A Potent Recipe for Higher-Value Health Care

Aligning quality, price transparency, clinical appropriateness and consumer incentives

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INTRODUCTION

As health care costs continue to rise and consume a higher percentage of employer and household budgets, employers and consumers are looking for ways to get better value care—high-quality care at a more affordable price. This pursuit of higher value is frequently hindered by a lack of easily accessible and useful information about the quality, price, and medical necessity of health care services. Some health care experts advocate for greater quality and price transparency as a building block for a higher-value health care system. Yet transparency is only part of the value equation. When employers and other health care purchasers pair transparency with consumer incentives and clinical evidence, consumers receive higher-value care. This paper examines current obstacles to quality and price transparency and highlights ways to motivate consumers to shop for care based on value. It examines initiatives that meld consumer incentives with greater transparency including: reference and value pricing; tiered and narrow networks; centers of excellence contracting; and Value-Based Insurance Design. The synergies gained when blending quality and price transparency with evidence-based consumer incentives should lead to an increase in the use of higher-value care and clinically appropriate services delivered in the most appropriate venue. In turn, this should also lead to a decrease in inappropriate and potentially harmful medical expenditures.

The University of Michigan Center for Value-Based Insurance Design (V-BID Center) is the leading advocate for development, implementation and evaluation of innovative, "clinically nuanced" health benefit plans and payment models. Since 2005, the Center has been actively engaged in understanding the impact of innovative provider facing and consumer engagement initiatives and collaborating with employers, consumer advocates, health plans, policy leaders, and academics, to improve clinical outcomes and enhance economic efficiency of the U.S. health care system. For more V-BID information and resources, please visit: **vbidcenter.org**.

Catalyst for Payment Reform (CPR) is an independent, non-profit corporation working on behalf of large employers and other health care purchasers to catalyze improvements in how we pay for health services and to promote better and higher-value care in the U.S. **catalyzepaymentreform.org**

BACKGROUND: RISING HEALTH CARE COSTS, LACK OF TRANSPARENCY, AND RELATED MARKET FAILURES

Despite spending more on health care than any other developed nation, health outcomes in the United States are no better.[1] Employers bear much of the cost burden, as employer-sponsored health insurance is the dominant model of coverage in the United States.[2]

Many employers, and others who purchase health care in the commercial market such as state employee and retiree agencies, have become frustrated about the poor and inconsistent value they get for their spending. Increasingly, they are looking for ways to get better value—high-quality care at a more affordable price.

DEFINITIONS:

Quality: The Institute of Medicine defines quality in the context of health care to mean "The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."[3] To gauge quality, the IOM's "six aims" identify the major aspects of quality that are important to measure: safety, effectiveness, timeliness, patient-centeredness, equity, and efficiency.

Price: Price is defined as "an estimate of a consumer's complete health care cost on a health care service or set of services that 1) reflects any negotiated discounts; 2) is inclusive of all costs to the employer or health care purchaser associated with a service or services, including hospital, physician, and lab fees; and, 3) identifies the consumer's out-of-pocket costs (such as co-pays, co-insurance, and deductibles)."[4]

Transparency: For the purposes of this paper, transparency means "the availability of provider-specific information on the quality of and price for a specific health care service or set of services to consumers and other interested parties."[5] Note: The availability of price and quality information is dependent on many variables. First, in the commercial sector, health plans and health care providers must agree in their negotiations to make the information on quality performance and negotiated payment amounts—or at least the consumer portion of those—available to their shared patient member population. Then, it must be translated for and made accessible to consumers through web sites, health coach lines, mobile applications, and other means, and allow for meaningful comparisons of providers. Access to quality and price information can be facilitated by the employer, health plan, other vendor or even the state in which the consumer resides.

