



BERKELEY CENTER
FOR HEALTH TECHNOLOGY

Consumerism Comes to Orthopedic Surgery

Hospital for Special Surgery
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James C. Robinson
Leonard D. Schaeffer Professor of Health Economics
Director, Berkeley Center for Health Technology
University of California



Overview

- Value in Orthopedic Surgery
- Consumerism by Design and by Default
 - High Deductibles & Reference Pricing
 - Initiatives to Support Consumer Choice



“Geez Louise—I left the price tag on.”

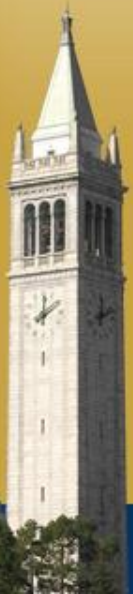
Value = Quality/Cost



- **QUALITY.** Clinicians and provider organizations have been focused on quality, not on reducing cost. You are the stewards of care improvement but also of society's health care resources.
- **COST.** Purchasers and payers (employers, insurers, government programs) are mostly focused on cost. They are stewards of resources but concerned for the quality of what they buy.
- **TODAY.** Let's talk about cost, as part of value.

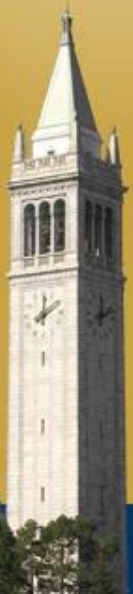
Purchasers' Experience with Provider-Oriented Strategies to Reduce Cost

- Purchasers have gone through cycles of optimism and skepticism with provider strategies
 - Payment methods: episode payment, shared savings, capitation
 - Care management: Disease management, complex care management, prior authorization, wellness
 - Network contracting: narrow and tiered provider networks, regional centers of excellence (COE)
 - Vertical integration: staff model HMOs, provider-sponsored health plans, IDN
- Many are currently in a phase of skepticism



Why Have Provider-Oriented Strategies been Disappointing to Purchasers?

- Any one payer has limited market share and it is difficult to coordinate across payers.
 - Uncoordinated initiatives create confusing signals and dilute incentives for physicians and providers
- It is inherently hard for medical practice and provider organizations to change
 - Complexity of large and diverse organizations
 - Culture of professional autonomy
 - Difficult to import best practices from outside
 - Difficult to identify and disseminate best practices generated internally
- The payer strategies have not been that smart 😊



Consumerism by Design



- Consumerism is rising for some right reasons
- A strong and long term cultural trend towards greater patient engagement and authority
 - From informed consent to shared decision-making
- Revolution in data and data systems
 - Internet search for information on disease & treatment reduces the historical asymmetry of information between patients and physicians
 - From information access to digital decision support

Consumerism by **Default**

- Consumerism is rising for some wrong reasons
 - Purchasers are exploring consumer strategies partly out of frustration with the slow returns on their investment in provider-oriented strategies
 - The US has an eroding social solidarity, with a growing belief that health care is a matter of individual, not collective, responsibility
 - From health care citizenship to consumerism
- Of course, consumer-oriented strategies suffer from their own limitations and failures.
- But, IMHO, the trajectory towards greater consumer rights, responsibilities, and risks is strong and will continue
- Let's make it work for a better health care system



High-Deductible Health Plans

By Rajender Agarwal, Olena Mazurenko, and Nir Menachemi

High-Deductible Health Plans Reduce Health Care Cost And Utilization, Including Use Of Needed Preventive Services

