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Private Sector Approaches to Health Care Cost Containment: A Closer Look

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Executive Summary

Growth in health spending has outpaced overall income growth for decades, placing an enormous burden on society and undermining wage gains. The problem has occupied both public and private sectors.

This paper examines private purchaser approaches to health care cost control. The private sector has been a veritable laboratory of new ideas and we highlighted eight current approaches here. These approaches were selected for their promise, efforts to evaluate, and for their focus on reducing costs while maintaining quality.

These approaches are varied and ambitious, and hard evidence of results is still emerging. Some approaches focus on consumers, using measures such as improved cost and quality transparency, workplace wellness, and value-based insurance design. Other approaches target consumers and providers together, such as Shared Decision Making, reference pricing and centers of excellence. The two remaining approaches affect the way providers deliver services and are compensated, such as Medical Homes and Accountable Care Organizations (ACO).

Almost all of these approaches have in common three important, overarching themes:

1. That care should be patient-centered.[1]
2. That costs can be controlled while maintaining or improving quality.
3. That value is ultimately our goal.

Most approaches show promise for reducing spending or spending growth, but some have not been the subject of a rigorous evaluation, so their value is still theoretical. Often, controlling or monitoring quality has not yet received as much attention as measuring savings.

Both savings and quality can be slippery to measure. In most instances, savings reported here do reflect total medical expenses, accounting for both payer and consumer (out of pocket) spending. But more subtle questions about whether price negotiations might cause providers to raise prices elsewhere or whether incentives in the form of health premium reductions shift costs remain open. Quality measurement, which has often lagged behind cost, will continue to need attention.

Universally, it seems that better methods of conveying price and quality information to consumers may be needed, especially to allow consumers to make value comparisons.

Not all approaches seem easily replicated by small payers, for example, small employers. Smaller employers not only lack purchasing leverage, but are rarely self-insured, the starting point for some approaches. In addition, with their smaller populations it may be difficult to cost-effectively cover the fixed costs for setup and data analytics.

[1] *Patient-centered*: providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions.

No fewer than five of our approaches were applied to knee and hip replacements, one of the largest single cost items for purchasers. Two approaches (reference pricing and Centers of Excellence) targeted the price of the procedure, at least one, with considerable success, reducing expenses by over $7,000 per case (20 percent). Another approach, Shared Decision Making, aimed at aligning the decision to have surgery with patient preferences, resulting in lower rates of surgery. A major employer used value-based insurance design to address these procedures, placing them in the added cost-sharing tier of benefits. Finally, an ACO about to launch analyzed its population and identified hip and knee replacements as an area for special attention.

Despite the shortage of cost evidence for some approaches and the implementation difficulties for others, private purchasers are expanding their use of these approaches. More experience should be forthcoming. Stay tuned to see which approaches gain the most traction over the next few years and whether they can affect cost trends in a meaningful, long-term manner, while also maintaining quality.

Introduction

By any measure, health care costs place an enormous burden on U.S. society. In the jobs sector, health insurance for a family of four consumes $7.86 an hour, representing $5.67 from the employer and another $2.19 paid by the worker.[2] In our economy, health spending accounts for more than one in six dollars, or 17.9 percent of our Gross Domestic Product (GDP).[3] What's worse, growth in health spending has outpaced other economic indicators for decades—increasing faster than wages, the economy, or general inflation. Private and public leaders must slow this rate of health spending, otherwise care will be increasingly unaffordable and we'll crowd out the other demands on our resources.

Private Sector Approaches to Health Care Cost Controls

In the private sector, employers and insurers have had much experience as purchasers wrestling with cost control. Private insurance pays for one of every three dollars of health spending, and covers half the population.[4] Most of this coverage is employer based.

This brief explores eight private sector approaches to cost control, including some of the most promising initiatives launched by private purchasers (See Table 1). A detailed exploration of these approaches follows, examining evidence for cost control, impact on quality and consumers, and whether the approach could be replicated more broadly. Each discussion draws from the published literature but also highlights a specific purchaser, incorporating information from our expert interviews where possible. These experts are listed in the acknowledgements at the end of this brief.

The private purchaser efforts cast a wide net. They involve the major players: the physicians, the hospitals, the patients, and employers. The approaches tap the power of information, through transparency and through analytics. And many use economic incentives to signal value, to promote coordination, or to mold organizational behavior. As Table 1 shows, some approaches create incentives for consumers to choose more value-oriented treatment or for providers to practice differently, and others work at the intersection of these traditional boundaries, promoting greater coordination and efficiencies.

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[2] For a single enrollee, the figure is $4.36/hour, with $3.20 contributed by the employer and $1.16 by the worker. Source: Kaiser Family Foundation and Health Research & Educational Trust. 2013. Employer Health Benefits Survey.
[3] Centers for Medicare and Medicaid Services (CMS), National Health Expenditures, 2013 release. http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html
[4] Ibid.

Table 1: Approaches to Cost Containment

	Cost Savings Result from Actions by:	Type of Initiative
1. Improved Consumer Information About Costs & Quality	Consumer	Consumer Engagement through Better Information
2. Shared Decision Making – Using Decision Aids	Consumer & Provider	Consumer-Provider Engagement through Information
3. Workplace Wellness	Consumer & Employer	Consumer Engagement/Benefit Design Incentives
4. Value-Based Insurance Design (VBID)	Consumer	Benefit Design/Consumer Response
5. Reference Pricing	Consumer & Provider	Benefit Design Incentives/Restrictions
6. Centers of Excellence	Consumer & Provider	Benefit Design Incentives/Restrictions
7. Medical Homes	Provider & Insurer	Alternative Payment/Delivery Design
8. Alternative Quality Contracts (ACQs) Accountable Care Organizations (ACOs)	Provider & Insurer	Alternative Payment/Delivery Design

Improved Consumer Information about Costs and Quality

Overview

In most purchase transactions, the consumer's part is central. But in health care, consumers are less empowered to play an active role, which can lead to poor treatment choices, and possibly excess spending. If provided with price, quality or value information, would consumers act on it? And does the manner of presenting the information affect consumers' willingness to use it?

Transparency has the power to put consumers on a more equal footing in health care transactions, permitting them to make judgments on value. And increasing amounts of data on price and quality will become available as Affordable Care Act (ACA) provisions for public reporting are implemented.[5] So far, however, consumer use of public information is low, and when used, consumers find the information overwhelming.[6]

[5] "Health Policy Briefs: Public Reporting on Quality and Costs." *Health Affairs*, internet publication. March 8, 2012. http://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=65.
[6] Ibid.

Research Findings

Absent strong quality data, consumers are reluctant to choose providers based on price. At the same time, consumers often use price as a proxy for quality.[7] If given good information on quality, however, consumers will use it. These findings emerged from a randomized study involving 1,421 employees, which assessed how the presentation of information affected the selection of high-value providers. Researchers found that consumers were amenable to making high value choices, if the data was laid out in a way that made sense. But a substantial minority, up to a third of participants, was reluctant to choose the low cost provider, especially when quality signals were absent or weak. Also, in presenting quality information, interpretive labels, such as "appropriate usage" or "careful with your health care dollars," helped participants make high value choices. Other work has also reported consumer difficulty interpreting quality information, citing consumer complaints that reports are excessively complex and not relevant to their concerns.[8]

Researchers found that consumers wanted information that is personally relevant. These included:

- Out-of-Pocket information[9] [10] [11]
- Quality data at the physician level, rather than medical group[12]

Based on findings about how consumers used information, researchers further recommended:[13] [14]

- Linking price with quality data
- Providing interpretive labels with quality information
- Targeting the health care choices consumers make most often, such as annual physicals

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[7] Hibbard, Judith H, Jessica Greene, Shoshanna Sofaer, Kirsten Firminger, and Judith Hirsh. 2012. "An Experiment Shows That a Well-Designed Report on Costs and Quality Can Help Consumers Choose High-Value Health Care." *Health Affairs* 31(3): 560–68. http://content.healthaffairs.org/content/31/3/560.full

[8] Lowsky, David, Ramya Chari, and Peter S Hussey. 2012. *"Flattening the Trajectory of Health Care Spending: Engage and Empower Consumers."* *RAND Research Brief.* http://www.rand.org/pubs/research_briefs/RB9690z3.html

[9] Mehrotra, Ateev, Peter S Hussey, Arnold Milstein, and Judith H Hibbard. 2012. "Consumers' and Providers' Responses to Public Cost Reports, and How to Raise the Likelihood of Achieving Desired Results." *Health Affairs* 31(4): 843–51. http://content.healthaffairs.org/content/31/4/843.abstract

[10] Yegian, Dardess, Shannon, & Carman, 2013) Yegian, Jill Mathews, Pam Dardess, Maribeth Shannon, and Kristin L Carman. 2013. "Engaged Patients Will Need Comparative Physician-Level Quality Data and Information About Their Out-of-Pocket Costs." *Health Affairs* 32(2): 328–37. http://content.healthaffairs.org/content/32/2/328.full

[11] Lowsky, Chari & Hussey, 2012.

[12] Yegian et al, 2013.

[13] Lowsky, Chari & Hussey, 2012.

[14] Mehrotra et al., 2012.

Private Sector Efforts to Provide Transparency in Health Care

Recognizing the potential benefits of putting decision-making information in the hands of consumers, private companies such as Castlight, ChangeHealthcare, and Healthcare Blue Book, have emerged to bring decision-making information on health care price, quality, and providers to consumers and their employers.[15]

Healthcare Blue Book, which is free to consumers, generates a "fair price" for common health care procedures for a geographic area. Castlight and ChangeHealthcare, in contrast, generate personalized cost (reflecting the employee's benefits) and provider quality information.

In the case of Castlight, for example, most customers are self-insured employers offering high deductible coverage ($1000+ deductible).[16] Castlight integrates health plan benefit information and the employer's claims history, along with quality data, to create personalized decision-making information, such as the employee's estimated out-of-pocket cost for a specific procedure by facility or provider. Castlight reports typical use rates of some 80 percent of employees and notes that introducing the product and educating workers about its functionality are important to generating repeat users.[17] The company continues user testing and product evaluation to better understand how consumers respond to information and display options.

Improved Consumer Information
CLOSE UP
Castlight

Focus: Consumer Decisions

Levers: Value Information in Consumer Hands

Where: San Francisco-Based

Scope of Implementation: Private, Venture Funded Business Serving National Customer Base

Savings: Unknown

Source of Savings: Includes Out-of-Pocket Savings; Higher Value Care

Quality: Quality Measures Included in Metrics for Users

Replication: Other Private Companies Also Engaged; Possible Learnings for Public Sector

Sustainability: Cost of Producing

It is too early to know what degree of cost savings could be expected if consumers used transparency reports routinely. Robust evaluations are needed with respect to the real world impact of well-designed cost and quality information.

