for this initiative? To some individuals "value-based benefits design" feels too legalistic, with implications for plan documents. Some have calling the approach "value-based health strategy" or "value-based health management."
- How should the term "value" be defined? Is there a consistent core definition for value that still allows individuals or other stakeholders to apply the concept from their vantage point?
- What does VBBD mean to all stakeholders and perspectives?
- What is the division of responsibility between the individual and the plan design?
- How does VBBD fit within the affordability issue, which is the main impetus for consumer-directed health plans? What is the role of consumer responsibility in VBBD?
- What impact does VBBD have on employer perceptions? To what extent do employers understand the cost, value, and quality components of VBBD?

Improving the Evidence Base Related to VBBD

- What is the business case for VBBD, and/or how can it be developed? What is the required upfront investment, and what are the mid- and long-term paybacks? The business case should lay out the potential ROI from VBBD, focusing not just on direct health care costs, but also indirect costs, such as its impact on productivity, presenteeism, and absenteeism. Existing tools from the Integrated Benefits Institute and others can help employers to estimate these costs and the potential for improvement.
- How does the economic environment affect the business case for VBBD? Does the current economic environment support VBBD?
- How do different stakeholders measure ROI, and what are the implications of these different approaches?
- How does VBBD fit into employer goals that tend to be short term in nature? How can one balance these short-term goals versus the desire for improvements in long-term clinical outcomes and associated benefits?
- What will it take to get more organizations to adopt VBBD? How can existing data be used to jumpstart this process, and what are the next steps?
- What works with respect to engaging consumers and changing behaviors among employees?
- Are financial incentives really a critical factor in VBBD? If so, what types of incentives work best, and how large do they need to be? At present, the messages appear to be mixed with respect to the required size of incentives.
- How can one analyze data and outcomes after implementing a VBBD strategy to measure its effectiveness?
- Are there negative effects from VBBD on consumers?
- What services are most underutilized, and how much will it cost to address the barriers to these services? Are there any overutilized services that could be reined in to help pay for these expenses in the short term?
- Which disease states offer the best opportunity for VBBD?

Making VBBD Work Better

- What should the communication/education strategy look like related to VBBD? Specifically, how can employers, health plans, and others be convinced of the merits of VBBD, and, in turn, how do employers and health plans effectively communicate the merits of VBBD to members/consumers and physicians? Narrow communications must be broadened to all relevant stakeholders.
- How do employers work with existing data to develop a good VBBD strategy? What additional data and information should be collected beyond what employers and/or health plans already collect? What information is required versus "nice to know"?
- How can the provider and consumer sides of VBBD be integrated effectively? How can physicians be brought along to support VBBD and to drive clinical quality improvement, an element critical to success?
- How can plans or employers engage physician "champions" for VBBD or otherwise engage them in engaging their patients through incentives?
- How can an employer fund a VBBD project?
- How does VBBD fit in with other models of health care and health benefit improvement, for example, primary care medical home programs?
- How can VBBD be used to reduce health care disparities or improve access to care?
- How can the various nuances of VBBD be effectively communicated to employers, particularly smaller employers that may not view VBBD as being at the top of their agendas?
- How does VBBD fit with organized labor? How can union leaders be convinced of the merits of VBBD, and of the need for changes in benefit design that encourage use of high-value services while discouraging use of low-value ones?
- How can communities and various stakeholders within them be encouraged to talk about VBBD? How does one explain VBBD to someone who is not at all familiar with the concept? There is a need for common messaging through templates and evidence based communication strategies that take a public health perspective.
- How can small employers implement VBBD? Can they do it on their own, and/or is there a way to work with coalitions, health plans, and consultants/brokers to implement VBBD?
- Are there additional case studies of employers that have been successful in this area? If so, how can one learn about their experiences?
- How often do benefit plans need to be redesigned?
- How does VBBD fit into health plan benefit language (summary plan descriptions)? How do VBBD variations in benefits fit into legal and ethical requirements and employee perceptions related to related to confidentiality and equity? How can employers demonstrate fairness in human resources administration if the benefits are not the "same" for all? Is this discriminatory?
- What can other stakeholders do to promote VBBD?