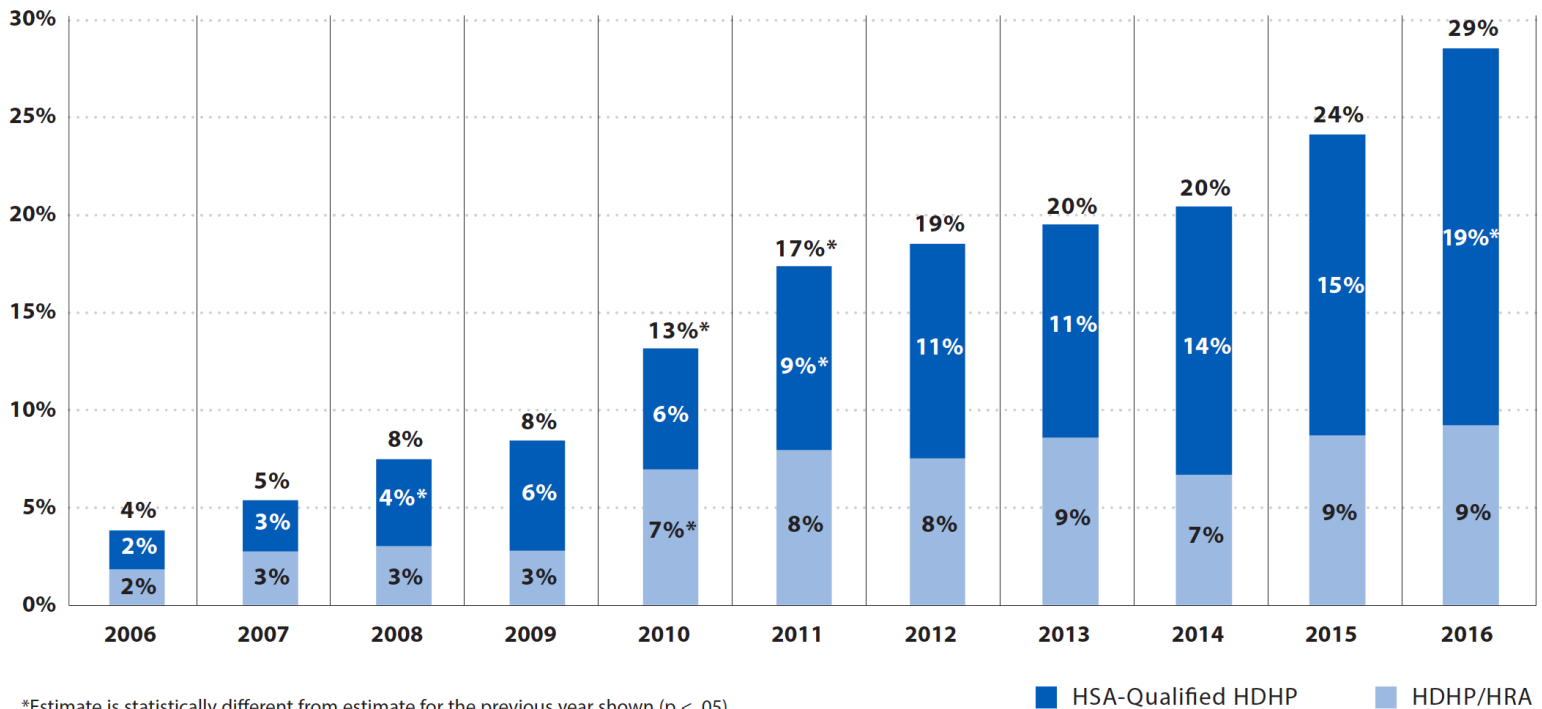
ABSTRACT Enrollment in high-deductible health plans (HDHPs) has greatly increased in recent years. Policy makers and other stakeholders need the best available evidence about how these plans may affect health care cost and utilization, but the literature has not been comprehensively synthesized. We performed a systematic review of methodologically rigorous studies that examined the impact of HDHPs on health care utilization and costs. The plans were associated with a significant reduction in preventive care in seven of twelve studies and a significant reduction in office visits in six of eleven studies—which in turn led to a reduction in both appropriate and inappropriate care. Furthermore, bivariate analyses of data extracted from the included studies suggested that the plans may be associated with a reduction in appropriate preventive care and medication adherence. Current evidence suggests that HDHPs are associated with lower health care costs as a result of a reduction in the use of health services, including appropriate services.

Health Affairs 2017;36(10):1762-68.

HDHP are popular among employers faced with tradeoff of premium versus deductible

EXHIBIT E

Percentage of Covered Workers Enrolled in an HDHP/HRA or HSA-Qualified HDHP, 2006-2016