Discussion

Highly personalized decision tools are dependent upon access to claims data for a workforce—making the strategy more accessible for large self-insured employer plans. Whether this level of information will become a widespread standard, through insurer initiatives, for example, remains to be seen. Calls for an all payer claims database envision the possibility of a unified approach to populating data systems and presenting information to meet consumer

[15] Hostetter, Martha, and Sarah Klein. April/May 2012. "Health Care Price Transparency: Can It Promote High-Value Care?" The Commonwealth Fund. http://www.commonwealthfund.org/Newsletters/Quality-Matters/2012/April-May/In-Focus.aspx
[16] Interview with Cathie Markow, October 22, 2013.
[17] Ibid.

needs.[18] Better information tools could help consumers navigate more complex benefit designs. However, privacy will need to be guarded as tools become more personalized.

Conclusion

Important work remains to refine and understand the metrics that would be most useful for consumers and the presentation formats that would be intuitive. Some private sector transparency tools seem to be building on research findings that illustrate the need to make consumer facing information. Data analytics and the increasing availability of public information may make it possible for personally relevant price and quality information to reach more consumers. This will make it possible for consumers to choose providers and treatments based on value.

Shared Decision Making (SDM)

Overview

Compared to the price information described above, Shared Decision Making (SDM) is a more clinically-oriented approach. SDM uses information from an unbiased source to engage patients and providers in conversations about treatment decisions. This approach uses decision aids (DA) to provide information on the risks and benefits of treatment options, especially for so-called "preference-sensitive conditions"—conditions for which there is no "right" course of treatment based on available evidence. Decision aids are tools providing neutral, easy-to-understand information for patients about treatment options and their outcomes; DA's may include a video, brochure, or website with factual information from a reputable source.[19] [20]

Shared Decision Making (SDM)
CLOSE UP
Group Health, Washington

Focus: Patient-Provider

Levers: Informed Patient Choice (prior to elective surgery)

Patient Preferences/Engagement

Time Period: 2007 - 2010

Horizon: SDM Extended After Pilot

Scope of Implementation: 10 preference - sensitive surgical conditions, throughout the integrated not-for-profit system
Enrollees Affected: 660,000

Savings: 12% - 21% lower medical costs over 6 months (for eligible population) than control for hip/knee surgery studied

Source of Savings: Lower rate of surgery

Quality: Shared Decision Making is a higher form of informed consent in Washington

Quality Incentives: N/A

Patient Satisfaction: Extremely positive, although response rate low.

Evaluation: Arterburn et al in *Health Affairs*

Period Evaluated: Jan 2009 – July 2010 (Intervention)

Replication: Savings likely for hips & knees; other preference-sensitive surgeries unclear; If not a group practice model, results less clear.

Key Finding: Introduction of decision aids linked to lower surgery rates and costs for hip and knee osteoarthritis; other conditions unclear.

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[18] Yegian et al, 2013.
[19] Stacey, Dawn, Carol L Bennett, Michael J Barry, Nananda F Col, Karen B Eden, Margaret Holmes-Rovner, Hilary Llewellyn-Thomas, Anne Lyddiatt, France Légaré, and Richard Thomson. 2011. "Decision Aids for People Facing Health Treatment or Screening Decisions." *The Cochrane Database of Systematic Reviews* (10): CD001431. http://www.ncbi.nlm.nih.gov/pubmed/21975733
[20] Arterburn, David, Robert Wellman, Emily Westbrook, Carolyn Rutter, Tyler Ross, David McCulloch, Matthew Handley, and Charles Jung. 2012. "Introducing Decision Aids at Group Health Was Linked to Sharply Lower Hip and Knee Surgery Rates and Costs." *Health Affairs* 31(9): 2094–2104. http://content.healthaffairs.org/content/31/9/2094.abstract

SDM is not first and foremost a cost containment approach. The core aim is to promote patient-centered care. SDM aims to "incorporate the patient's perspective and values into decisions about treatment in collaboration with the clinician when there is no 'right' course of treatment based on available evidence."[21] Prominent researchers have pointed out that wide variation in the rate of elective surgeries, for example hip replacement, suggests that patients may receive care aligned not with their values and preferences, but reflecting local practice patterns or other provider incentives.[22] SDM goes beyond the traditional informed consent process which, as one writer characterized, produces consents that "are neither informed nor consensual."[23] While not its central aim, studies have found that that SDM can also save money—fueling further interest.

Findings on Cost & Quality

A comprehensive review of randomized trials through 2009 showed that decision aids reduce the election of discretionary surgery and have no apparent adverse effects on health outcomes or satisfaction.[24] Since then, two key studies (see below), one more tightly focused on SDM than the other, have found cost savings associated with Shared Decision Making when used for preference-sensitive conditions.

Table 2: Shared Decision Making

Study	Cost Savings in Intervention*	Utilization Savings	Decision Aid Format
Group Health, Seattle (Arterburn et al, Sept 2012)[25]	12% lower costs – knee subjects 21% lower costs – hip subjects	38% fewer knee replacement 26% fewer hip replacements	Video: patient viewed on their own
Health Dialog, New England (Veroff et al, Feb 2013)[26]	5.3% lower costs	9.9% fewer surgeries 12.5% fewer Admissions	Contact with Health Coaches via phone, mail, e-mail, internet
Notes: Costs refers to total medical costs for the period. Percent savings are as compared to the control group. * Intervention refers to the introduction of decision aids			

[21] American Institutes for Research. April 2013. "Shared Decision Making and Benefit Design; Engaging Employees and Reducing Costs for Preference-Sensitive Conditions." Robert Wood Johnson Foundation. http://www.rwjf.org/en/research-publications/find-rwjf-research/2013/04/shared-decision-making-and-benefit-design.html

[22] Lee, Emily Oshima, and Ezekiel J. Emanuel. 2013. "Shared Decision Making to Improve Care and Reduce Costs." *The New England Journal of Medicine* 368(1): 6 – 8. http://www.nejm.org/doi/full/10.1056/NEJMp1209500

[23] King, Jaime, and Benjamin Moulton. 2013. "Group Health's Participation in a Shared Decision Making Demonstration Yielded Lessons, Such As Role Of Culture Change." *Health Affairs* 32(2): 294–302. http://content.healthaffairs.org/content/32/2/294.abstract.

[24] Stacey et al, 2011.

[25] Arterburn et al, 2012.

[26] Veroff, David, Amy Marr, and David E Wennberg. 2013. "Enhanced Support For Shared Decision Making Reduced Costs Of Care For Patients With Preference-Sensitive Conditions." *Health Affairs* 32(2): 285–93. http://content.healthaffairs.org/content/32/2/285.abstract

Group Health, an HMO-style health system in Washington State, conducted a large demonstration using twelve decision aids for preference-sensitive surgical conditions.[27] Results relating to the impact of decision aids on the rates of surgery and the medical costs for two of these conditions, hip and knee osteoarthritis, were reported in the literature.[28,29] The research not only found that the introduction of Shared Decision Making for hip and knee osteoarthritis was linked to reduced surgeries and costs (Table 2), but it showed that a large organization could bring about the cultural shift needed to effectively integrate Shared Decision Making into day-to-day practice.

A significant finding was the role of physician leadership. From the championship of the medical director of clinical improvement to the service chiefs that selected the project's preference-sensitive conditions, physician involvement was key. Data and constant evaluation played an important role as well, initially revealing, for example, widespread practice variation within their system (presumably some of it "unwarranted"). During the study, monthly data reports on the distribution of decision aids and surgery rates, by individual physician, department, and location provided the opportunity for continuous evaluation.

The study used a historical control, applying the same study selection criteria to an earlier period at Group Health. The authors also examined statewide trends in hip and knee replacements, to rule out a history bias. Authors note that it is not possible to separate the impact of the decision aids themselves from the concurrent education and monitoring of physicians. The latter may be quite important. Only one third of eligible patients (those with an orthopedic visit for knee or hip osteoarthritis during the study period) received a decision aid. In addition, it is not known whether patients who received the DAs actually viewed them.

The remaining procedures for which decision aids were implemented were not reported in this study, but our interviewee reported they showed no significant cost savings.[30] Additional study would be needed to understand why; possible reasons might be that lower volume procedures do not yield detectable results, or that alternate courses of treatment are also expensive, or that patients do not rule out elective surgery as often for some conditions.

A study by Health Dialog examined the benefits of offering Shared Decision Making to patients in two New England health plans with one of six preference-sensitive conditions: hip pain, knee pain, back pain, heart conditions, benign prostatic hyperplasia, and benign uterine conditions.[31] The analysis drew upon data from an earlier large randomized study of health coaching, and thus was limited in some respects. For example, it addressed more general "patient

[27] The pilot implemented decision aids for the following conditions: knee osteoarthritis, knee osteoarthritis, abnormal uterine bleeding, uterine fibroids, lumbar herniated disc, lumbar spinal stenosis, chronic stable angina, benign prostatic hyperplasia, early-stage prostate cancer, and early-stage breast cancer.
[28] King, Jaime, and Benjamin Moulton. 2013. "Group Health's Participation In A Shared Decision-Making Demonstration Yielded Lessons, Such As Role Of Culture Change." *Health Affairs* 32(2): 294–302. http://content.healthaffairs.org/content/32/2/294.abstract
[29] Arterburn et al, 2012.
[30] October 22, 2013 exchange with David Arterburn.
[31] Verroff, Marr, & Wennberg, 2013.

conditions," rather than the highly specific orthopedic diagnoses and related decisions of the Group Health study. The Health Dialog study also did not set out to implement Shared Decision Making; rather it considered its health coaching to serve the same functions as SDM. This study reported results in aggregated form. Nevertheless, this study added to the weight of evidence suggesting that using decision aids to engage patients in learning about the tradeoffs associated with their treatment options can lead to less intensive service use and cost savings as compared to the control (Table 2). The controls had received the usual, rather than the enhanced level of services. The study also demonstrated the use of extenders, in this instance health coaches, in the Shared Decision-Making process.

Discussion

While SDM was clearly linked to a reduction in hip or knee replacement surgery at Group Health, it might be difficult to replicate this effect and achieve cost savings in other locations or for other conditions. Reasons include:

- *Practice Type* – As an integrated, not-for-profit health system, with salaried physicians not paid by the procedure, Group Health may have been more open to adapting physician practices to patient preferences than other types of physician organization. In addition, physician leadership may have had more influence in an integrated group practice, achieving more uniform and complete implementation of decision aids and a more rapid cultural change among physicians. Leadership was able, for example, mid-way through the pilot to conduct a half day continuing medical education training for specialty physicians, re-arranging even the operating room schedules, to ensure attendance.[32]
- *Physician Involvement* – The Group Health pilot suggests that a substantial physician cultural shift also lay behind the results reported, and may have had even more impact than the decision aids themselves.
- *18 Month Study Period Could Miss Some Longer Term Effects* – The long-term impact is unknown because patients could elect surgery later or experience an adverse outcome beyond the 18 month study period.
- *The Experience for Hips and Knees May Not be Replicated for Other Conditions* – Decisions, costs, and the tendency for some patients to opt for non-surgical treatment outcomes may be unique to each preference-sensitive condition. For example, there might not be as great a tendency to forego bariatric surgery as there is knee surgery. And, the cost of the alternatives to surgery will be different for each condition, affecting the overall equation.