Appendix 2: Acknowledgments

This workshop was conceptualized in collaboration with the Agency for Healthcare Research and Quality (AHRQ), and partially supported by AHRQ. AHRQ has had a history of providing evidence-based reports on value-based purchasing. Recent AHRQ reports have included "Consumer Financial Incentives: A Decision Guide for Purchasers," "Strategies to Support Quality-based Purchasing: A Review of the Evidence," "Consumer-Oriented Strategies for Improving Health Benefit Design: An Overview," and "Identifying, Categorizing, and Evaluating Health Care Efficiency Measures." Other AHRQ resources, including data bases and grants for research support contribute to the infrastructure available for research on value-based benefit design.

NBCH thanks the following faculty members for their time and expertise, both for participating in the November 12 meeting and for contributing to the development of this white paper:

- Andrew Webber, President and CEO, NBCH
- Irene Fraser, Ph.D., Director, Center for Delivery, Organization, and Markets, AHRQ
- Peter Lee, Executive Director, National Health Policy, Pacific Business Group on Health (PBGH)
- Jack Mahoney, MD, Chief Medical Officer, The Center for Health Value Innovation
- Dennis White, Senior Vice President of Value-Based Purchasing, NBCH
- Meredith Rosenthal, Ph.D., Harvard School of Public Health
- Emma Hoo, Director of Value Based Purchasing, PBGH
- Mark Fendrick, MD, University of Michigan
- David Hom, Center for Health Value Innovation
- Charles Murray, Director of Risk Related Activities, Colorado Springs School District11
- Frank Johnson, Executive Director, Maine State Employee Health Commission

NBCH and AHRQ also recognize the efforts of Susan Dorsey, Vice President, and Liza Greenberg, RN, MPH, Senior Consultant for their work to develop the agenda and produce the workshop. Larry Stepnick and Liza Greenberg authored this white paper, and the VBBD Advisory Committee provided guidance to staff.

Workshop Advisory Committee

(affiliations as the time the Committee was convened)

Jill Berger, Vice President, Benefits, Marriott International

Troy Brennan, MD, Chief Medical Officer, Aetna

Becky Cherney, President/CEO, Florida Health Care Coalition

Cheryl A. DeMars, CEO, The Alliance

Franz Fanuka, Director, Healthcare Business Organizations, US Managed Markets, sanofi aventis

A. Mark Fendrick, M.D., University of Michigan Medical Center

Irene Fraser, Ph.D., Director, Center for Delivery, Organization and Markets, AHRQ

Neil Goldfarb, Vice Chair for Research, Dept. of Health Policy, Jefferson Medical College

Peter Hayes, Director Associate Health and Wellness, Hannaford Bros Co

David Hom, Consultant

Emma Hoo, Pacific Business Group on Health

Frank Johnson, Executive Director, Employee Health & Benefits, State of Maine

David Lansky, PhD, President and CEO, Pacific Business Group on Health

Doug Libby, Executive Director, Maine Health Management Coalition

Jack Mahoney, MD, Director, Strategic Health Initiatives, Pitney Bowes

Jim Murray, Ph.D., Senior Director, Outcomes Research and Management, Merck

Duane Putnam, Director, Employers-Coalitions, Pfizer, Inc.

Meredith Rosenthal, Ph.D, Associate Professor, Harvard School of Public Health

Dennis P. Scanlon, Ph.D., Associate Professor of Health Policy & Administration Department of Health Policy & Administration The Pennsylvania State University

Kirk Woodruff, Director, National Strategic Alliances & Accounts, Ethicon Endo-Surgery, Inc.