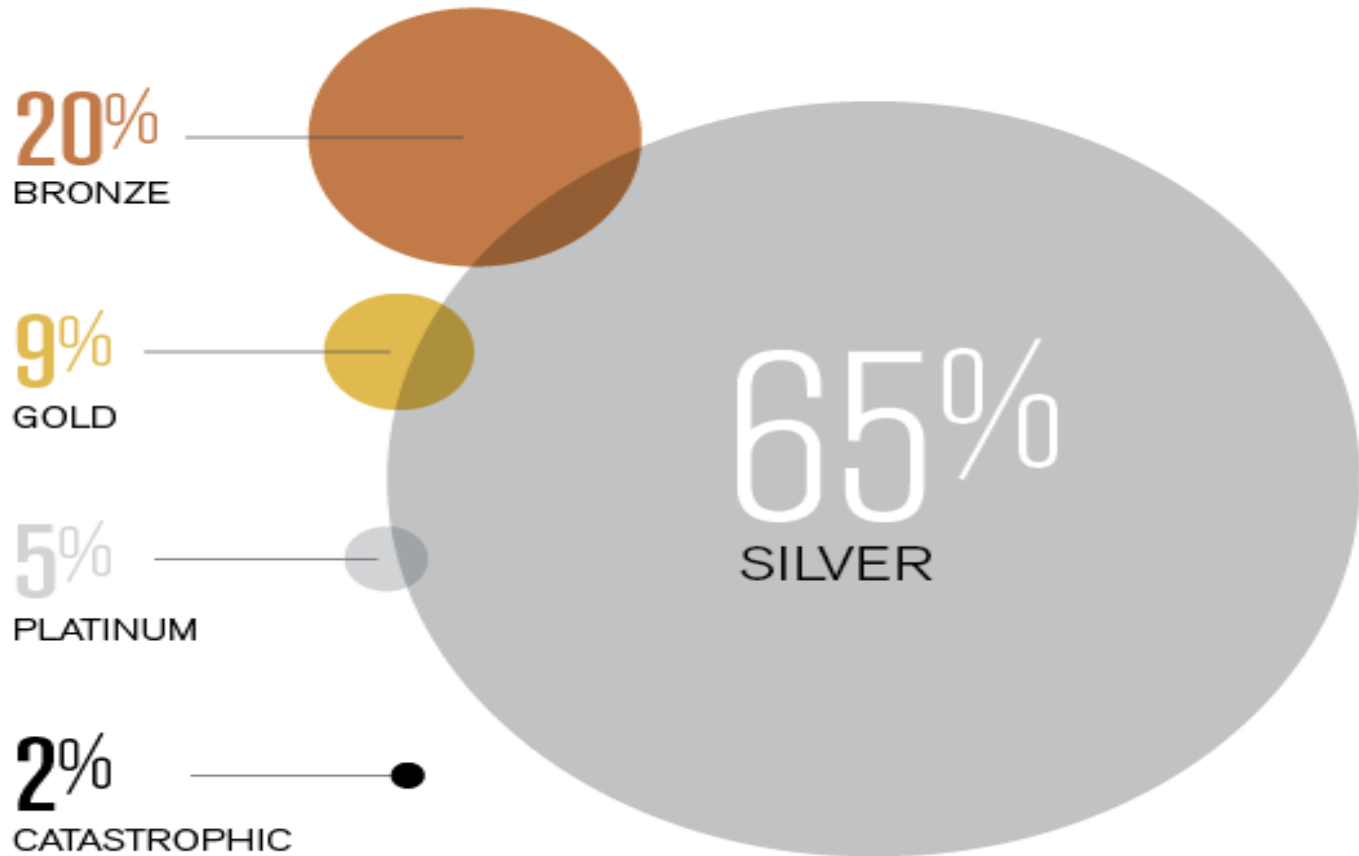
*Estimate is statistically different from estimate for the previous year shown ($p < .05$).

NOTE: Covered Workers enrolled in an HDHP/SO are enrolled in either an HDHP/HRA or a HSA-Qualified HDHP. For more information, see the Survey Methods Section. The percentages of covered workers enrolled in an HDHP/SO may not equal the sum of HDHP/HRA and HSA-Qualified HDHP enrollment estimates due to rounding.

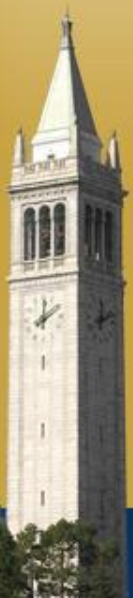
SOURCE: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 2006-2016.

HDHP are popular among individuals in ACA Exchanges when faced with same tradeoff

Plan selection by metal level



Note: Percentages rounded by HHS.



What is a Bronze or Silver Design?

Service	Cost Sharing (Bronze)	Cost Sharing (Silver)
Deductible	\$5,000	\$2,000
PCP Office Visit	\$60 (3 per year)	\$45
SCP Office Visit	\$70	\$65
Urgent Care Visit	\$120	\$90
ER Visit	\$300	\$250
Lab Test	30%	\$45
X-ray	30%	\$65
Generic Drug	\$25	\$25
Brand Drug	\$50	\$50
Max OOP: Individual	\$6,350	\$6,350
Max OOP: Family	\$12,700	\$12,700

Source: Covered California *Plan Options Participant Guide*, 2017

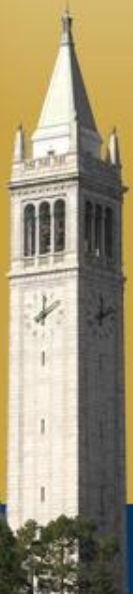
High Deductibles: Impacts

- Reductions in spending: 10%
 - Savings come from reduction in volume (tests, visits), not from reductions in price (shopping)
 - Reductions in use of both appropriate and inappropriate services
 - No evidence on long-term impacts
- Reduction in social pooling of risk and payment
 - Savings accrue largely to healthy enrollees (who pay lower premium and do not incur cost sharing) rather than to sick enrollees (who pay lower premium but then must pay high cost sharing)
 - Insurers encouraging shift to HDHP out of concern for adverse selection (attracting sick enrollees)