On the other hand, one of our interviewees noted that the greater variation in the rate of surgery, the greater the potential reductions in surgery.[33] In this way, areas with greater variation in surgery rates might more readily experience reductions in surgeries than Group Health.

A reliable means of certifying decision aids is important for retaining consumer confidence and assuring accuracy and currency of the information. In a few places, this has prompted legislators to create a path for certifying DAs and

[32] King & Moulton, 2013.
[33] October 22, 2013 Interview with David Arterburn.

promoting Shared Decision Making.[34] Both the state of Washington and the ACA[35], for example, provided for a means of certifying decision aids.

Conclusion

Shared Decision Making with decision aids offers the promise of more patient-centered care together with the possibility that unwarranted surgeries will be reduced, saving money, while aligning treatment with patients' preferences. The implementation of Shared Decision Making involves a substantial effort on the part of physicians and physician leadership, but its integration into the course of routine activity has been demonstrated in an integrated health system. Group Health's decision to continue and expand SDM beyond its pilot is an indication of its success with patients and providers. However, it is unclear whether cost savings are being generated from any SDM other than hips and knees and whether other practice models could implement Shared Decision Making as effectively.

[34] The state of Washington's "Healthy Washington Initiative," passed in 2007, and section 3506 of the federal "Affordable Care Act," enacted in 2010, both explicitly encourage the use of Shared Decision Making.

[35] To date, HHS has not yet initiated a certification process for decision aids. However, the HHS Agency for Healthcare Research and Quality (AHRQ) has three patient decision aids on its web site, which include extensive documentation for each on its development and the application of the International Patient Decision Aid Standards (IPDAS) to the aid. http://effectivehealthcare.ahrq.gov/index.cfm/tools-and-resources/patient-decision-aids/

Workplace Wellness

Description

Like Shared Decision Making, workplace wellness focuses on consumer engagement. Off the cuff, worksite wellness programs seem like common sense. Underlying population health affects health care costs both for society and for employers. And social and behavioral factors, such as obesity and smoking, have a major impact on health and spending.[36] A recent study reaffirmed that over 1 in 5 dollars spent on workers' health care was related to eight modifiable health risk factors.[37] Workplace wellness programs can promote healthy intervention and behaviors right where people spend much of their time. But, does workplace wellness really save money by lowering health care costs? And are there any drawbacks to consider?

Workplace Wellness
CLOSE UP
Johnson & Johnson
Evaluation of Live for Life

Focus: Consumers/Workers
Levers: Financial/Peer
Where: At Work Worldwide
Time Period: Study 2002-2008
Horizon: 30 Years +
Scope of Implementation: Worldwide
Savings: $565/employee/year
$1.98 - $3.92 Saved per $1 Invested
Source of Savings: Reduced Medical Spending
Source of Savings: Improved Risk Factors
Evaluation: Henke, Goetzel et al, 2011.
Replication: Likely – Other studies have similar findings
Sustainability: Yes – Mature program
Key Finding: J&J provides a $500 credit towards their health insurance for completing the health risk assessment and participating in a follow up activity. This yields high levels of completion for the survey and activities (80-85% range).

Evidence on Cost

Two major studies found that workplace wellness generates savings, but results from one important study were unclear.

- A 2010 meta-analysis incorporating 32 rigorous studies computed the return on investment and found that:
  - Medical costs fall by $3.27 for every dollar invested in workplace wellness.[38]
  - Absentee costs fall $2.73 per $1.00 spent.
- An evaluation of Johnson & Johnson's (J&J) 30+ year-old program, Live for Life, found a savings in medical costs of $1.98 - $3.92 in medical costs saved[39] per dollar invested. ($565/employee/year).[40]
- A 2013 meta-analysis by RAND was less clear cut. It found an increasing effect from wellness programs on total monthly medical cost, but the results were not significant. ($157/employee/year).[41]

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[36] Chari, Ramya, Peter S Hussey, Andrew Mulcahy, David Lowsky, Mary E Vaiana, and Arthur L. Kellermann. 2012. "Rand Research Brief, Flattening the Trajectory of Health Care Spending: Promote Population Health | RAND." http://www.rand.org/pubs/research_briefs/RB9690z4/index1.html

[37] Goetzel, Ron Z, Xiaofei Pei, Maryam J Tabrizi, Rachel M Henke, Niranjana Kowlessar, Craig F Nelson, and R Douglas Metz. 2012. "Ten Modifiable Health Risk Factors Are Linked To More Than One-Fifth Of Employer-Employee Health Care Spending." *Health Affairs* 31(11): 2474–84. http://content.healthaffairs.org/content/31/11/2474.abstract

[38] Baicker, Katherine, David Cutler, and Zirui Song. 2010. "Workplace Wellness Programs Can Generate Savings." *Health Affairs* 29(2): 304–11. http://content.healthaffairs.org/content/29/2/304.full?sid=b37e26e2-1ae3-4e8b-a6f0-8da5d9660716

[39] Savings in the Johnson & Johnson study reflect a comparison to employees in other large companies via propensity-score matching, which produces statistical "twins" of employees at Johnson & Johnson. The medical savings represent the differences in the medical cost trends of the two groups.

[40] Henke, Rachel M, Ron Z Goetzel, Janice McHugh, and Fik Isaac. 2011. "Recent Experience In Health Promotion At Johnson & Johnson: Lower Health Spending, Strong Return On Investment." *Health Affairs* 30(3): 490–99. http://content.healthaffairs.org/content/30/3/490.abstract

Discussion

Weight of Cost Evidence: Each of the studies above brought its own strengths to the question of the cost impact of worksite wellness on medical costs. The 2010 meta-analysis, by combining a large quantity of evidence, deserves substantial weight. The J&J study was able to demonstrate that cost benefits exist for a mature program, by using a control group comprised of employees at other companies, suggesting that benefits accrue over time and can still be realized in a mature program. The RAND study suggested possible savings, but was inconclusive. On balance, the evidence suggests that workplace wellness programs do save money. Whether all programs would save money, or whether the most successful programs have been evaluated is difficult to say. But, the evidence is encouraging.

Use of Incentives: Most workplace wellness programs use incentives to encourage participation in the program (69 percent).[42] High levels of participation, up to 85 percent for example at J&J, are seen when significant incentives for participation are offered.[43] In contrast, RAND found that incentives tied to employees achieving specific health targets were rarely used (10 percent).

While some may see tying incentives to health targets as a logical way to promote healthy behaviors, others see this as cost shifting and discrimination.[44] But, whether the incentive is linked to participation or a health target, failure to realize the incentive means that some employees pay more for health care than others. The difference may lie mainly in the ability of the employee to take advantage of the incentive. Theoretically, anyone could participate, while not everyone could suddenly move the dial on their health risk markers. While the very nature of health insurance is to shift risk, there is concern that employees unable to realize these incentives may be the least able to bear the additional costs. Furthermore, under the ACA, in 2014, employers can tie 30 percent of premiums to achievement of health-related targets, up from the current 20 percent. With this as a backdrop, the issue of whether wellness incentives shift costs or discriminate deserves a closer look, keeping in mind the real improvements that some workplace wellness programs have delivered, among them reductions in risk factors, increases in healthy behaviors, and clinically meaningful effects sustainable over time.[45]

Replication: While workplace wellness programs are more common among large employers, one stressed that even small employers can create a culture of health, and can implement a simple health risk assessment with a few questions.[46] But there have been no evaluations of whether small employers achieve good outcomes with a wellness approach.

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[41] Mattke, Soeren, Hangsheng Liu, John P Caloyeras, Christina Y Huang, Kristin R Van Busum, Dmitry Khodyakov, and Victoria Shier. 2013. "Workplace Wellness Programs Study Final Report." RAND Research Report. http://www.rand.org/content/dam/rand/pubs/research_reports/RR200/RR254/RAND_RR254.sum.pdf
[42] Ibid.
[43] Isaac, Fik. Interview Oct 7, 2013.
[44] Horwitz, Jill R, Brenna D Kelly, and John E DiNardo. 2013. "Wellness Incentives in the Workplace: Cost Savings through Cost Shifting to Unhealthy Workers." *Health Affairs* 32(3): 468–76.
[45] Mattke et al, 2013.
[46] Isaac, Fik. Interview Oct 7, 2013.

A Long Game: Ultimately population health is a long game—the result of small health-improving actions accumulated over many years—and it's difficult to gauge its impact over the short run. If workplace wellness interventions can realize these longer term benefits, their value will have exceeded the economic returns on investment cited above.

Conclusion

Workplace wellness has special appeal because it can engage employees before they are "ill," when behavioral changes can still make a long term difference.[47] Compelling evidence shows that workplace wellness programs can positively impact health and may save money, too. What is less clear is how universally savings can be realized (especially for smaller employers) and how the important work of promoting wellness can avoid discriminating against less healthy employees.

Consumers, Cost-Sharing & Value-Based Insurance Design (VBID)

ABC's of Cost-Sharing & What It Means for Value-Based Insurance Design (VBID)

When RAND released the landmark Health Insurance Experiment (HIE) in 1984, it documented the powerful effect of consumer cost-sharing on use and spending.[48] This study and subsequent work found that consumers respond to broad cost-sharing (such as coinsurance), by reducing the use of services indiscriminately.[49] Studies of consumers moving into Consumer Directed Health Plans (CDHPs), which have higher deductible health plans and may have a health savings account, have found large reductions in health spending in the first year, up to 14 percent.[50] Significant savings occurred only when deductibles were $1000 or more.[51] Survey research also shows that individuals enrolled in CDHPs exhibit more cost-conscious behaviors.[52] For example, they were more likely to say they had checked the price of a service before getting care. These findings all underscore the importance of giving consumers a personal financial stake, or "skin-in-the-game" in health care.[53]

But, the research also raises cautions. When switching to a CDHP, consumers reduced spending across the board, including preventive care, even though it was usually covered by insurance. This result warns us that, even today, consumers have difficulty discriminating between high and low value services and will need better signals to help

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[47] Mattke et al, 2013.
[48] Brook, Robert H, John E Jr Ware, William H Rogers, et al. 1984. "RAND Health Insurance Experiment." http://www.rand.org/content/dam/rand/pubs/reports/2006/R3055.pdf
[49] Lowsky, David, Ramya Chari, and Peter S Hussey. 2012. "Flattening the Trajectory of Health Care Spending: Engage and Empower Consumers." *RAND Research Brief*. http://www.rand.org/pubs/research_briefs/RB9690z3.html
[49] Melinda Beeuwkes Buntin, Amelia M. Haviland, Roland McDevitt, Neeraj Sood. 2011. "Healthcare Spending and Preventive Care in High-Deductible and Consumer-Directed Health Plans." *The American Journal of Managed Care*, v. 17, no. 3.
[51] Buntin, Melinda Beeuwkes, Amelia M Haviland, Roland McDevitt, and Neeraj Sood. 2011. "High-Deductible Health Plans Cut Spending but Also Reduce Preventive Care." *RAND Fact Sheet* 17(3). http://www.rand.org/content/dam/rand/pubs/research_briefs/2011/RAND_RB9588.pdf
[52] Fronstin, Paul. 2011. "Findings from the 2011 EBRI/MGA Consumer Engagement in Health Care Survey." *EBRI Issue Brief / Employee Benefit Research Institute* (365): 1–26. http://www.ncbi.nlm.nih.gov/pubmed/22312794
[53] Haviland, Amelia M., Roland McDevitt, M. Susan Marquis, Neeraj Sood, and Melinda Beeuwkes Buntin. 2012. "Skin in the Game." *RAND Research Highlights*. http://www.rand.org/pubs/research_briefs/RB9672.html

them make the best choices. Researchers found no evidence that vulnerable populations cut back more than others, suggesting that cost-sharing does not pose excess risk to them, although it should be monitored.[54]

Overall, it seems when their pocketbooks are involved, consumers will respond by consuming fewer services, at least in the initial year of higher cost-sharing. But, to make efficient or value-oriented choices, they will need information to help them distinguish between high value and low value services. The current trend towards transparency and data tools may finally give consumers what they need to exert muscle in the health care market.