NBCH STAFF

Susan Dorsey, Vice President, National Business Coalition on Health

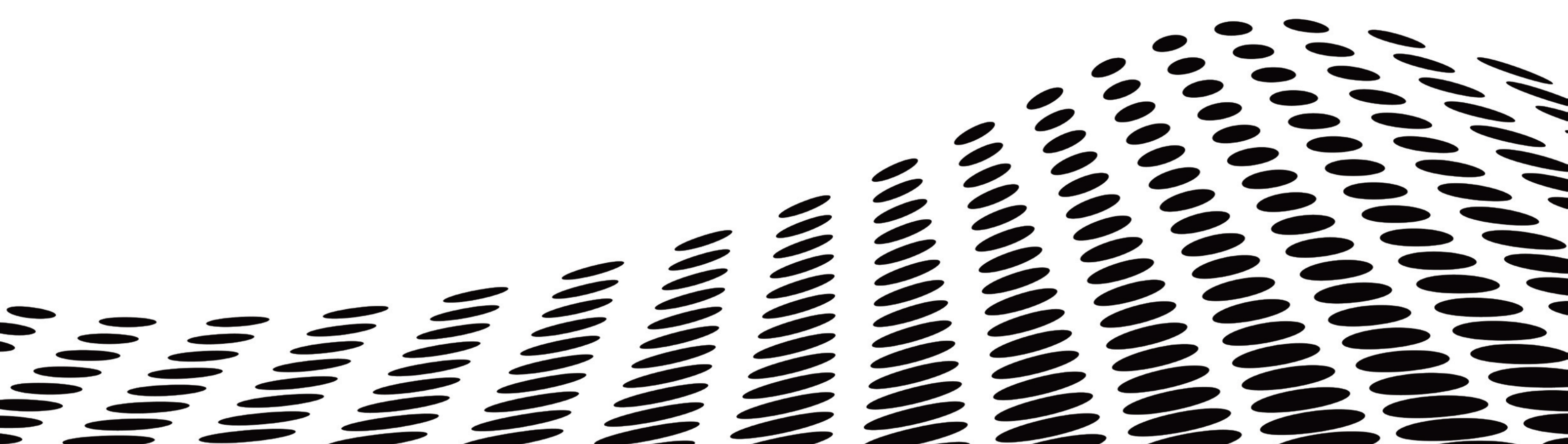
Liza Greenberg, RN, MPH, Senior Consultant, National Business Coalition on Health

Andrew Webber, President and CEO, National Business Coalition on Health

Dennis White, Senior Vice President, National Business Coalition on Health

Program Sponsors

In addition to support from the Agency for Healthcare Research and Quality, NBCH and CCHI recognize and thank the following sponsoring organizations.



Appendix 3: What Employers Should Know about Value-Based Benefit Design:

A Summary of Literature

(From A Presentation by Coalition Directors to Employer Members)

Bibliography

VBBD Rationale from the Literature

Many researchers have outlined the conceptual framework for VBBD (sometimes called Value- Based Insurance Design or VBID).[3] VBID "encourages the use of services when the clinical benefits exceed the cost and likewise discourages the use of services when the benefits do not justify the cost."[4]. The Center for Studying Health Systems Change notes, "Innovative benefit designs include incentives to encourage healthy behaviors; incentives that vary by service type, patient condition or enrollee income; and incentives to use efficient providers."[5] VBBD proponents note that increased cost sharing is also an element of VBBD – thus the challenge is to create an evidence based mix of services, information, and incentives that promote improved health and management of chronic disease.[6,7]

Evidence for Aspects of Value-Based Benefit Design

Evidence Base for Impact of Formulary Design and Cost Sharing: Many researchers have shown that changes in a formulary, particularly relating to cost sharing, have an impact on patient out of pocket costs and subsequent utilization of medication[8,9,10]. This has frequently been studied in terms of adverse clinical and adherence outcomes due to therapeutic drug discontinuation when higher patient costs are imposed.[11,12,13] A review article examining 132 studies concluded, "Increased cost sharing is associated with lower rates of drug treatment, worse adherence among existing users, and more frequent discontinuation of therapy. For each 10% increase in cost sharing, prescription drug spending decreases by 2% to 6%, depending on class of drug and condition of the patient. The reduction in use associated with a benefit cap, which limits either the coverage amount or the number of covered prescriptions, is consistent with other cost-sharing features. For some chronic conditions, higher cost sharing is associated with increased use of medical services, at least for patients with congestive heart failure, lipid disorders, diabetes, and schizophrenia." [14] A Medicare study showed that increased drug costs to patients, when they result in decrease in utilization of essential drugs, may not be a cost savings to plan sponsors due to increases in costs of hospitalization and acute care.[15]

Evidence Base for Reducing Financial Barriers to Key Medications to Improve Outcomes: A descriptive study of one large employer (Pitney Bowes) that modified pharmacy benefits showed that patient incentives can increase appropriate pharmaceutical use while decreasing medical costs.[16] Using assumptions regarding use of medications under various financial scenarios, researchers have developed estimates showing reductions in morbidity and mortality under no cost or low cost drug benefit scenarios.[17,18] One study perhaps most applicable to the VBBD concept of selective cost sharing showed adverse outcomes relating to cost sharing for essential drugs, but not for "non-essential" drugs.[19] A 2008 study of reduced co-pays plus disease management interventions estimated the effects on improvements in medication adherence in the range of 7-14% for most drug classes. [20]