High Deductibles: Limitations

- Too much and too little cost sharing
 - Primary & preventive services are under deductible
 - Major procedures are above deductible, giving no incentive for shopping among facilities based on price
- Lack of guidance for consumers and patients
 - Incomplete and sometimes inaccurate information on price, quality, appropriateness
- Annual reset
 - Emergency services are more at risk than are procedures that can be delayed till next plan year
- Financial barrier to access
 - HDHP do not guarantee availability of low-cost service options, can create major access barrier for consumers with modest means



Reference Pricing

By James C. Robinson, Timothy T. Brown, and Christopher Whaley

ANALYSIS & COMMENTARY

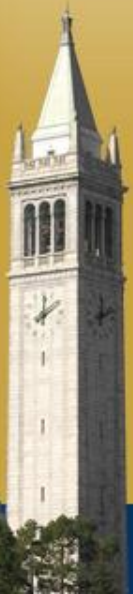
Reference Pricing Changes The 'Choice Architecture' Of Health Care For Consumers

ABSTRACT Reference pricing in health insurance creates incentives for patients to select for nonemergency services providers that charge relatively low prices and still offer high quality of care. It changes the “choice architecture” by offering standard coverage if the patient chooses cost-effective providers but requires considerable consumer cost sharing if more expensive alternatives are selected. The short-term impact of reference pricing has been to shift patient volumes from hospital-based to freestanding surgical, diagnostic, imaging, and laboratory facilities. This article summarizes reference pricing’s impacts to date on patient choice, provider prices, surgical complications, and employer spending and estimates its potential impacts if expanded to more services and a broader population. Reference pricing induces consumers to select lower-price alternatives for all of the forms of care studied, leading to significant reductions in prices paid and spending incurred by insurers and employers. The impact on consumer cost sharing is mixed, with some studies finding higher copayments and some lower. We conclude with a discussion of the incentives created for providers to redesign their clinical processes and for efficient providers to expand into price-sensitive markets. Over time, reference pricing may increase pressures for price competition and lead to further cost-reducing innovations in health care products and processes.

Health Affairs 2017;36(3):524-30.

Reference Pricing: Structure

- Focus on tests and treatments where there is wide variation in price without variation in quality
- Payer negotiates its best price (allowed charge)
- It then sets its contribution limit at the minimum, median, or elsewhere on distribution of prices
- Consumer who selects provider charging below this reference price pays nominal cost sharing, but if pick more expensive must pay full difference
 - Payer promotes communication to consumers
 - Exceptions are made for patients whose physicians submit clinical justification for high priced facility/test



Reference Pricing: Impacts

- Consumers quickly shift to lower-priced options
- This leads to 10-30% decline in prices paid
 - For TJR, evidence of competitive price reductions
- Available metrics (30, 90 day complication rates) show no change in quality
 - No evidence on long term outcomes
- No impact on rate of utilization (because there are always options with low cost sharing)
- Contrast with high deductible health plans
 - Strong impact on price shopping
 - No impact on volume



Reference Pricing: Limitations

- Reference pricing is still nascent, experimental
- Targets discrete components of care, rather than more meaningful care episodes (in part because providers have not developed care episodes)
- Low hanging fruit: services with major price differences according to site of care
 - ASC versus HOPD: surgery, diagnosis, infusion
 - National versus local clinical laboratory
- Data on price and quality are incomplete and difficult to navigate for consumers
- No link to appropriateness



Example of Reference Pricing: Arthroscopy of the Knee and Shoulder

Consumer Choice Between Hospital-Based and Freestanding Facilities for Arthroscopy

Impact on Prices, Spending, and Surgical Complications

James C. Robinson, PhD, Timothy T. Brown, PhD, Christopher Whaley, PhD, and Kevin J. Bozic, MD, MBA

Investigation performed at the University of California, Berkeley, California

Background: Hospital-based outpatient departments traditionally charge higher prices for ambulatory procedures, compared with freestanding surgery centers. Under emerging reference-based benefit designs, insurers establish a contribution limit that they will pay, requiring the patient to pay the difference between that contribution limit and the actual price charged by the facility. The purpose of this study was to evaluate the impact of reference-based benefits on consumer choices, facility prices, employer spending, and surgical outcomes for orthopaedic procedures performed at ambulatory surgery centers.