Lack of Quality and Price Transparency

One major obstacle to seeking high-value care is that employers and consumers have little to no information about care quality. At the individual provider level, discerning between those who provide high-quality and low-quality care remains difficult. In most areas, there is little, if any, public reporting about individual physician outcomes. Hospital outcomes are easier to find, for example on the CMS Hospital Compare website, though they are often vague and hard to interpret.

Moreover, in many situations, consumers have little to no information about the price of their health care—either what their care costs in total (i.e., the cost a self-funded employer/purchaser or health plan must pay for the claim submitted by the provider), or what their share of cost will be (i.e., the patients' portion of the cost or the out-of-pocket cost). This distinction between total costs and

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patient out-of-pocket costs is important—consumers need to understand their financial liability and consumers and purchasers also need to understand how the full cost of care is related to its value. Government efforts thus far have been suboptimal in making these data easily accessible. In a recent report card on state price transparency laws, Catalyst for Payment Reform and the Health Care Incentives Improvement Institute gave just two states—Massachusetts and New Hampshire—an A grade. Twenty-nine states received an F because they provided no information or almost no information to the public about health care prices for hospitals, providers, in-patient, and out-patient services.[6]

Significant price variation with no connection to quality

Even when price information exists, it can be confusing to consumers. Consumers often have difficulty obtaining price information and, when they do, they often misinterpret higher prices as a proxy for higher quality.[7] Studies show that there is significant variation in price both within and across markets. In a single geographic area, prices can vary significantly for elective procedures. One survey found total prices charged to employers or health care purchasers for colonoscopies in the San Francisco Bay Area ranged from $900 to $7,200 and for knee arthroplasty from $3,000 to $29,000.[8] In other cases, commercial insurer reimbursements may range from below Medicare rates to more than 400 percent of Medicare rates within the same market.[9]

Price transparency and anti-competitive behavior

The market power of the provider is cited as the key factor in higher payment rates as price rarely correlates with quality.[10] While some believe price transparency will enhance competition among providers to deliver more affordable care, others believe it could lead to anti-competitive behavior. When providers have enough market power, they can stop transparency before it starts by prohibiting health plans from revealing price or quality information to health plan members. In situations where there is transparency, it could also result in higher prices. One way to mitigate this potential unintended consequence is to make sure that consumers have access only to differences in their own out-of-pocket costs based on their health plan and specific benefit design.

Lack of information about clinical necessity

Even when price and quality information are readily available, consumers need better information regarding whether recommended treatments and procedures are clinically necessary. There is a robust medical literature espousing the systematic underuse of high-value, evidence-based services. In addition, the overuse and misuse of medical services that produce no health benefit is a longstanding concern. For example, a recent report found that cardiac stents are frequently overused and implanted in patients who stand to gain little if any benefit.[11] The U.S. Preventive Services Task Force grading system and Choosing Wisely initiative are efforts to provide information and criteria about which services are likely to benefit whom, and which services patients should question. These efforts can help consumers understand the pros and cons of receiving certain services.

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LEVERAGING CONSUMER INCENTIVES TO SEEK HIGHER VALUE CARE

Consumers have more incentives today than at any other time in history to shop for health care based on value. As the cost of health care continues to rise, consumers have seen their out-of-pocket costs—including premiums and out-of-pocket cost sharing at the point of service—grow as well, making them more invested in their own health choices. According to the Kaiser Family Foundation, the average monthly premium contribution by families covered by employer-sponsored insurance more than doubled from 2001 to 2011, to $344 per month,[12] though median household income decreased by six percent during the same period.[13] Given the shifting of costs, consumers have more motivation than ever before to become savvy shoppers for health care.