Evidence for Public Reporting (general): There is some evidence that public reporting of performance information influences patient perceptions of health care providers, particularly hospitals; there is little evidence that performance information is widely used for decision making. , Some studies found that while public reporting does not widely affect consumer decision making,[21,22] it promotes quality improvement initiatives by the affected providers[23]; other studies have found market share changes as a result of quality reporting[24]. At least one study suggested that there may be a down side to public reporting, in that it may cause physicians to avoid patients who pose a risk to quality ratings[25]. Many studies support the finding that high volume hospitals have better clinical outcomes, the underlying concept of Centers of Excellence (COEs)[26]. VBBD elements are those incentives and actions that engage consumers to promote uptake and adoption of the quality services – including COEs and tiered networks.

Evidence of Impact of Differential Co-pay for Quality "Tiers" on Patient Decisions: There is little evidence that information alone will change behavior, although research has shown that information may affect patient perception of providers and facilities[27]. Researchers are still studying the effect of combined information and incentives to promote selection of high quality and efficient providers and facilities.

Evidence of Effectiveness of Strategies to Change Physician Behavior: One study on the impact of cost information on physician prescribing practices showed that physicians changed prescribing patterns, but not in a

manner that impacted overall or patient costs[28]. An AHRQ review of evidence and other studies suggest that no single strategy conclusively changes provider behavior. However, Cochrane studies and other reviews showed that more multi-faceted, targeted interventions appear to be more effective than non-specific engagement programs.[29,30]

Evidence on Financial Incentives to Providers: Pay for performance is one strategy for creating provider performance incentives linked to quality metrics. Evidence is not conclusive on the effect of pay for performance. A study in one integrated health care system reported that the group developed medical management processes in response to pay for performance incentives that improved diabetes-related HEDIS indicators, the measures used in the study[31]. A similar pilot study in California found good results in a small group of patients that if extrapolated to a population, would show significant quality improvements and incentive payments[32]. Studies show that guideline based CVD processes are linked to improved outcomes[33], but are inconclusive on the effect of pay for performance[34]. A review of physician incentive programs found variation in the effect, with some positive effects but the potential for a negative effect on access to care for the sickest patients[35].

Evidence Base for Offering and Incentivizing a Preventive Services Benefit: A CDC Community Preventive Services Task Force evidence review, as reported in the CDC Purchaser Guide, resulted in a recommendation that purchasers offer benefits for identification, management, and coordination for co-morbid conditions including depression[36], obesity[37], alcohol[38] and tobacco screening[39] for members. Studies have found that increased cost sharing negatively impacts use of preventive health care services[40]. One workplace study used variable cost sharing to reduce overall plan cost, while preserving benefits for preventive health care services. Rates of preventive services were maintained under the flexible cost sharing arrangement[41]. No studies were found that specifically examined maternity related VBBD strategies.

References

[1] PBGH and the California Health Care Foundation. Assessing Quality-based Benefit Design. April, 2006. Available at: http://www.pbgh.org/news/pubs/documents/PBGH-CHCFQualityBenDesignPWC-04-2006.pdf

[2] See press release Tuesday November 11th, 2008 "Employees Wrongly Think "You Get What You Pay For" In Health Care" at: https://benefitslink.com/pr/detail.php?id=42449

[3] Fendrick AM, Chernew ME. Value-based insurance design: aligning incentives to bridge the divide between quality improvement and cost containment. Am J Manag Care. 2006 Dec;12 Spec no.:SP5-SP10.

[4] Chernew ME, Rosen AB, Fendrick AM. Value-based insurance design. Health Aff (Millwood). 2007 Mar-Apr;26(2):w195-203. Epub 2007 Jan 30

[5] Tu HT Ginsburg PB Benefit Design Innovations: Implications for Consumer-Directed Health Care. February 2007. Center for Studying Health Systems Change. Washington, D.C. Issue Brief No. 109.

[6] Brennan T, Reisman L. Value-Based Insurance Design And The Next Generation Of Consumer-Driven Health Care Health Affairs, 26, no. 2 (2007): w204-w207 doi: 10.1377/hlthaff.26.2.w204.

[7] Rosen AB, Braithwaite RS. Linking Cost Sharing to Value: An Unrivaled Yet Unrealized Public Health Opportunity17 April 2007 | Volume 146 Issue 8 | Pages 602-605 .