Methods: We obtained data on 3962 patients covered by the California Public Employees' Retirement System (CalPERS) who underwent arthroscopy of the knee or shoulder in the three years prior to the implementation of reference-based benefits in January 2012 and on 2505 patients covered by CalPERS who underwent arthroscopy in the two years after implementation. Control group data were obtained on 57,791 patients who underwent arthroscopy and were not subject to reference-based benefits. The impact of reference-based benefits on consumer choices between hospital-based and freestanding facilities, facility prices, employer spending, and surgical complications was assessed with use of difference-in-differences multivariable regressions to adjust for patient demographic characteristics, comorbidities, and geographic location.

Results: By the second year of the program, the shift to reference-based benefits was associated with an increase in the utilization of freestanding ambulatory surgery centers by 14.3 percentage points (95% confidence interval, 8.1 to 20.5 percentage points) for knee arthroscopy and by 9.9 percentage points (95% confidence interval, 3.2 to 16.7 percentage points) for shoulder arthroscopy and a corresponding decrease in the use of hospital-based facilities. The mean price paid by CalPERS fell by 17.6% (95% confidence interval, -24.9% to -9.6%) for knee procedures and by 17.0% (95% confidence interval, -29.3% to -2.5%) for shoulder procedures. The shift to reference-based benefits was not associated with a change in the rate of surgical complications. In the first two years after the implementation of reference-based benefits, CalPERS saved \$2.3 million (13%) on these two orthopaedic procedures.

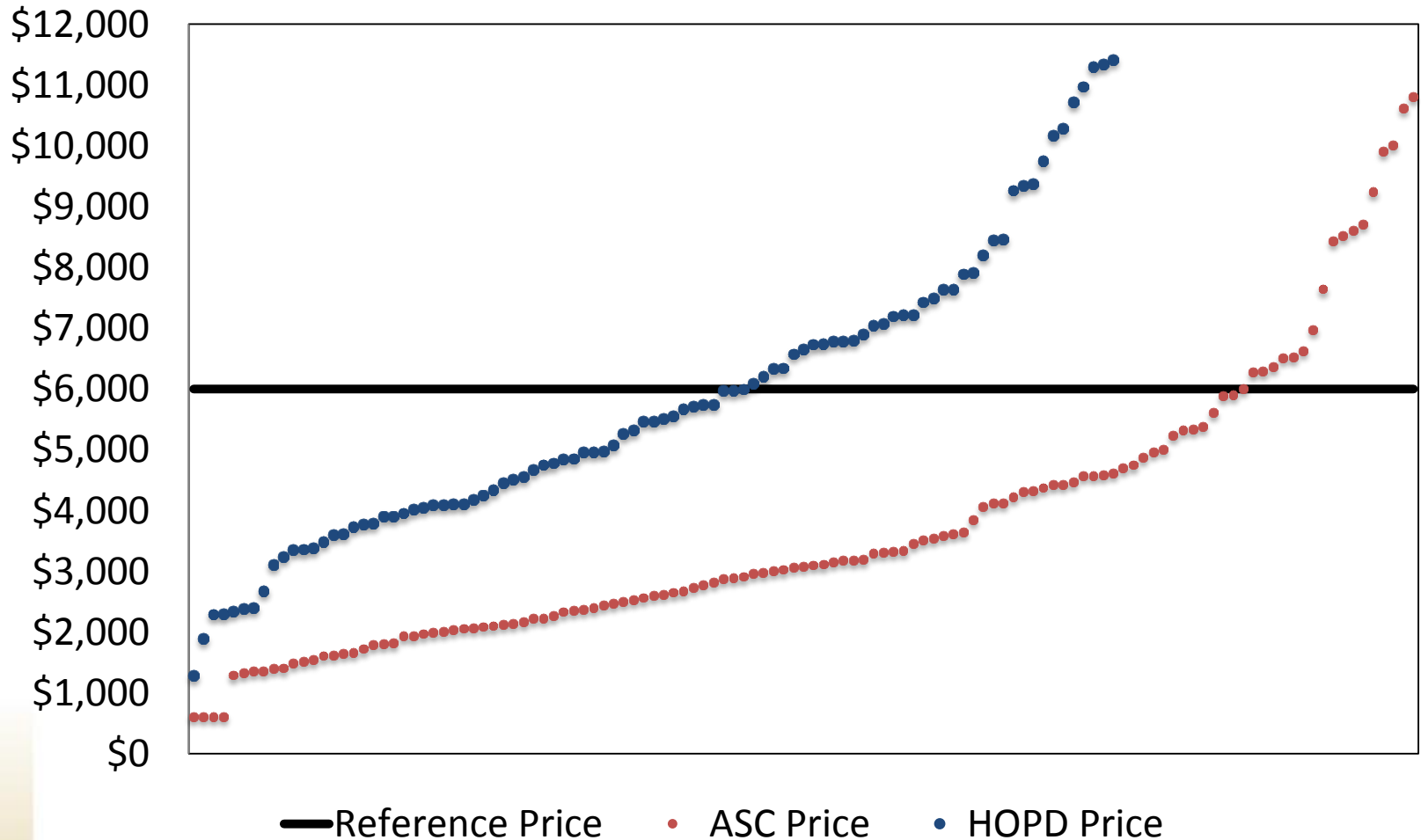
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California Public Employees Retirement System