[54] Lowsky, Chari, & Peter S Hussey, 2012.

Overview of Value-Based Insurance Design (VBID)

Like many forms of consumer cost-sharing, value-based insurance design (VBID) uses economic incentives to influence consumer decision making at the point where services are being consumed, but in a more nuanced fashion.

VBID works by changing consumer cost-sharing, such as copays, to encourage consumers to use health care with high clinical value. Care which is less expensive relative to its benefits would entail less cost-sharing, and conversely, more expensive/lower value care would require more consumers to pay more. These cost-sharing variations provide a signal to consumers who might otherwise have trouble distinguishing between high and low value treatments.

VBID has frequently been applied to prescription drugs, for example, eliminating copays for drugs that treat chronic conditions, such as diabetes. Some envision VBID more broadly applied, as it has been for the Oregon public employees, removing services that are not cost effective from benefit packages, increasing copays for items identified as low-value items, such as sleep studies, and eliminating copays for high value services, such as 17 preventive services and chronic disease generic medication.[55] The board's high value category also removed barriers to healthy behavior by covering tobacco cessation and weight control, a reflection of the board's interest in the overall health of its employee population.

Value-Based Insurance Design
CLOSE UP
Oregon State Employees

Focus: Consumers
Levers: Cost-sharing Incentives
Time Period: 2010—present
Horizon: Ongoing
Scope of Implementation: Oregon Public Employees Board (OPEBB) & Oregon Educators Benefit Board (OEBB)*
Enrollees Affected: ~260,000
Savings: 0% Increase in health premiums for 2014 due to medical cost trends
Source of Savings: Offsetting Copays for Low Value Services; Possibly external or concurrent factors
Cost Trend: Slowed
Quality: Inherent in the Value Concept
Evaluation: Ongoing
Replication: Likely
Sustainability: Possible, will require ongoing effort; improvements in underlying population health will help
Key Finding: Oregon's VBID effort piggybacks on the state's experience with evaluation and ranking of treatments via the Oregon Health Evidence Review Commission.

* Note: Not all benefit changes implemented simultaneously in the two groups.

Findings

Overall, hard evidence of cost savings from VBID has been scarce. This may be because most interventions are "carrots"—in other words, they reduce cost-sharing for high value treatments. Many believe that cost-savings is more likely to be realized from "sticks", increases in cost-sharing for services that are low value, overused, or which merit a second look.[56] Furthermore, a longer study period might be needed to detect the savings that better adherence to treatment might bring.

[55] Kapowich, Joan M. 2010. "Oregon's Test Of Value-Based Insurance Design In Coverage For State Workers." *Health Affairs* 29(11): 2028–32. http://content.healthaffairs.org/content/29/11/2028.abstract

[56] Volpp, Kevin G, George Loewenstein, and David A Asch. 2012. "Choosing Wisely: Low-Value Services, Utilization, and Patient Cost. http://jama.jamanetwork.com/article.aspx?articleID=1386618.

Research from prescription drug studies confirmed that reducing copays on high value chronic medications did not lead to cost savings. Two studies found increased adherence (2.8 percent) to drugs, but did not report clinical benefits or cost savings.[57] [58] Another found zero impact on overall spending from reducing copays for five classes of drugs used to treat chronic conditions.[59] In addition, a published literature review found no evidence of cost savings resulting from cutting cost-sharing on preventive care.[60]

In contrast, intriguing results have been noted by the state of Oregon Public Employees Benefit Board (OPEBB) and Oregon Educators Benefit Board (OEBB), which made extensive use of both carrots and sticks. Using information from the Oregon Health Evidence Review Commission, Oregon created a stick, the "Added Cost Tier" of low-value or overused treatments, imposing separate copays (either $100 or $500, depending on the procedure). Included in this Added Cost Tier were hi-tech imaging (except in cases of cancer or trauma), sleep studies, hip/knee replacements, and gastrointestinal bypass surgery.[61] In some instance, coverage for low value services, such as wart removal, were eliminated altogether. These design changes help to pay for cost-sharing reductions on high value items, such as Weight Watchers, tobacco cessation, preventive services, and generic drugs for chronic conditions. Furthermore, Oregon not only implemented these changes in their self-insured plan, but they asked their other insurers, including Kaiser, to match their benefit design.[62]

Although no formal results have been published at this point, the administrator cites encouraging signs of cost savings; and the self-insured plan is slated for a zero percent increase in premiums in 2014 as a result of favorable cost trends.[63] The Oregon VBID benefit changes were implemented concurrently with wellness, medical homes, and other initiatives, making it difficult to isolate the individual impact of any one intervention. Nevertheless, the results suggest there may be cost savings attributable at least in part to the extensive use of VBID.

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[57] Choudhry, Niteesh K, Michael A Fischer, Jerry Avorn, Sebastian Schneeweiss, Daniel H Solomon, Christine Berman, Saira Jan, Jun Liu, Joyce Lii, M Alan Brookhart, John J Mahoney, and William H Shrank. 2010. "At Pitney Bowes, Value-Based Insurance Design Cut Copayments And Increased Drug Adherence." *Health Affairs* 29(11): 1995–2001. http://content.healthaffairs.org/content/29/11/1995.abstract

[58] Gibson, Teresa B, Sara Wang, Emily Kelly, Candace Brown, Christine Turner, Feride Frech-Tamas, Joseph Doyle, and Edward Mauceri. 2011. "A Value-Based Insurance Design Program At A Large Company Boosted Medication Adherence For Employees With Chronic Illnesses." *Health Affairs* 30(1): 109–17. http://content.healthaffairs.org/content/30/1/109.abstract

[59] Chernew, Michael E, Iver A Juster, Mayur Shah, Arnold Wegh, Stephen Rosenberg, Allison B Rosen, Michael C Sokol, Kristina Yu-Isenberg, and A Mark Fendrick. 2010. "Evidence That Value-Based Insurance Can Be Effective." *Health Affairs* 29(3): 530–36. http://content.healthaffairs.org/content/29/3/530.abstract

[60] Buttorff, Christine, Sean R Tunis, and Jonathan Weiner. 2013. "Encouraging Value-Based Insurance Designs in State Health Insurance Exchanges." *American Journal Managed Care*: 593–600. http://www.ajmc.com/publications/issue/2013/2013-1-vol19-n7/Encouraging-Value-Based-Insurance-Designs-in-State-Health-Insurance-Exchanges/

[61] The development of the Added Cost Tier list begins with recommendations from the Oregon Health Leadership Task Force concerning preference-sensitive conditions and is informed by Oregon's Health Evidence Review Commission, which ranks services and procedures for the purpose of allocating Medicaid dollars. As a reference point, hip and knee replacements on the Evidence Commission ranked 384th out of the 476 services funded by Medicaid. Although the Public Employees Board considered the possibility of exemptions or appeals to waive the added cost copay in certain instances, it rejected this option as too difficult to administer.

[62] Joan Kapowich, interview, Oct 11, 2013.

[63] Ibid.

Conclusion

While a carrot-only approach may yield benefits in terms of better adherence to medication, the use of sticks may be needed to realize savings.[64] More evidence is needed to identify high and low value services, to understand how to reliably achieve cost savings, and perhaps to ensure that quality and access do not suffer when "sticks" are used.[65]

[64] Ginsburg, Marjorie. 2010. "Value-Based Insurance Design: Consumers' Views On Paying More For High-Cost, Low-Value Care." *Health Affairs* 29(11): 2022–26. http://content.healthaffairs.org/content/29/11/2022.abstract

[65] Thomson, Sarah, Laura Schang, and Michael E Chernew. 2013. "Value-Based Cost-sharing In The United States And Elsewhere Can Increase Patients' Use Of High-Value Goods And Services." *Health Affairs* 32(4): 704–12. http://content.healthaffairs.org/content/32/4/704.abstract

Reference Pricing (Ceiling Price)

Overview

Reference pricing is a benefit design feature that sends a very strong price signal to the consumer about which providers represent high value. It also puts price pressure on the provider market. Reference pricing addresses only price. It does not involve questions of utilization, appropriateness of treatment, or patient preferences, which other approaches, such as Shared Decision Making or medical homes might address. When prices vary, especially for common, but expensive procedures, reference pricing offers the opportunity to lower the average cost per procedure.

How reference pricing works: An insurer or self-insured employer sets a fixed amount they will pay for a certain procedure or bundle of services. Patients pay the remainder if they select a provider whose fees exceed the reference price, making the patient more sensitive to provider prices. Employees may receive a list of providers meeting the reference price, as they do in the two examples below. This relieves the consumer of price research and also ensures that they will not incur unexpected costs.

Who has used reference pricing: Most published information on reference pricing programs comes from two large self-insured employers: California Public Employees Retirement System (CalPERS) and Safeway (See Table 3). Both faced enormous variation in price for certain procedures. CalPERS prices for hip and knee replacements varied five-fold, with no measurable differences in quality.[66] In response, CalPERS established a statewide reference price for hip and knee replacements of $30,000, at about the 66th percentile of the prices seen. Safeway documented wide variations in imaging, finding that colonoscopies, for example, varied from $848 - $5,984 in the San Francisco area.[67] To address this, Safeway piloted colonoscopy reference pricing at $1500 for the region, later expanding to additional areas with

Reference Pricing
CLOSE UP
CalPERS

Focus: Consumers/Patients
Levers: Avoiding Out-of-Pocket Cost
Where: CalPERS
Time Period: Jan 2011 Implementation
Horizon: Ongoing
Scope of Implementation: Self-Insured Plan / Plan Administrator, Anthem
Enrollees Affected: 1.3 million
Savings: $3.1 million ($2.8 to CalPERS; $0.3 million to employees); 20.2% per case
Source of Savings: Price Reductions
Quality: Screening by Insurer Prior to Designation
Quality Incentives: N/A
Evaluation: James Robinson & Timothy T. Brown
Replication: Likely, but possibly limited to self-insured employers. CalPERS is expanding reference pricing to Ambulatory Surgery.
Sustainability: Unknown, although likely.
Key Finding: Wide price variation for straightforward procedures is a cost savings opportunity.