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The good news is that studies have shown that when they are armed with the right information, consumers can and will shop for higher-value care. In experimental conditions, Hibbard et al found that if they are given easy-to-understand information on price and quality, consumers will choose a high-quality provider (defined as lowest price with best quality) 80 to 90 percent of the time.[14] In another study, employees whose employers participated in a large buyer's group in Minnesota's Twin Cities were sensitive to cost differences, when presented with information and incentives to choose less-costly providers for all of their covered health care. In this instance, a one percent rise in price resulted in up to a 4.3 percent drop in utilization of a particular health system.[15]

BENEFIT DESIGNS THAT COUPLE CONSUMER INCENTIVES WITH TRANSPARENCY: MODELS OF SUCCESS

The studies cited above and others show that employers and other health care purchasers can get better value for their health care dollar when they create benefit designs that marry consumer incentives with quality and price transparency. There are a number of benefit designs that have been tested and shown to encourage consumers to shop for care and make decisions based on price and quality considerations. Many of these benefit designs have proven to yield better quality care for consumers and savings for consumers and their employers.

Reference and Value Pricing

DESCRIPTION: THE CONSUMER INCENTIVE Reference pricing establishes a standard price for a drug, procedure or service and then generally asks health plan beneficiaries (consumers) to pay the charges beyond that amount—essentially a 'reverse deductible.' For example, if a reference price for the professional fee for a diagnostic colonoscopy is $1,000, and a consumer undergoes a colonoscopy at a provider with an allowable fee of $1,000, there is no cost share. However, if the consumer chooses a provider with an allowable fee of $2,500, the consumer will pay the incremental $1,500, or some portion of that difference. Thus, consumers have an incentive to choose a provider at or below the reference price to avoid having to pay out-of-pocket for the difference.

Many employers already utilize reference pricing for pharmaceuticals and some are now implementing it for health care procedures and services. For procedures or services where quality is thought to vary, reference pricing can become value pricing—taking quality into account in addition to price. Reference and value pricing are most useful in circumstances in which there is (a) a sufficient choice of providers of a service; (b) substantial variation in cost among those providers; (c) an elective schedule, giving consumers time to "shop" for price and quality; and (d) valid and reliable quality and price information.

QUALITY AND PRICE TRANSPARENCY IN THE MIX Reference pricing only works when consumers are aware of the reference price for a specific procedure or service and know which providers meet or beat the reference price. If a provider does not meet the reference price, consumers need to know the added amount they would have to pay to receive care from that provider. For procedures or services where quality is thought to vary, consumers also need information about which providers accepting the reference price meet certain quality standards. Successful reference and value pricing programs require extensive employee outreach and education about both quality and price. For example, when Safeway, the grocery retailer, implemented reference pricing for its non-union workforce in 2005, they included a robust transparency tool that allows employees to shop for non-emergency services before visiting a provider. This tool and other decision support and engagement initiatives, have spurred employees to become more engaged in their health and knowledgeable about health care purchasing decisions.[16]

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EXAMPLES OF SUCCESS When Safeway found the price of screening colonoscopies in the San Francisco Bay Area varied from $900 to $7,200, it set the reference price for this service at $1,250. It has since set reference prices for other elective procedures and, as a result of this and other reforms, held its per capita health care costs nearly flat (average trend predicted to be one percent CAGR from 2005 through 2013). Similarly, the California Public Employees Retirement System (CalPERS) established a reference price of $30,000 for hip and knee replacements to steer its members toward high-value providers. [17] Establishing the reference price had a direct impact on charges for these procedures, as a number of providers lowered their prices to fall within the reference price. In its first year, reference pricing saved CalPERS $2.8 million, and its members saved an additional $300,000 due both to decreases in prices charged as well as a shift in surgical volume to lower-priced facilities.[18] CalPERS provided members with frequently updated lists of providers who charged the reference price or lower, enabling consumers to seek care from providers without incurring additional costs not covered by their benefit design.

Tiered and Narrow Networks

DESCRIPTION: THE CONSUMER INCENTIVE Other approaches to benefit designs that incentivize consumers to shop based on price and quality information include tiered and narrow networks. Tiered networks place providers into various tiers based on price and quality. Narrow networks, which create a smaller pool of in-network providers based on price and quality, are a variation on the same premise. Both shift at least some of the cost of using a high-cost, low-quality provider onto the consumer, so the consumer has a financial incentive to choose higher-value providers.