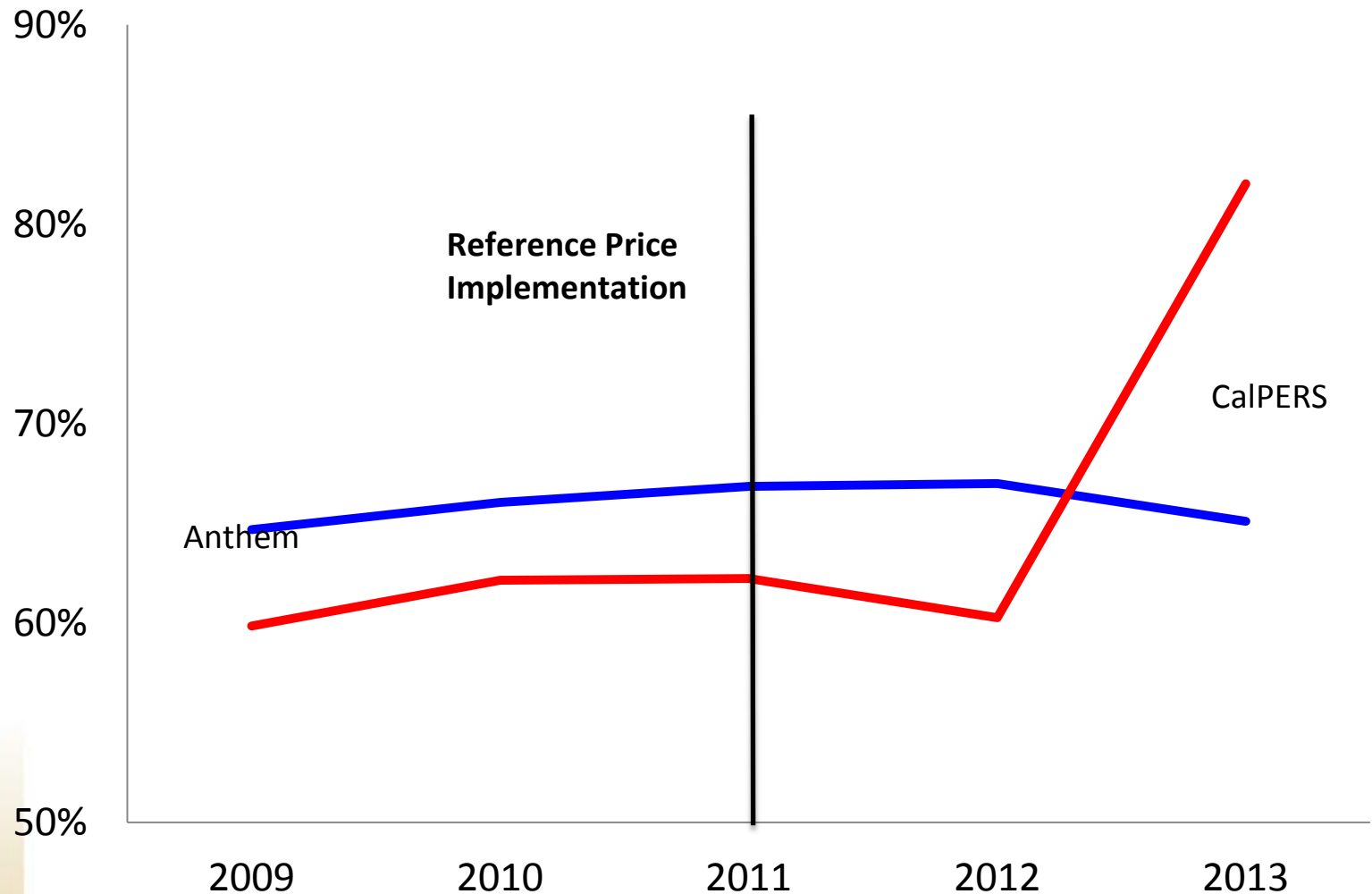
- In 2011 CalPERS pioneered reference pricing for TJR when faced with price variation in CA from \$25,000 to \$120,000
- It subsequently expanded to ambulatory procedures, including arthroscopy, to favor ambulatory surgery centers (ASC) over hospital outpatient departments (HOPD)
- Reference payment limit was set for HOPDs at the level of the average price charged by ASC