[66] Robinson, James C, and Timothy T Brown. 2013. "Increases in Consumer Cost-sharing Redirect Patient Volumes and Reduce Hospital Prices for Orthopedic Surgery." *Health Affairs* 32(8): 1392–97. http://www.ncbi.nlm.nih.gov/pubmed/23918483
[67] Robinson, James C, and Kimberly MacPherson. 2012. "Payers Test Reference Pricing and Centers of Excellence to Steer Patients to Low-Price and High-Quality Providers." *Health Affairs* 31(9): 2028–36. http://www.ncbi.nlm.nih.gov/pubmed/22949452

a separate reference price; it also instituted reference pricing for about a third of laboratory tests at the 60th percentile of the charge distribution.

Findings

Cost: Cost results in the literature are largely limited to the CalPERS initiative. After instituting reference pricing for hip and knee replacements, CalPERS experienced:[68]

- 20.2 percent decline in spending per hip or knee replacement.[69]
- This amounted to $7,028 per case in 2011, the first year of implementation. The program saved $3.1 million in the first year, most accruing to CalPERS, with $300,000 of this accruing to enrollees. Analysis showed that savings were obtained through price reductions, mostly in higher cost facilities, and due to a greater share of procedures being conducted at "value" priced facilities.
- Similar savings were experienced in the second year (2012), based on data through September.

Quality: Some employers employ rigorous criteria to select the facilities that qualify for the reference price. What has not been measured, however, is whether outcomes under a reference pricing regime are the same, worse or better than under other alternative approaches.

When developing its list of over forty "value-based" facilities for hip and knee replacements, CalPERS not only relied on price, but also on hospital quality and satisfaction information. CalPERS, together with its plan administrator Anthem, applied a range a quality screens, including accreditation, whether the facility performed a sufficient volume of joint replacement procedures, and its scores on surgical infection prevention indicators.[70] CalPERS staff reported that at the outset of the reference pricing initiative, quality measures were higher for the selected "value-based" facilities, probably because they performed more joint replacements.[71] Details regarding the quality criteria for Safeway's reference pricing for colonoscopies and lab tests are unknown, although senior management referred to quality standards for colonoscopy in a published interview.[72]

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[68] Robinson, James C, and Timothy T Brown. 2013. "Increases in Consumer Cost-sharing Redirect Patient Volumes and Reduce Hospital Prices for Orthopedic Surgery." *Health Affairs* 32(8): 1392–97. http://www.ncbi.nlm.nih.gov/pubmed/23918483

[69] As compared to non-CalPERS Anthem enrollees and adjusted for severity as follows: The raw CalPERS costs declined from $34,742 to $25,611 per case, a 26.3% reduction; but non-CalPERS cases also dropped 1%, bringing the difference to 25.3%. After severity adjustments, the CalPERS savings was $7,028 per case, a 20.2% decline.

[70] Robinson and Brown, 2013.

[71] October 22, 2013 interview with Doug McKeever and David Cowling, CalPERS.

[72] Shachmut, Ken. November 3, 2009. "Safeway Senior Vice President Ken Shachmut Talks About Holding Health Care Costs Steady, for Four Straight Years, Do-It-Yourself Health Reform, and $8,000 Colonoscopies." The Commonwealth Fund. http://www.commonwealthfund.org/Newsletters/Purchasing-High-Performance/2009/November-3-2009/Interview/Safeway-Senior-Vice-President-Ken-Shachmut-Talks-about-Holding-Health-Care-Costs-Steady.aspx

Table 3: Reference Pricing Examples

Employer	Details	Savings
CalPERS – Knee & Hip, 2011[73] [74]	• 2011 Launch • In Self-Insured Plan: - Reference price of $30,000 set, or about 66th percentile of prices • 47 Hospitals designated as "value-based", i.e. charged no more than $30,000, met quality and geographic accessibility standards • Patients going elsewhere: Subject to usual plan cost-sharing + any amount over $30,000.	• $3.1 million total - $2.8 million to CalPERS - $0.3 million to enrollees • 20.2% decline* per procedure - $7,028 per procedure • Most declines due to price reductions in "overpriced" facilities • 5.6% decline in "value" facility prices • 34.3% decline in "overpriced" facility prices • Increase in volume at "value" facilities • Prior to intervention, had faced 5 fold variation in cost per case
Safeway – Imaging[75]	• 2009 Launch • Self-insured plan • $1500 Ref price for colonoscopy set; exception for emergency procedures made. • Ref prices differed by geographic area	• Unknown, but approach expanded to other geographic areas • Prior to intervention, faced enormous variation in colonoscopy prices (e.g. $848 - $5,984)
Safeway – Lab Tests[76]	• One third of lab tests placed under reference pricing • 451 of the 847 lab CPT codes in Safeway benefit plan • Reference prices target the 60th percentile of the charge distribution	Unknown
*** Savings figures shown are smaller than the raw figures because they have been adjusted to account for the severity of the patient mix. Note: CalPERS Total Savings Computed as $7028 * 447 patients = $3.1 million.**		

[73] Robinson, James C, and Kimberly MacPherson. 2012. "Payers Test Reference Pricing and Centers of Excellence to Steer Patients to Low-Price and High-Quality Providers." *Health affairs (Project Hope)* 31(9): 2028–36. http://www.ncbi.nlm.nih.gov/pubmed/22949452
[74] Robinson, James C, and Timothy T Brown. 2013.
[75] Robinson, James C, and Kimberly MacPherson. 2012. "Payers Test Reference Pricing and Centers of Excellence to Steer Patients to Low-Price and High-Quality Providers." *Health affairs (Project Hope)* 31(9): 2028–36. http://www.ncbi.nlm.nih.gov/pubmed/22949452
[76] Robinson, James C, and Kimberly MacPherson. 2012. "Payers Test Reference Pricing and Centers of Excellence to Steer Patients to Low-Price and High-Quality Providers." *Health affairs (Project Hope)* 31(9): 2028–36. http://www.ncbi.nlm.nih.gov/pubmed/22949452

Discussion

Communication to Employees: In both examples, the employer engaged in a communication campaign to explain the new reference price benefits. Safeway, for example, distributed to all employees a list of facilities that charged less than the $1,500 limit for colonoscopies.[77] CalPERS staff stressed that communication of the new reference pricing benefit was vital.[78] Like Safeway, CalPERS provided a list of facilities that met the reference price criteria (so called "value-based" facilities). Such lists are important, not only because they make shopping simpler, but they assure consumers that the provider's services will be covered as they expect. A CalPERS travel per diem available to those living more than 50 miles from a value-based facility also required communication.

Strategies: The impetus for reference pricing is generally wide price variation on large ticket items. By steering patients to the lower cost providers, the average price for the procedure can be reduced, as it was for CalPERS. Controlling for provider quality will be important, not only for the wellbeing of patients but to ensure that additional costs aren't incurred later due to poor quality. CalPERS savings occurred both from a larger share of patients going to the lower cost facilities and from declines in the price of higher cost facilities. The Safeway expansion of reference pricing to laboratory tests broke new ground by targeting high volume services with relatively low costs; a future evaluation of this strategy would be valuable.

Challenges: A number of uncertainties remain. In the examples here, reference pricing was established for large, self-insured employers. It isn't clear whether a smaller employer, even if self-insured, would have the analytic capacity to set up reference pricing. Other questions include whether state regulators would permit reference pricing arrangements as part of fully insured products. Also, we do not know how reference pricing affects aggregate costs: did facilities that lost business or lowered prices when reference pricing was implemented offset their losses with increases on other services? Finally, to date reference prices seem to have been high enough to capture sufficient providers of good quality that access and value are assured and that benefits are maintained. But, an ongoing quality screen is important to uphold this standard.

Conclusion

Reference pricing can have a substantial impact on costs by bringing down costs per case, as shown by CalPERS 20 percent cost reduction for hip and knee replacements. The CalPERS and Safeway reference pricing initiatives suggest that variation in price among comparably qualified providers is required. Quality screening is important. The reference price needs to capture sufficient providers of good quality that enrollee access is maintained. Finally, reference pricing may be difficult to expand beyond large self-insured employers.

[77] Robinson & MacPherson, 2012.
[78] October 22, 2013 interview with Doug McKeever and David Cowling, CalPERS.

Centers of Excellence (COE)

Overview

Like reference pricing, Centers of Excellence (COE) is a benefits approach which takes aim at wide variation in price for an expensive procedure. It also sends a strong signal to consumers about value, because it targets high quality providers.

How Centers of Excellence Work: In these arrangements, the employer/insurer has done the shopping, arranging for a single or a limited number, of "centers of excellence" to provide the bundle of care for a set fee. The number of providers available to consumers is greatly reduced, but patients using the centers of excellence need not shop, and can receive high quality care with little or no cost-sharing. The employer typically pays for travel, lodging, and food for the patient and a family member. In most cases, such as the Wal-Mart and Lowe's examples below, employees are not required to use the COE, but may choose to obtain the procedure elsewhere, incurring the standard deductibles or coinsurance of their insurance plan.[79] Centers of Excellence arrangements are best suited for high-cost, nonemergency procedures. COEs offer employers an opportunity to target high cost procedures, while negotiating favorable terms with highly reputable organizations.

Proliferation of Centers of Excellence: Centers of Excellence are proliferating (See Table 4). Major employers have COE arrangements at locations such as the Cleveland Clinic and Johns Hopkins. Most recently, in October 2013, a group of employers, including both Wal-Mart and Lowe's, announced COE arrangements for hip and knee replacements. In this instance, the employers had acted jointly to arrange COEs, working with the Pacific Business Group on Health's (PBGH) Negotiating Alliance, which also provided quality review.[80]

Findings

Cost: To date, none of the employers listed in Table 4 have published information on cost savings achieved by using Centers of Excellence. But, the expanding use of COEs, by Lowe's and Wal-Mart, for example, suggests that these large employers have found COEs do save money.