PRICE AND QUALITY TRANSPARENCY IN THE MIX Tiered and narrow networks work best when consumers are educated about why specific providers have been placed in a certain tier, and why staying in more cost-favorable tiers helps them obtain high-value care. To do that, the cost and quality information used to place providers into tiers should be accessible and easy for consumers to understand. When setting up a tiered network, employers should use both quality and price information.

EXAMPLES OF SUCCESS Massachusetts has been at the forefront of experimentation with both tiered and limited, or narrow networks. The Group Insurance Commission, which manages state employee benefits, introduced tiering of specialists and hospitals in 2007, and that program continues. In 2011, in an effort to enroll more employees in the agency's limited network plans, including its three HMOs, the commission offered a three month "premium holiday," and in fiscal 2012 succeeded in enrolling 31 percent of employees in these lower cost narrow network products compared with 19

percent the year before.[19] Some of the challenges in the state have been that some of the prestigious, high-cost providers are excluded from these lower cost networks.[20]

Intel, the computer chip manufacturer, implemented a narrow network at a New Mexico manufacturing plant, contracting with just one provider system for all care and offering either the narrow network or more traditional plans to employees at the plant. The arrangement just began this year, so no results are available yet. Intel executives said they expect to save $8 to $10 million through 2017 through better managed, more efficient care using that one provider system.[21]

Centers of Excellence Contracting

DESCRIPTION: THE CONSUMER INCENTIVE In this type of benefit design, employers and purchasers identify one provider--or a very select group of providers—for a given service, and typically secure low rates for that service in exchange for steering a large volume of patients to the selected provider(s). The design borrows from managed care contracts, in which patient volume was exchanged for lower prices, but adds a quality element; patients are usually channeled to hospitals known to have superior outcomes for specific services. Depending on how it is structured, centers of excellence contracting can include a soft or strong financial incentive for consumers. For example, some benefit plans designate a center of excellence for a particular condition, but leave traditional co-pays or co-insurance in place if a consumer goes somewhere else. Other plans only cover the service if the consumer uses a designated center of excellence.[22]

QUALITY AND PRICE TRANSPARENCY IN THE MIX As with tiered or narrow networks, centers of excellence contracting does best when both the purchaser and the consumer understand provider prices and quality measures. Once an employer or other purchasing entity has decided on which provider best meets their enrollees' health care needs, they should be able to pass along information about the rationale for that choice, including specific quality and price information, to consumers to help gain their buy-in.

As with tiered or narrow networking, centers of excellence contracting does best when both the purchaser and the consumer understand provider prices and quality measures.

EXAMPLES OF SUCCESS Lowe's, a retail home improvement chain with 200,000 employees, dependents and retirees, launched a center of excellence program for cardiac care in 2010. The company chose Cleveland Clinic, a nationally respected health system, for all non-emergency cardiac procedures, and secured an agreement for attractive pricing in exchange for bringing in patients from out of the area.[23] Consumers who elect another provider face a deductible, plus 20 percent coinsurance for their cardiac procedure, up to a maximum of $4,000.[24] Lowe's employees who use the Cleveland Clinic, on the other hand, face no cost sharing and, additionally, are reimbursed for travel costs for themselves and a companion. Lowe's is currently expanding the program to cover spinal care.[25] Other retailers, including Wal-Mart Stores, Inc., The Boeing Company, and Pepsi Co. have similar programs, and the Cleveland Clinic recently announced its intention to partner directly with more employers.[26, 27]

Value-Based Insurance Design (V-BID)

DESCRIPTION: THE CONSUMER INCENTIVE V-BID can be used to differentiate between high-value and low-value providers, in much the same way as centers of excellence contracting. However, unlike other benefit designs, V-BID also differentiates between high-value and low-value services, adding the element of medical necessity to the transparency discussion. V-BID uses the levers of traditional insurance design, including co-pays, deductibles and co-insurance, to steer consumers toward higher-value care depending on their health status and needs. By reducing cost-sharing for certain high-value services and providers and increasing cost-sharing for certain low-value services and providers, value-based insurance designs encourage consumers to use high-value services and think twice about using services not likely to improve their health.