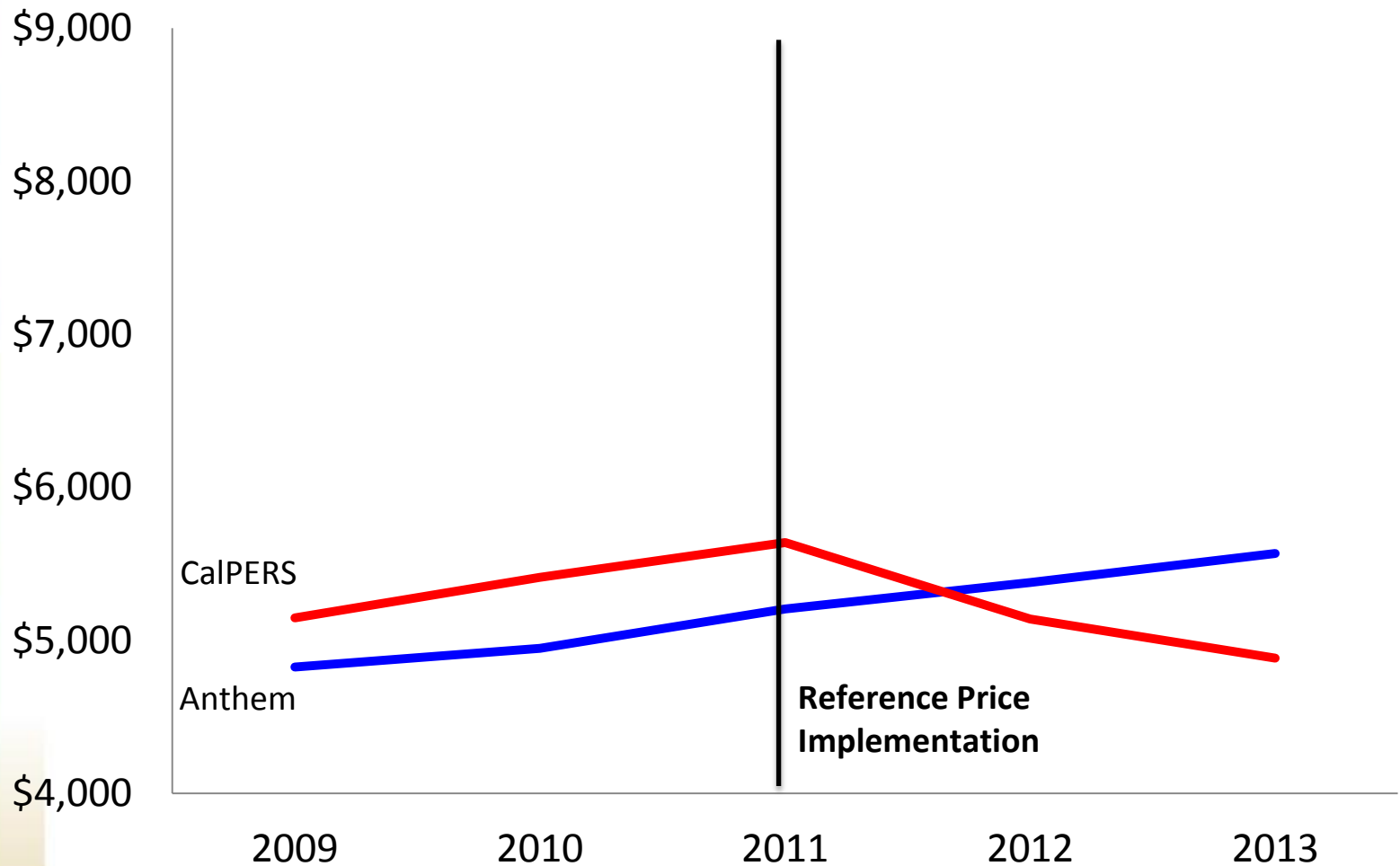
Price Variation Prior to Implementation of Reference-Based Benefits: Knee Arthroscopy



Percentage Selecting ASC over HOPD: Knee Arthroscopy



Change in Average Price Paid: Knee Arthroscopy








Purchaser Initiatives to Support Consumer Choice




- Better information on price and quality across competing facilities
- Active outreach (beyond information availability) to inform consumer choices
- Decision support (beyond information and outreach for particular services)