Quality: Quality is often provided for in these instances by contracting with well known, high quality providers, like Cleveland Clinic. Alternatively, the PBGH Negotiating Alliance developed an explicit and extensive quality screening and monitoring approach for the multi-employer hip and knee COEs. This quality effort is notable in that it includes outcome measures for individual surgeons and will be updated and reviewed annually. Blue Shield of California HMO

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[79] Lee, Jaimy. October 8, 2013. "Wal-Mart, Lowe's to Offer Employees Leg up on Knee Work—at Certain Systems." Modern Healthcare.http://www.modernhealthcare.com/article/20131008/NEWS/310089966?AllowView=VW8xUmo5Q21TcWJOb1gzb0tNN3RLZ0h0MWg5SVgra3NZRzROR3l0WWRMWGFWUDBKRWxiNUtpQzMyWmFyNTNRWUpicW4=&utm_source=link-20131008-NEWS-310089966&utm_medium=email&utm_campaign=am

[80] Criteria included publicly available quality information, as well as specific outcomes data (e.g. readmission rates) for the orthopedic program overall and for the individual surgeons being evaluated for inclusion. This process will recur annually. For additional information about the Employers' Center of Excellence Network, http://www.pbgh.org/ecen

took a different approach to quality screening when establishing its 16 Centers of Excellence. It began by considering limiting the facilities considered to the 57 California hospitals designated as "Blue Distinction" facilities by the BlueCross BlueShield Association based on process and outcome quality measures.[81]

Table 4: Centers of Excellence Examples

Employer	Centers of Excellence Details
Lowe's – Non-Emergency Cardiac Procedures[82]	• April 2010 launch • Includes angioplasty, bypass surgery, valve replacement • Usual cost-sharing waived if treated at Center of Excellence • Travel reimbursed • Cleveland Clinic
Wal-Mart[83] **Spinal Procedures**	• Mercy Hospital, Springfield, MO • Scott & White Hospital • Virginia Mason Medical Center
Wal-Mart[84] **Cardiac Procedures, incl. CABG**	• Cleveland Clinic • Geisinger Medical Center • Scott & White Memorial Hospital • Virginia Mason Medical

Employers Center of Excellence Network (includes Wal-Mart, Lowe's & Others)[85] – **Hip & Knee Replacements**	• October 2013 Announcement
	• $0 cost-sharing for employees if treated at Centers of Excellence
	• Centers of Excellence Facilities
	  - Johns Hopkins Bayview Medical Center
	  - Mercy Hospital, Springfield, MO
	  - Kaiser's Orange County-Irvine Medical Center
	  - Virginia Mason Medical Center, Seattle
	• Quality Screening & Criteria for Inclusion provided by Pacific Business Group on Health's Negotiating Alliance

CalPERS -- Knees & Hips [86]	• For Blue Shield of California HMO CalPERs enrollees • Began with "Blue Distinction" facilities for orthopedic surgery from national BCBS Association • Designated 16 facilities, which are the exclusive providers of this procedure (BS will not pay for this elsewhere) • Required regulatory approval

[81] Robinson & MacPherson, 2012.
[82] Robinson, James C, and Kimberly MacPherson. 2012. "Payers Test Reference Pricing and Centers of Excellence to Steer Patients to Low-Price and High-Quality Providers." *Health affairs (Project Hope)* 31(9): 2028–36. http://www.ncbi.nlm.nih.gov/pubmed/22949452
[83] Wal-Mart. Oct 11, 2012. "Wal-Mart Expands Health Benefits to Cover Heart and Spine Surgeries at No Cost to Associates." *Press Release*. http://news.walmart.com/news-archive/2012/10/11/walmart-expands-health-benefits-to-cover-heart-spine-surgeries-at-no-cost-to-associates
[84] Wal-Mart. Oct 11, 2012. "Wal-Mart Expands Health Benefits to Cover Heart and Spine Surgeries at No Cost to Associates." *Press Release*. http://news.walmart.com/news-archive/2012/10/11/walmart-expands-health-benefits-to-cover-heart-spine-surgeries-at-no-cost-to-associates
[85] Lee, Jaimy. 2013. "Wal-Mart, Lowe's to Offer Employees Leg up on Knee Work—at Certain Systems | Modern Healthcare." *Modern Healthcare*. http://www.modernhealthcare.com/article/20131008/NEWS/310089966?AllowView=VW8xUmo5Q21TcWJOb1gzb0tNN3RLZ0h0MWg5SVgra3NZRzROR3l0WWRMWGFWUDBKRWxiNUtpQzMyWmFyNTNRWUpicW4=&utm_source=link-20131008-NEWS-310089966&utm_medium=email&utm_campaign=am
[86] Robinson & MacPherson, 2012.

Discussion

The Centers of Excellence approach both uses the bargaining leverage of a large employer and greatly expands the geographic area from which it can obtain price quotes. For a facility like the Cleveland Clinic, located in an area that is no longer growing, COE contracting presents the opportunity to continue to fully use its facilities.

Quality screening and monitoring are important to ensuring that a Center of Excellence does, in fact, provide excellent care. The recent Negotiating Alliance involvement with quality monitoring for Lowe's and Wal-Mart joint replacements is encouraging. Transparency around quality metrics and performance will also be important.

In terms of the ability of other purchasers to adopt COEs, it is unclear whether a small employer would have the buying power to make such an arrangement or if COE contracting will continue to be primarily available large employers with self-insured products. While CalPERS was able to implement COEs for state employees insured under Blue Shield of California's HMO, this initiative did require state regulatory approval, and other employers might find this requirement more difficult to navigate.[87] Other contracting overhead could include complications from "All or None" clauses in hospital contracts, which prevent purchasers from cherry picking certain facilities from a network.[88] In terms of the system-wide cost impact, as with reference pricing, it is possible that facilities losing business to a COE might take action to replace revenues, such as raising prices on other services. However, even if this were true, it would be difficult to document.

Conclusion

Centers of Excellence are best suited for non-emergency procedures where the patient will be well enough to travel. The procedures must be costly and vary in price. So far, COEs are mainly an option for large self-insured employers. Public evidence of savings from COEs was not available, although it seems likely that they result in lower prices per procedure. Quality screening and ongoing monitoring of COEs is needed to assure they do provide the value that they promise.

[87] Robinson & MacPherson, 2012.
[88] Robinson & MacPherson, 2012.

Patient-Centered Medical Homes (PCMH)

Overview

In contrast to price-based approaches, Patient-Centered Medical Homes (PCMH) focus on health care delivery. PCMHs use an alternative payment method to compensate primary care providers for acting as the focal point for patient-centered, coordinated care.[89] In a PCMH, a patient's personal physician leads a team of people who provide or coordinate care.[90] Medical homes are designed to cover the costs of coordination and management of care activities, such as phone calls, referrals, email, and follow up, which go uncompensated in traditional FFS practice. A variety of payment approaches have been used, but typically they involve a mix of payment incentives for quality, a management fee per member per month, FFS payments, and possible bonuses based on clinical performance; in a survey of 26 demonstration sites, fixed fees for management ranged from $0.50 - $9.00 per member per month.[91]

Medical homes have been viewed as a way to revitalize primary care, attracting and retaining physicians by promoting patient-centered, efficient, coordinated care.[92] Patient-centered medical homes operate in all 50 states, some of them contracting with public insurance (typically a single payer, such as Medicaid) and others with private insurance (typically multiple payers).[93] About half of the states have promoted medical homes for Medicaid enrollees, especially high risk patients with chronic conditions.[94] Medical homes can operate in either PPO or HMO environments. Through

PATIENT-CENTERED MEDICAL HOMES CLOSE UP
Colorado Multi-Payer Patient-Centered Medical Home Pilot

Focus: Providers
Levers: Quality Payments; Management Payments for Coordination of Care
Time Period: May 2009 – April 2012
Horizon: Pilot Complete
Scope of Implementation: Multi-Payer Pilot with 16 Primary Care Practices
Enrollees Affected: 255,000 enrollees
Savings: One payer reports $2.50/$1 return on investment; savings for other payers unknown. Preliminary results show reduction in Emergency Department visits and hospital readmissions.
Source of Savings: If confirmed, likely from decrease in emergency visits and hospital admits.
Quality: Quality Payments for Level 1, 2, 3 of NCQA recognition
Quality Incentives: PMPM fees for NCQA levels 1, 2, and 3
Evaluation: Harbrecht & Latts, *Health Affairs,* 2012.
Evaluation Period: 3 Year Pilot
Key Finding: In multi-payer sites, data is fragmented; self-insured employers often will not pay the PMPM management fee.

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[89] Patel, Urvashi B, Carl Rathjen, and Elizabeth Rubin. 2012. "Horizon's Patient-Centered Medical Home Program Shows Practices Need Much More Than Payment Changes to Transform." *Health Affairs* 31(9): 2018–27. http://content.healthaffairs.org/content/31/9/2018.abstract?sid=6b606063-20fe-4df6-be80-214b6359df1f

[90] For additional information, see US Department of Health and Human Services, Health Resources and Services Administration, "What is a medical home?" http://www.hrsa.gov/healthit/toolbox/Childrenstoolbox/BuildingMedicalHome/whyimportant.html

[91] Bitton, Assaf, Carina Martin, and Bruce E. Landon. 2010. "A Nationwide Survey of Patient-Centered Medical Home Demonstration Projects." *The Commonwealth Fund: In the Literature*. http://www.commonwealthfund.org/Publications/In-the-Literature/2010/May/A-Nationwide-Survey-of-Patient-Centered-Medical-Home-Demonstration-Projects.aspx

[92] Bitton, Martin, & Landon, 2010.

[93] Robert Wood Johnson Foundation. 2013. "Partnership for Sustainable Health Care." 34. http://www.rwjf.org/en/research-publications/find-rwjf-research/2013/04/strengthening-affordability-and-quality-in-america-s-health-care.html

[94] Takach, Mary. 2012. "About Half of the States Are Implementing Patient-Centered Medical Homes for Their Medicaid Populations." *Health Affairs* 31(11): 2432–40. http://content.healthaffairs.org/content/31/11/2432.abstract?sid=4e1a162e-09e0-49f5-8e81-63fc26460053

their emphasis on coordination of care and quality incentives, medical homes, like ACO arrangements, hope to both improve quality and save money.

Findings on Cost & Quality

Most PCMHs have not yet been evaluated. With many payers and medical homes preparing to assess demonstration projects, the Commonwealth Fund has sponsored an Evaluators Collaborative, to establish common measures of evaluation.[95] While full scale evaluations are still ramping up, some early results, including cost figures, are in. These preliminary results are mixed, but mostly encouraging:

- In Colorado, one payer reported a return on investment of $2.50 for every dollar invested during the study period, based on its 6,200 enrollees in the multi-payer medical home.[96]
- Also in Colorado, a medical home reported reduced emergency visits and hospital admissions; quality measures improved on process outcomes, such as screening for tobacco use and breast cancer, and intermediate outcomes, such as blood pressure levels, over the course of its 3-year pilot.[97]
- In Michigan, Blue Cross Blue Shield reported $155 million in lower medical costs in 2011 (~ $8.50 per member per month) from a state-wide program that rewarded medical home activities.[98] The PCMH practices were lower than non-PMHC practices across eight measures, including a 23.8 percent difference for primary care-sensitive emergency department visits.
- In Rhode Island, a medical home reporting on two years of results found a significant reduction in ambulatory care-sensitive emergency department use. No significant improvements were found in quality measures; the study did not report on cost.[99]
- Although quality incentives are an integral part of the payment arrangements for medical homes, evidence on quality improvements is still limited.