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Many employers choose to combine a V-BID plan with decision-support tools which can help consumers become active participants in their own health care. Such tools include interactive educational programs that walk consumers through the pros and cons of receiving a particular service. Benefit designs encourage consumers to participate in the interactive educational process by awarding gift cards or reduced cost-sharing if consumers utilize the tool.

QUALITY AND PRICE TRANSPARENCY IN THE MIX Because V-BID also differentiates between high- and low-value services and adds the concept of medical necessity into the mix, consumers need to understand quality, price, and medical necessity. Thus, the type of information that consumers need to understand this benefit design relates to how much a given service can improve their health or, conversely, may be superfluous or even harmful to health. For example, if a V-BID plan eliminates co-pays for diabetes medication, consumers should also get information about why that medication is important and why the cost has been reduced. On the other hand, if coverage for other services is being reduced because they have shown to be of low-value to health and or not medically necessary, consumers should receive that information as well. In V-BID plans, the consumer's out of pocket contribution becomes important because it relates to the value – not exclusively the price – of the service delivered.

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Further, the same service could be valuable for one patient but not another. As an example, the American Optometric Association recommends annual eye exams for diabetics but not for asymptomatic adults below age 61.[28] In this example, a V-BID plan would eliminate the share of cost for an eye exam for a diabetic but maintain some share of cost for a non-diabetic under 61. When transparency is coupled with consumer incentives (and these are tied to clinical evidence) more appropriate care will be provided in the most appropriate venue. Moreover, the inclusion of medical necessity into the transparency discussion should also lead to a decrease in inappropriate and potentially harmful medical expenditures.

EXAMPLES AND SUCCESS V-BID has been shown to alter consumers' utilization of services in several ways, including increased medication adherence and decreased emergency department admissions and hospitalizations.[29] Pitney Bowes, a Connecticut-based global technology leader, was an early adopter of V-BID. It cut or eliminated co-pays for medications to treat a number of chronic conditions, including heart disease, asthma, diabetes, and high blood pressure. For diabetic employees, the policy change reduced emergency department visits by 26 percent and slowed the rate of cost growth.[30] Company-wide, the elimination of co-pays for statins and a blood clot inhibitor improved medication adherence.[31] Some employers have also implemented higher co-pays for services with lower value. For example, Oregon uses a V-BID plan for state employees that included decision support tools as well as higher consumer cost sharing for low-value services.[32] In its first few years it decreased utilization of some designated low-value services by between 15 and 30 percent.[33]

STEPS FOR INCREASING PRICE AND QUALITY TRANSPARENCY AND CONSUMER ENGAGEMENT

There are a number of steps employers and other health care purchasers can take to advance both price and quality transparency, and to incentivize consumers to use price and quality information to shop for care based on value. These steps should not be considered "stand alone" recommendations.

1. Support the creation of stronger state price transparency laws. As discussed previously, in a recent report card on state price transparency laws, Catalyst for Payment Reform revealed most states fail to give consumers actionable information about what their care costs.

2. Phase out "gag clauses" which providers can negotiate into their contracts with health plans to keep their negotiated payment amounts a secret. Gag clauses can prevent consumers from ever knowing the real cost of their care. In 2012, a number of regional and national employer and consumer coalitions signed on to Catalyst for Payment Reform's Statement on Price and Quality Transparency in Health Care, encouraging providers to end the practice of gag clauses. Such public calls to action can have a powerful effect, and help raise awareness about the practice and its effects on consumers.