Price Transparency


Company and Product	Information Offered	Platform
Castlight Health 	<ul style="list-style-type: none"> • Price transparency – flagship firm • Plan benefit information for consumers • Employer analytics 	<ul style="list-style-type: none"> • Varied: web tools, delivered insights, mobile tools for employees
Aetna iTriage 	<ul style="list-style-type: none"> • Price comparison information from Healthcare Bluebook • Healthcare services information • Adding new services in future 	<ul style="list-style-type: none"> • Mobile integrated data platform, including an app
UnitedHealthcare MyEasyBook 	<ul style="list-style-type: none"> • Online health care shopping tool for consumers with high-deductible plans 	<ul style="list-style-type: none"> • Integrated in with members' claims, transparency tools, and in-network providers
Guroo 	<ul style="list-style-type: none"> • Cost information for over 70 common health conditions and services based on claims data from four major insurers 	<ul style="list-style-type: none"> • Consumer-facing website • Has received Medicare data as a "qualified entity"
Health in Reach 	<ul style="list-style-type: none"> • Comparison of licensed providers, including doctors and dentists • Discounts and deals • Online appointment system 	<ul style="list-style-type: none"> • Consumer-facing website • Providers can sign up to create a profile

Active Outreach

Company and Product	AIM Specialty Health Specialty Care Shopper Program 
History	<ul style="list-style-type: none"> • Began as American Imaging Management, a radiology benefit management company • Acquired by WellPoint in 2007 • Current services expand beyond radiology
Approach	<ul style="list-style-type: none"> • Through the Specialty Care Shopper Program, an AIM specialist proactively contacts a health plan member once a service (e.g. an MRI or CT) has been approved if there is a high-quality, lower-cost site-of-care option available within their local community • If the member decides to accept the recommendation, AIM assists the member in scheduling the appointment
Rationale	<ul style="list-style-type: none"> • The cost of a given procedure can vary widely across providers and care delivery settings within the same geographic area • Giving patients information may help them select lower-cost options
Results	<ul style="list-style-type: none"> • Since its implementation in one market in 2011, AIM has redirected more than 4,900 cases, at an average cost savings of \$950 per case • A study published in Health Affairs found that for patients needing MRIs, the AIM program resulted in a \$220 cost reduction (18.7%) per test and a decrease in use of hospital-based facilities from 53 percent in 2010 to 45 percent in 2012

Sources: <http://www.aimspecialtyhealth.com/solutions/management-solutions/member-management>;
 Sze-jung Wu, Gosia Sylwestrzak, Christiane Shah and Andrea DeVries, "Price Transparency For MRIs Increased Use Of Less Costly Providers And Triggered Provider Competition," *Health Affairs*, 33, no.8 (2014):1391-1398

Decision Support

Company	<div>  Optum (UnitedHealth Group) </div>	
Product	Emergency Room Decision Support	Treatment Decision Support
Goal	<ul style="list-style-type: none"> Engage health plan members after each emergency room visit to address factors that drive inappropriate ER use 	<ul style="list-style-type: none"> Connect members with the right treatment, right provider, right medication, and right lifestyle
Approach	<ul style="list-style-type: none"> Identifies and engages individuals after each emergency room visit – up to five times during the course of a year Leverages both “live” nurses and automated voice call technology to engage consumers Refers to case and disease management programs and behavioral health services Connects individuals with primary care providers (including appointment scheduling) 	<ul style="list-style-type: none"> Connects members with specially trained nurse “coaches” who address a consumer’s immediate symptom in addition to issues that impact their quality of life and care Right treatment — guidance on when and where to seek care Right provider — scheduling appointments with high-quality network providers Right medication — coaching on lower cost options, drug interactions and appropriate use Right lifestyle — referring to wellness and behavioral health services
Results	<ul style="list-style-type: none"> Individuals who were engaged by ER Decision Support had a decrease in avoidable ER visits, while individuals who did not participate had an increase in avoidable visits (2007-2008) 	<ul style="list-style-type: none"> 2-to-1 average return on investment 70 percent of callers with ER pre-intent avoid the visit after a Optum NurseLine call 8.8 hours reduced absenteeism per employee/per event

Sources: <https://www.optum.com/health-plans/clinical-management/member-support/clinical-care-management/navigate-care-options/emergency-room-decision-support.html>; <https://www.optum.com/health-plans/clinical-management/member-support/clinical-care-management/navigate-care-options/treatment-decision-support.html>

Promoting Value by Promoting Effective Consumer Choice



- Consumerism is here to stay; let's make it work
- Better, more comparable, and more accessible information on price and quality
- Better decision support on appropriateness
- Coordinated care pathways as the unit of choice
- Aligned incentives for consumers and clinicians
- The more clinicians do to make consumer choices effective, the less purchasers will need to do



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Reference Pricing

What is Reference Pricing? How does it work? Does it generate savings? Explore pilot program results for Diagnostic Tests, Surgery, and Pharmaceuticals.