Discussion

Descriptions of medical home operations, especially when multiple payers are involved, reveal a complex payment process and operational difficulties that often impeded the management of care. In Colorado, for example, primary care physicians were dependent on data from multiple payers to monitor care outside the primary care practice, such as specialist or hospital care; and difficulties obtaining a routine flow of data sometimes impacted coordination

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[95] Rosenthal, Meredith B, Melinda K Abrams, Asaf Bitton, and PCMH Evaluators' Collaborative. May 2012. "Recommended Core Measures for Evaluating the Patient-Centered Medical Home: Cost, Utilization, and Clinical Quality." *The Commonwealth Fund:* Data Brief. http://www.commonwealthfund.org/Blog/2012/May/Measuring-the-Success-of-Medical-Homes-blog.aspx

[96] Raskas, Ruth S, Lisa M Latts, Jill R Hummel, Douglas Wenners, Harlan Levine, and Sam R Nussbaum. 2012. "Early Results Show WellPoint's Patient-Centered Medical Home Pilots Have Met Some Goals for Costs, Utilization, and Quality." *Health Affairs* 31(9): 2002–9. http://content.healthaffairs.org/content/31/9/2002.abstract

[97] Harbrecht, Marjie G, and Lisa M Latts. 2012. "Colorado's Patient-Centered Medical Home Pilot Met Numerous Obstacles, yet Saw Results Such as Reduced Hospital Admissions." *Health Affairs* 31(9): 2010–17. http://content.healthaffairs.org/content/31/9/2010.full

[98] Share, David A, and Margaret H Mason. 2012. "Michigan's Physician Group Incentive Program Offers a Regional Model for Incremental 'Fee for Value' Payment Reform." Health Affairs 31(9): 1993–2001. http://content.healthaffairs.org/content/31/9/1993.abstract?sid=cc1f0114-4903-4d6a-96a9-fa232e9f0e37

[99] Rosenthal, Meredith B, Mark W Friedberg, Sara J Singer, Diana Eastman, Zhonghe Li, and Eric C Schneider. 2013. "Effect of a Multipayer Patient-Centered Medical Home on Health Care Utilization and Quality: The Rhode Island Chronic Care Sustainability Initiative Pilot Program." *JAMA Internal Medicine*:http://archinte.jamanetwork.com/article.aspx?articleid=1735895

efforts. In addition, information from multiple payers was not necessarily comparable.[100] In PPO arrangements, the absence of a primary care physician already associated with each enrollee at the outset added to implementation challenges. And in multi-payer arrangements, self-insured payers often would not pay the per member per month management fee, leaving their enrollees to be subsidized by others.[101] Multiple evaluators commented that it will likely take time to see the full health and economic effects of medical homes, with one suggesting a period as long as five to 10 years.[102] [103]

Conclusion

Results on cost savings from the formation of Patient-Centered Medical Homes are encouraging but preliminary. Lower emergency department visits occurred in all three main studies of commercial implementations. Substantial implementation challenges have been encountered and are being resolved plan-by-plan. Evaluation of the many ongoing demonstrations projects will be key to understanding the role that can be played by medical homes in reorienting primary care and whether medical homes save money.

[100] Harbrecht & Latts, 2012.
[101] Harbrecht & Latts, 2012.
[102] Rosenthal, Friedberg, et al, 2013.
[103] Stange, KC, PA Nutting, and WL Miller. 2010. "Defining and Measuring the Patient-Centered Medical Home." *Journal of General Internal Medicine* 25(6): 601–12. Commonwealth Literature Abstract. http://www.commonwealthfund.org/Events/2012/Measuring-the-Success-of-the-Patient-Centered-Medical-Home.aspx

Alternative Quality Contract (AQC) and Accountable Care Organizations (ACO)

An ACO is a formal collaboration of providers and insurers, who make a collective commitment to be responsible for all the care of a defined population for a target price, often but not always incorporating quality targets. This gives providers (physicians and usually hospitals) and insurers a common incentive. If medical expenses for all services can be held below the target, the three entities split the savings. ACOs are considered an alternate delivery and payment system.

How the ACO Structure Could Promote Savings & Quality: In an ACO, the creation of the common or global target, sometimes called "aligning incentives" encourages providers to coordinate care and removes the traditional focus on volume. The common target eliminates incentives to shift costs to other providers or to generate services. It also incents the insurer to assist, for example with data analytics. For these reasons, entering into an ACO often leads to a dramatic cultural shift, turning "fierce competitors [into] fierce collaborators."[104] [105] [106] Most ACOs include a quality incentive, and often savings are split based on providers' quality performance.

More on ACO Workings: ACOs take a long term view of their provider-payer partnership, routinely adopting five year contract periods. Although providers may have agreed to a global budget target, this does not mean that they are capitated. Unlike capitation, intermediate payment methods can vary based on providers performance on quality measures and the amount of shared savings. But the size of the overall savings pool is capped by the global budget. Many providers in ACOs, especially hospitals, continue to be

Typical ACO Characteristics

- Collaboration between major providers and the payer
- A single collective expense target (aligned incentives)
- A defined population
- Share in Savings – "One Sided" model
- Also share losses – The "Two-Sided" model
- Quality focus – quality is often a basis for distribution of savings
- Each patient is associated with a primary care provider
- Data Driven
- Most have not yet been evaluated

ACO Variations

- Hospitals – Do not always join ACO
- May be built on HMO or a PPO arrangement
- Providers may receive a pmpm fee for coordination of care
- May be for employees of a single large employer
- Commercial ACOs and Medicare ACOs both exist
- Medicare has two types of ACOs: the Pioneer ACOs & the Shared Savings Program

[104] Schoenherr, Karen. 2013. "Establishing a Coalition to Pursue Accountable Care in the Safety Net: A Case Study of the FQHC Urban Health Network." *The Commonwealth Fund*. http://www.commonwealthfund.org/Publications/Case-Studies/2013/Oct/Coalition-to-Pursue-Accountable-Care-in-the-Safety-Net.aspx?omnicid=20

[105] Larson, Bridget K, Aricca D Van Citters, Sara A Kreindler, Kathleen L Carluzzo, Josette N Gbemudu, Frances M Wu, Eugene C Nelson, Stephen M Shortell, and Elliott S Fisher. 2012. "Insights from Transformations Under Way at Four Brookings-Dartmouth Accountable Care Organization Pilot Sites." *Health Affairs* 31(11): 2395–2406. http://content.healthaffairs.org/content/31/11/2395.abstract

[106] Markovich, Paul. 2012. "A Global Budget Pilot Project Among Provider Partners and Blue Shield of California Led to Savings in First Two Years." *Health Affairs* 31(9): 1969–76. http://content.healthaffairs.org/content/31/9/1969.abstract?sid=530a3e05-7db9-4b35-add6-82cfaa5cc4a5

paid on a fee-for-service (FFS) basis. In this sense, ACO is simple to implement, in that it can be overlaid on existing reimbursement practices.

Two High Profile Examples of Commercial Initiatives

Example I: **The Blue Cross Blue Shield of Massachusetts (BCBSMA) Alternative Quality Contract (AQC),** launched in 2009, stands as perhaps the earliest and most prominent example of what are now known as Accountable Care Organizations (ACOs). In this global budgeting approach, BCBSMA created incentives for providers to save money and improve quality, negotiating a multi-year series of global budget targets with a set of providers. Both providers and insurer would share savings if medical expenses were below the target; they would share losses if not. In addition, a substantial incentive payment was offered for meeting quality metrics.

Example II: **The Blue Shield of California/CalPERS ACO** began in 2010 by serving state employees in the Sacramento area. This pilot brought together Dignity Health hospitals and the Hill Physicians group with Blue Shield, building on an existing narrow network HMO.[107] Providers and insurer share in either savings or losses.

Alternative Quality Contract (AQC)
CLOSE UP
Blue Cross Blue Shield of Massachusetts

Focus: Providers
Levers: Global Budgeting + Quality Incentives
Time Period: 2009 – Present
Horizon: 5 year provider contracts
Scope of Implementation:
¾ of contracted network providers
Enrollees Affected: 665,000 by Oct 2012
Savings: $22.58 per enrollee/quarter over 2 years; 2.8% less spending than the control group in initial two year period.
Source of Savings: Lower priced tests/procedures (initial 2 years)
Cost Trend: AQC cost trend lower than non-AQC trend in 2009, 2010, and 2011. In 2011 medical costs were even with general inflation levels.
Quality: Improvements across many measures
Quality Incentives: Up to 10% Budget
Evaluation: Song et al in *Health Affairs* (Song et al, 2012)
Period Evaluated: 2009 – 2010
Replication: Model for many ACO's
Sustainability: Continued into years 3 & 4
Key Finding: Cost trend reduced to general inflation levels by year three; quality continued to improve.

[107] The ACO was initially built on the Net Value product. Grossman, Joy et al, 2013. "Arranged Marriages : The Evolution of ACO Partnerships in California." *California HealthCare Foundation, Health Care Almanac*. http://www.chcf.org/publications/2013/09/arranged-marriages-acos

Findings on Cost & Quality

Blue Cross Blue Shield of Massachusetts AQC Results

The first two years of the BCBSMA effort, the AQC, were the subject of a rigorous evaluation[108] [109] [110]

Cost Savings: Medical expenses in the first two years of the BCBSMA pilot were 2.8 percent less than they would otherwise have been (1.9 percent less in year one and 3.3 percent in year two).[111] In the third year (2011), AQC medical cost increases were similar to overall economic inflation (less than three percent).[112]

The greatest savings in the initial two years accrued from:

- Provider groups which had no prior experience with risk sharing, suggesting that expansion to other FFS providers could produce further savings (See table 5)
- Using lower priced procedures and tests
- The highest utilizers

In addition, savings were greater in the second year than in the first, suggesting that the time horizon for implementing effective management and coordination is fairly long. After the initial two years, the savings areas shifted away from prices on tests and procedures to other areas, including lower re-admission rates.[113]

Further Details on Spending & Savings: Savings were measured based on total medical spending, which included the enrollees' cost-sharing. We know AQC savings were independent of the national slowdown in health spending, because AQC savings figures represent a comparison to the control group. In 2010, it is likely that total medical savings were more than offset by quality bonuses, infrastructure support from BCBSMA and sharing of savings.[114] BCBSMA had foreseen this possibility, but considered it a temporary cost in the startup of a major positive change, and preferable to the status quo. Policy changes have since changed the payment dynamics, so that quality payments, for example, cannot eat up savings.[115] [116]

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[108] Song, Zirui, Dana Gelb Safran, Bruce E Landon, Mary Beth Landrum, Yulei He, Robert E Mechanic, Matthew P Day, and Michael E Chernew. 2012. "The 'Alternative Quality Contract,' Based on a Global Budget, Lowered Medical Spending and Improved Quality." *Health Affairs* 31(8): 1885–94. http://content.healthaffairs.org/content/31/8/1885.full?sid=ca707ad5-6627-4467-9a95-37d22514a97f

[109] Blue Cross Blue Shield Massachusetts. 2012. "Massachusetts Payment Reform Model : Results and Lessons." http://www.bluecrossma.com/visitor/pdf/aqc-results-white-paper.pdf

[110] "The 'Alternative Quality Contract,' Based on a Global Budget, Lowered Medical Spending and Improved Quality." 2012. *The Commonwealth Fund: In the Literature*. http://www.commonwealthfund.org/Publications/In-the-Literature/2012/Jul/The-Alternative-Quality-Contract.aspx

[111] Song, Safran et al, 2012.