3. Encourage the development of all-payer claims databases with greater access for research, reporting, and consumer uses, which would provide the ability to analyze trends in health care costs as well as increased access to price information for consumers.

4. Encourage state exchanges to use existing tools, including the benefit designs described in this paper above, to promote further transparency and engagement. For example, states can encourage V-BID, reference pricing or value contracting in state exchanges and/or give insurers preference on exchange websites if they demonstrate exceptional transparency.

5. Develop a strong employee education and engagement plan to support implementation of the benefit designs outlined above. For example, V-BID is most successful and accepted by employees when they fully understand how it works and its value to them as consumers. However, many employees are unfamiliar with basic cost-sharing terminology and the clinical nuances of a V-BID program may not be immediately intuitive. Therefore, a deliberate, carefully-executed communications strategy can help consumers and employers obtain maximum benefit from V-BID.

6. Understand and support the use of appropriate price and quality transparency tools for consumers. Fortunately, many health plans and third-party vendors have created a range of price and quality transparency tools for consumers and most allow access directly from the employer or health plan. Employers and purchasers can learn more about the tools already offered by their plans and assess whether they are meeting employees' information needs. Catalyst for Payment Reform has made available Specifications for the Comprehensive Evaluation of Transparency Tools for use by employers and purchasers.

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CONCLUSION

All parties involved in purchasing and paying for health care services can do a lot to shine a light on differences in price and quality. When purchasers develop benefit designs that motivate consumers to shop based on price information and quality information—including information or incentives tied to clinical necessity—they can enhance the quality of care and reduce health care spending. The creation of benefit designs that that explicitly encourage consumers to act on price and quality information, including reference pricing, tiered networks, centers of excellence contracting and V-BID, is a step in this direction. These can begin to shift toward a system that provides and rewards high-value care, while simultaneously driving waste from the health care system.