[8] Huskamp, H. A., P. A. Deverka, et al. (2003). "The Effect of Incentive-Based Formularies on Prescription-Drug Utilization and Spending." New England Journal of Medicine 349(23): 2224-2232.

[9] Goldman, DP Joyce GF, Escarce JJ et. al. Pharmacy Benefits and the Use of Drugs by the Chronically Ill JAMA. 2004;291:2344-2350.

[10] Huskamp, HA, Deverke PA, Epstein AM et. al. The Effect of Incentive-Based Formularies on Prescription-Drug Utilization and Spending. NEJM December 4, 2003 Number 23 Volume 349:2224-2232.

[11] Gibson, TB, Mark TL, McGuigan KA et. al. The Effects of Prescription Drug Copayments on Statin Adherence. Am J Manag Care. 2006;12:509-517.

[12] Heisler M, Langa KM, Eby EL, Fendrick MA Kabeto MU, Piette JD. The Health Effects of Restricting Prescription Medication Use Because of Cost. Medical Care. July 2004.42(7):626-634,

[13] Rice T, Matsuoka KY. The impact of cost-sharing on appropriate utilization and health status: a review of the literature on seniors. Med Care Res Rev. 2004 Dec;61(4):415-52.

[14] Goldman, DP, Joyce GF, Zheng Y. Prescription Drug Cost Sharing Associations With Medication and Medical Utilization and Spending and Health. JAMA, July 4, 2007—Vol 298, No. 1. 61-69.

[15] Hsu J, Price M, Huang J. et al. Unintended Consequences of Caps on Medicare Drug Benefits. NEJM Volume

354:2349-2359 Number 22June 1, 2006

[16] Berger J. Economic and clinical impact of innovative pharmacy benefit designs in the management of diabetes pharmacotherapy. Am J Manag Care. 2007 Apr;13 Suppl 2:S55-8.

[17] Choudhry NK, Avorn J, Antman EM, Schneeweiss S, Shrank WH. Should patients receive secondary prevention medications for free after a myocardial infarction? An economic analysis. Health Aff (Millwood). 2007 Jan-Feb;26(1):186-94.

[18] Rosen AB, Hamel MB, Weinstein MC, Cutler DM, Fendrick AM, Vijan S. Cost-effectiveness of full Medicare coverage of angiotensin-converting enzyme inhibitors for beneficiaries with diabetes. Ann Intern Med. 2005 Jul 19;143(2):89-99.

[19] Tamblyn R, Laprise R Hanley JA et. Al. Adverse Events Associated With Prescription Drug Cost-Sharing Among Poor and Elderly Persons. JAMA. 2001;285:421-429.

[20] Chernew ME, Shah MR, Wegh A, Rosenberg SN, Juster IA, Rosen AB, Sokol MC, Yu-Isenberg K, Fendrick AM. Impact of decreasing copayments on medication adherence within a disease management environment. Health Aff (Millwood). 2008 Jan-Feb;27(1):103-12.

[21] Marshall MN, Shekelle PG, Leatherman S, Brook RH. The public release of performance data: what do we expect to gain? A review of the evidence. JAMA. 2000 Apr 12;283(14):1866-74.

[22] Romano PS, Zhou H. Do well-publicized risk-adjusted outcomes reports affect hospital volume? Med Care. 2004 Apr;42(4):367-77.

[23] Hibbard JH, Stockard J, Tusler M. Does publicizing hospital performance stimulate quality improvement efforts? Health Aff (Millwood). 2003 Mar-Apr;22(2):84-94.

[24] Mukamel DB, Mushlin AI. Quality of care information makes a difference: an analysis of market share and price changes after publication of the New York State Cardiac Surgery Mortality Reports. Med Care. 1998 Jul;36(7):945-54.

[25] Narins CR, Dozier AM, Ling FS, Zareba W. The influence of public reporting of outcome data on medical decision making by physicians. Arch Intern Med. 2005 Jan 10;165(1):83-7.

[26] Halm EA Lee C Chassin MR. Is Volume Related to Outcome in Health Care? A Systematic Review and Methodologic Critique of the Literature Annals of Internal Medicine. Sept 17, 2002. Vol 137 No. 6 511-520. Available at: http://www.annals.org/cgi/content/abstract/137/6/511?ijkey=042b12776872367855d6187ee62a1d97873f72cd&keytype2=tf_ipsecsha accessed September 26, 2007.