[112] Interview with Blue Cross and Blue Shield of Massachusetts, Dana Safran, October 16, 2013.

[113] Interview with Blue Cross and Blue Shield of Massachusetts, Sarah Iselin and Dana Safran, October 8, 2013.

[114] Song, Safran et al, 2012.

[115] Blue Cross Blue Shield Massachusetts. 2012.

[116] Interview with Blue Cross and Blue Shield of Massachusetts, Dana Safran, October 16, 2013.

Table 5: Medical Cost Savings, Alternative Quality Contract, BCBSMA[117]

	Percent Less Medical Spending Than Control Group		
	Year 1	**Year 2**	**Both Years Combined**
Overall Savings	1.9%	3.3%	2.8%
Without Prior Risk (2009 Cohort*)	6.3%	9.9%	--
Without Prior Risk (2010 Cohort**)	5.1%	n/a	n/a
With Prior Risk	1.1%***	1.8%***	

* Refers to the cohort of providers whose initial year of the AQC was 2009.
** Refers to the cohort whose initial year of the AQC was 2010.
*** Not statistically significant (at the p<.05 level).
Notes: "Prior Risk" refers to whether the provider group had prior experience with risk sharing. Reductions in medical spending have not netted out the savings returned to providers and quality bonuses.

Quality: BCBSMA saw substantial increases in quality measures for AQC providers. For example, in the first two years, the share of diabetes patients receiving an eye exam increased 7.2 percentage points more than the control, raising the screening level to 65.2 percent.[118] The extensive list of quality and outcome measures which assessed quality under the AQC provide substantial assurances that savings were not being accrued at the expense of care and quality. Substantial improvements in quality measures were made, with greater improvements in the second year than the first.

AQC Conclusion: Now in its fifth year, the BCBSMA AQC initiative has developed an impressive track record. Quality has improved. Cost trends are lower. Provider participation in the AQC had expanded by October 2012 to include over three-quarters of BCBSMA's network of contracted providers, who care for some 665,000 enrollees. As of 2013, BCBSMA was planning for expansion that would include its PPO products as well.

[117] Song, Zirui, Dana Gelb Safran, Bruce E Landon, Mary Beth Landrum, Yulei He, Robert E Mechanic, Matthew P Day, and Michael E Chernew. 2012. "The 'Alternative Quality Contract,' Based on a Global Budget, Lowered Medical Spending and Improved Quality." *Health Affairs* 31(8): 1885–94. http://content.healthaffairs.org/content/31/8/1885.full?sid=ca707ad5-6627-4467-9a95-37d22514a97f
[118] Song et al, 2012.

Blue Shield of California/CalPERS ACO Results

The Blue Shield of California/CalPERS ACO also reported savings across two years.[119] In this local area pilot involving 41,000 enrollees, the Blue Shield of California ACO found savings of $37 million ($16 per member per month) over what costs would have otherwise been. The ACOs approach included an ambitious initial year spending target – zero percent increase over the prior year, as compared to a nine percent increase for the plan outside the ACO. Yet, the ACO successfully beat its target in both years. Of the $37 million, $13 million resulted from beating the targets; the remainder represented premium increases not taken.

Unlike BCBSMA, Blue Shield ACO savings were primarily generated by reductions in hospital days. Strategies used to coordinate care included improvements to the exchange of electronic health information and a review of their data to understand the drivers of cost. These are likely "real" savings, as under the global payment target, costs cannot be shifted to other providers.

Accountable Care Organization
CLOSE UP
Sacramento, California
Blue Shield of California/CalPERS
Dignity Health/Hill Physicians

Focus: Providers/Insurers
Levers: Financial Gains/Losses if ACO misses the Global Budget Targets
Where: Sacramento, CA with CalPERS and Blue Shield of California HMO
Time Period: Jan 2010 – Dec 2011
Horizon: Ongoing; Expanded to 5 more areas, for a total of 7 additional ACOs
Scope of Implementation: CalPERS enrollees only initially
Enrollees Affected: 41,000 in pilot
Savings:

- $37 million (~16 PMPM) Over two years
- Beat their target in both Yr1 & Yr. 2

Source of Savings:

- 15% Decline in Hospital Days in Yr. 1
- 15% Decline in Readmissions in Yr. 1

Source of Savings:
Cost Trend: Premiums held to 0% increase in 2010 (compared to 9% outside)
Quality: Pilot did not build in extra quality features
Quality Incentives: No
Evaluation: Health Affairs, Sept 2012
Evaluation Period: 2010-2011 (2 Yrs.)
Replication: Likely, especially in HMOs. Planning expansion to PPOs
Sustainability: Unknown
Characteristics: HMO (closed network) Blue Shield now has 6 additional ACO's

[119] Markovich, Paul. 2012. "A Global Budget Pilot Project Among Provider Partners and Blue Shield of California Led to Savings in First Two Years." *Health Affairs* 31(9): 1969–76. http://www.ncbi.nlm.nih.gov/pubmed/22949445

Other ACO Results

At present, few other commercial ACO's have published results on cost, and the limited information available is inconclusive. Some observers believe that the evidence of cost savings remains uncertain, especially in the short term.[120] Others note small savings and promise from preliminary results.[121] Even Medicare, whose ACO Pioneer Pilot reported recently on its first year, showed mixed results, with 13 of 32 plans reported as saving money ($87.6 million in all) and two losing money.[122] While it may be too early to expect much concrete evidence to have reached the peer reviewed literature, publication bias may also play a role, leaving negative results unreported.

Although Blue Shield of California ACOs are just now incorporating quality incentives, for many ACO's, quality improvements are the one area where they can already report progress.

Discussion

ACO's are still in their infancy, with most early pilots barely past their second or third birthday.[123] [124] Nonetheless, these arrangements are proliferating. Today over 400 ACOs exist across 49 states.[125] At least 150 of these are commercial ACOs and more are planned.[126] For example, United Healthcare announced it will ramp up to 100 ACOs with a million customers in 2014.[127] In another example, Blue Shield of California plans to expand to 20 ACOs in 2015.[128]

ACO structural arrangements and incentives are both varied and evolving. For example, the very different sources for savings between BCBSMA and CalPERS suggests that their cost structures and incentives differed at the time of implementation.

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[120] Meyer, Harris. 2012. "Many Accountable Care Organizations Are Now up and Running, If Not Off to the Races." *Health Affairs* 31(11): 2363–67. http://content.healthaffairs.org/content/31/11/2363.full

[121] Silow-Carroll, S, and JN Edwards. 2013. "Early Adopters of the Accountable Care Model: A Field Report on Improvements in Health Care Delivery." *The Commonwealth Fund*. http://www.commonwealthfund.org/Publications/Fund-Reports/2013/Mar/Early-Adopters-Accountable-Care-Model.aspx

[122] Beginning in January 2012, Medicare initiated two types of Medicare ACOs, the Medicare Shared Savings Program and the Pioneer ACO.

[123] Meyer, Harris. 2012.

[124] Larson, Bridget K, Aricca D Van Citters, Sara A Kreindler, Kathleen L Carluzzo, Josette N Gbemudu, Frances M Wu, Eugene C Nelson, Stephen M Shortell, and Elliott S Fisher. 2012. "Insights from Transformations Under Way at Four Brookings-Dartmouth Accountable Care Organization Pilot Sites." *Health Affairs* 31(11): 2395–2406. http://content.healthaffairs.org/content/31/11/2395.abstract

[125] Muhlestein, David. 2013. "Continued Growth Of Public And Private Accountable Care Organizations – Health Affairs Blog." http://healthaffairs.org/blog/2013/02/19/continued-growth-of-public-and-private-accountable-care-organizations/

[126] Ibid.

[127] Cigna. Oct 15, 2013. Press release, "Brown & Toland and Cigna Expand Accountable Care in Bay Area - MarketWatch." *Marketwatch*. http://www.marketwatch.com/story/brown-toland-and-cigna-expand-accountable-care-in-bay-area-2013-10-15?reflink=MW_news_stmp

[128] Blue Shield of California. 2012. "Blue Shield ACO Fact Sheet." https://www.blueshieldca.com/bsca/about-blue-shield/health-reform/our-involvement/healthcare-quality-value/aco/home.sp

Many questions remain, such as:

- Can savings offset administrative and implementation expense, such as for information support and care coordinators?
- How will providers handle the situation of ACO arrangements with multiple payers? Will there be concerns about sharing data? Or will there be anti-trust concerns?
- Are the savings incentives sufficient to change behavior in ACO's where providers share in savings but not in risk of over spending ("one-sided" ACOs)?
- Can hospitals benefit enough from ACOs that they will willingly participate? Will sharing savings and from the possibility of access to more patients that they can put aside concerns about devoting themselves to ACO activities designed to cut back on hospital days?
- How will different provider arrangements, for example, HMO and PPO affect ACOs?

Both the major studies of ACO cost savings involved the insurer's HMO products. It may be more difficult for ACOs built on PPO or FFS models to achieve the same level of savings because the "closed" HMO environment prevents "leakage," the term for care received outside the ACO. Leakage has been a significant problem for Medicare ACOs. On the other hand, the PPO cost structure is less tightly integrated and therefore more savings may be possible.

AQC/ACO is a long term investment, and provider contracts (five years) reflected this. BCBSMA stressed that an adequate first year global budget was critical to a successful launch and provided the headroom for savings and better management of care to be implemented.

Data Support: In both the BCBSMA and the Blue Shield pilots, the insurers supplied regular data and analytics to providers. Examples include AQC's daily hospital census and monthly 360 degree reports on the services provided to each patient, including specialty care and referrals. Blue Shield the commitment to analytics began at the outset with an exhaustive review of the target population. Blue Shield maintains a dedicated data analysis unit to support its ACOs. Substantial data analytics to support the project and the providers is likely to be a key part of success for ACOs going forward.

Consumers: For consumers, the increased coordination of care, emphasis on quality and the possibility of cost control should be a positive. Already, ACOs seem to be addressing two of the most obvious results of fragmented care, inappropriate emergency department use and readmissions to the hospital within 30 days of discharge. With quality measures safeguarding care, consumers have much to gain.

Conclusion

ACO's show promise but many questions remain. The BCBSMA AQC and the Blue Shield CalPERS ACO both demonstrated that they could hold down the cost trend in their initial two years. In Massachusetts, exceptional quality improvements were also made. Both are expanding these models to additional provider groups and to PPOs. Both efforts should be closely watched.

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