ENDNOTES

1 US Burden of Disease Collaborators. The State of US Health, 1990-2010: Burden of Diseases, Injuries and Risk Factors. *Journal of the American Medical Association*. 10 July 2013, Published online.
2 Kaiser Family Foundation. 2010-2011 data
3 http://www.iom.edu/Global/News%20Announcements/Crossing-the-Quality-Chasm-The-IOM-Health-Care-Quality-Initiative.aspx
4 http://www.gao.gov/products/GAO-11-791
5 Ibid
6 Catalyst for Payment Reform and Health Care Incentives Improvement Institute. Report Card on State Price Transparency Laws. March 2013. Accessed at: http://catalyzepaymentreform.org/images/documents/reportcard.pdf
7 Aligning Forces for Quality. Lessons Learned: Consumer Beliefs and Use of Information about Health Care Cost, Resource Use and Value. October 2012. http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2012/rwjf402126
8 Renda L. Focusing on What Matters Most--Health Behavior and Accountability. The Institute for Health Care Consumerism. Accessed at: http://www.theihcc.com/en/communities/employee_communication_education/focusing-on-what-matters-most-%E2%80%93-healthy-behavior-a_gqk6ur59.html
9 Ginsburg PB. Wide Variation in Hospital and Physician Payment Rates Evidence of Provider Market Power. Center for Studying Health System Change. HSC Research Brief No. 16, Nov 2010. Accessed at: http://www.hschange.com/CONTENT/1162/
10 Robinson JC. Hospital Market Concentration, Pricing, and Profitability in Orthopedic Surgery and Interventional Cardiology. *American Journal of Managed Care*. 2011 June 1. 17(6 Spec No.): e241-8.
11 http://www.ama-assn.org/resources/doc/cqi/overuse-proceedings-paper.pdf
12 Kaiser Family Foundation. 2012 Employer Benefits Survey. Accessed at: http://kff.org/private-insurance/report/employer-health-benefits-2012-annual-survey/
13 DeNavas-Walt C, Proctor BD, Smith JC. Income, Poverty and Health Insurance Coverage in the United States: 2011. Current Population Reports. U.S. Census Bureau. Accessed at: http://www.census.gov/prod/2012pubs/p60-243.pdf
14 Hibbard JH, Greene J, Sofaer S, Firminger K, Hirsh J. An Experiment Shows That a Well-Designed Report on Cost and Quality Can Help Consumers Choose High-Value Health Care. *Health Affairs*. March 2012; 31(3), 560-8.
15 Christianson JB, Feldman R. Evoloution in The Buyers Health Care Action Group Purchasing Initiative. *Health Affairs*. 2002 Jan. 21(1):76-88.
16 Dodi Kelleher. Safeway. Presentation at Sustainable Behavior Change Conference. Seattle University, 2011. Accessed at: http://www.slideshare.net/HealthInnoventions/dodi-kelleher-saveway-at-consumer-centric-health-models-for-change-11
17 Renda L. Focusing on What Matters Most--Health Behavior and Accountability. The Institute for Health Care Consumerism. Accessed at: http://www.theihcc.com/en/communities/employee_communication_education/focusing-on-what-matters-most-%E2%80%93-healthy-behavior-a_gqk6ur59.html
18 Robinson JC and Brown TT. Increases in Consumer Cost Sharing Redirect Patient Volumes and Reduce Hospital Prices for Orthopedic Surgery. *Health Affairs*. Aug. 2013. vol. 22, no. 8, 1392-97.
19 Mechanic RE, Altman SH, McDonough JE. The New Era of Payment Reform, Spending Targets, and Cost Containment in Massachusetts: Early Lessons for the Nation. *Health Affairs*. Sept. 2012. 31(10): 2334-42.
20 Ibid
21 Evans M. "Intel offers employees narrow network to better manage care." *Modern Healthcare*. July 13, 2013.
22 Robinson JC and MacPherson K. "Payers Test Reference Pricing And Centers of Excellence to Steer Patients to Low-Price and High-Quality Providers." *Health Affairs*, 2012 (31) 9; 2028-2036.
23 Ibid
24 Ibid
25 Health Care Cost Summit: Slowing the Growth of Health Costs—How to Bend the Cost Curve. America's Health Insurance Plans. March 9, 2011.
26 Ostrom CM. "Boeing to send some insured works to Cleveland for cardiac care." *The Seattle Times*. 18 Oct 2012.
27 Evans, M. "Cleveland Clinic seeks to partner with employers to provide hips, knees, spine surgeries." *Modern Healthcare*. 10 Sept 2013.
28 http://www.aoa.org/patients-and-public/caring-for-your-vision/comprehensive-eye-and-vision-examination/recommended-examination-frequency-for-pediatric-patients-and-adults
29 The Evidence for V-BID: Validating an Intuitive Concept. V-BID Center Brief. Nov. 2012. Accessed at: http://www.sph.umich.edu/vbidcenter/publications/pdfs/V-BID%20brief%20Evidence%20Nov2012.pdf
30 Choudhry NK, Rosenthal MB and Milstein A. Assessing the evidence for value-based insurance design. *Health Affairs*. 2010 Nov.; 29(11):1988-94.
31 Choudhry NK, Fischer MA, Avorn J, Schneeweiss S, Solomon DH, Berman C, Jan S, Liu J, Lii J, Brookhart MA, Mahoney JJ, Shrank WH. At Pitney Bowes Value-Based Insurance Design Cut Co-payments and Increased Drug Adherence. *Health Affairs*. 2010 Nov.; 29(11):1995-2001.
32 Kapowich JM. Oregon's Test of Value-Based Insurance Design In Coverage for State Workers. *Health Affairs*. 2010 Nov.; 29(11):2028-32.
33 The Evidence for V-BID: Validating an Intuitive Concept. V-BID Center Brief. Nov. 2012. Accessed at: http://www.sph.umich.edu/vbidcenter/publications/pdfs/V-BID%20brief%20Evidence%20Nov2012.pdf