[27] Hibbard JH, Stockard J, Tusler M. Hospital performance reports: impact on quality, market share, and reputation. Health Aff (Millwood). 2005 Jul-Aug;24(4):1150-60.

[28] Ornstein SM, MacFarlane LL, Jenkins RG, Pan Q, Wagner KA. Medication Cost Information in a Computer-Based Patient Record System Impact on Prescribing in a Family Medicine Clinical Practice. Arch Fam Med. 1999;8:118-121.

[29] Oxman AD, Thomson MA, Davis DA, Haynes RB. No magic bullets: a systematic review of 102 trials of interventions to improve professional practice. CMAJ. 1995 Nov 15;153(10):1423-31.

[30] Fahey T, Schroeder K, Ebrahim S. Interventions used to improve control of blood pressure in patients with hypertension. Cochrane Database Syst Rev. 2006 Apr 19;(2):CD005182.

[31] Levin-Scherz J, DeVita N, Timbie J. Impact of pay-for-performance contracts and network registry on diabetes and asthma HEDIS measures in an integrated delivery network. Med Care Res Rev. 2006 Feb;63(1 Suppl):14S-28S.

[32] Cutler TW, Palmieri J, Khalsa M, Stebbins M.Evaluation of the Relationship Between a Chronic Disease Care Management Program and California Pay-for-Performance Diabetes Care Cholesterol Measures in One Medical Group. J Manag Care Pharm. 2007 Sep;13(7):578-88.

[33] Peterson ED, Roe MT, Mulgund J, DeLong ER, Lytle BL, Brindis RG, Smith SC, Pollack CV, Newby LK, Harrington RA, Gibler WB, Ohman EM. Association between hospital process performance and outcomes among patients with acute coronary syndromes. JAMA. 2006 Apr 26;295(16):1912-20

[34] Glickman SW, Ou FS, DeLong ER, Roe MT, Lytle BL, Mulgund J, Rumsfeld JS, Gibler WB, Ohman EM, Schulman KA, Peterson ED. Pay for performance, quality of care, and outcomes in acute myocardial infarction. JAMA. 2007 Jun 6;297(21):2373-80.

[35] Petersen LA, Woodard LD, Urech T, Daw C, Sookanan S. Does pay-for-performance improve the quality of health care. Ann Intern Med. 2006 Aug 15;145(4):265-72.

[36] Campbell KP, Lollar D. Depression evidence-statement: screening. In: Campbell KP, Lanza A, Dixon R, Chattopadhyay S, Molinari N, Finch RA, editors. A Purchaser's Guide to Clinical Preventive Services: Moving Science into Coverage. Washington, DC: National Business Group on Health; 2006.

[37] Tohill BC, Campbell KP, Chattopadhyay S. Obesity evidence-statement: screening, counseling, and treatment. In: Campbell KP, Lanza A, Dixon R, Chattopadhyay S, Molinari N, Finch RA, editors. A Purchaser's Guide to Clinical Preventive Services: Moving Science into Coverage. Washington, DC: National Business Group on Health; 2006.

[38] Naimi T, Brewer RD, Campbell KP, Chattopadhyay S. Alcohol misuse evidence-statement: screening and counseling. In: Campbell KP, Lanza A, Dixon R, Chattopadhyay S, Molinari N, Finch RA, editors. A Purchaser's Guide to Clinical Preventive Services: Moving Science into Coverage. Washington, DC: National Business Group on Health; 2006.

[39] Rosenthal AC, Campbell KP, Chattopadhyay S. Tobacco use treatment evidence-statement: screening, counseling, and treatment. In: Campbell KP, Lanza A, Dixon R, Chattopadhyay S, Molinari N, Finch RA, editors. A Purchaser's Guide to Clinical Preventive Services: Moving Science into Coverage. Washington, DC: National Business Group on Health; 2006.

[40] Solanki G, Schauffler HH, Miller LS. The direct and indirect effects of cost-sharing on the use of preventive services. Health Serv Res. 2000 Feb;34(6):1331-50.

[41] Busch SH, Barry CL, Vegso SJ, Sindelar JL, Cullen MR. Effects of a cost-sharing exemption on use of preventive services at one large employer. Health Aff (Millwood). 2006 Nov-Dec;25(6):1529-36.

National Business Coalition on Health
1015 18th Street, N.W., Suite 730
Washington, DC 20036