



BERKELEY CENTER  
FOR HEALTH TECHNOLOGY

# **Mobile Technology as a Platform to Support Health Care Price Transparency**

**James C. Robinson**

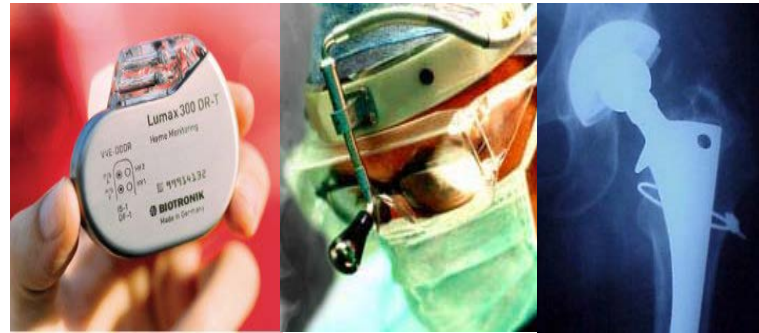
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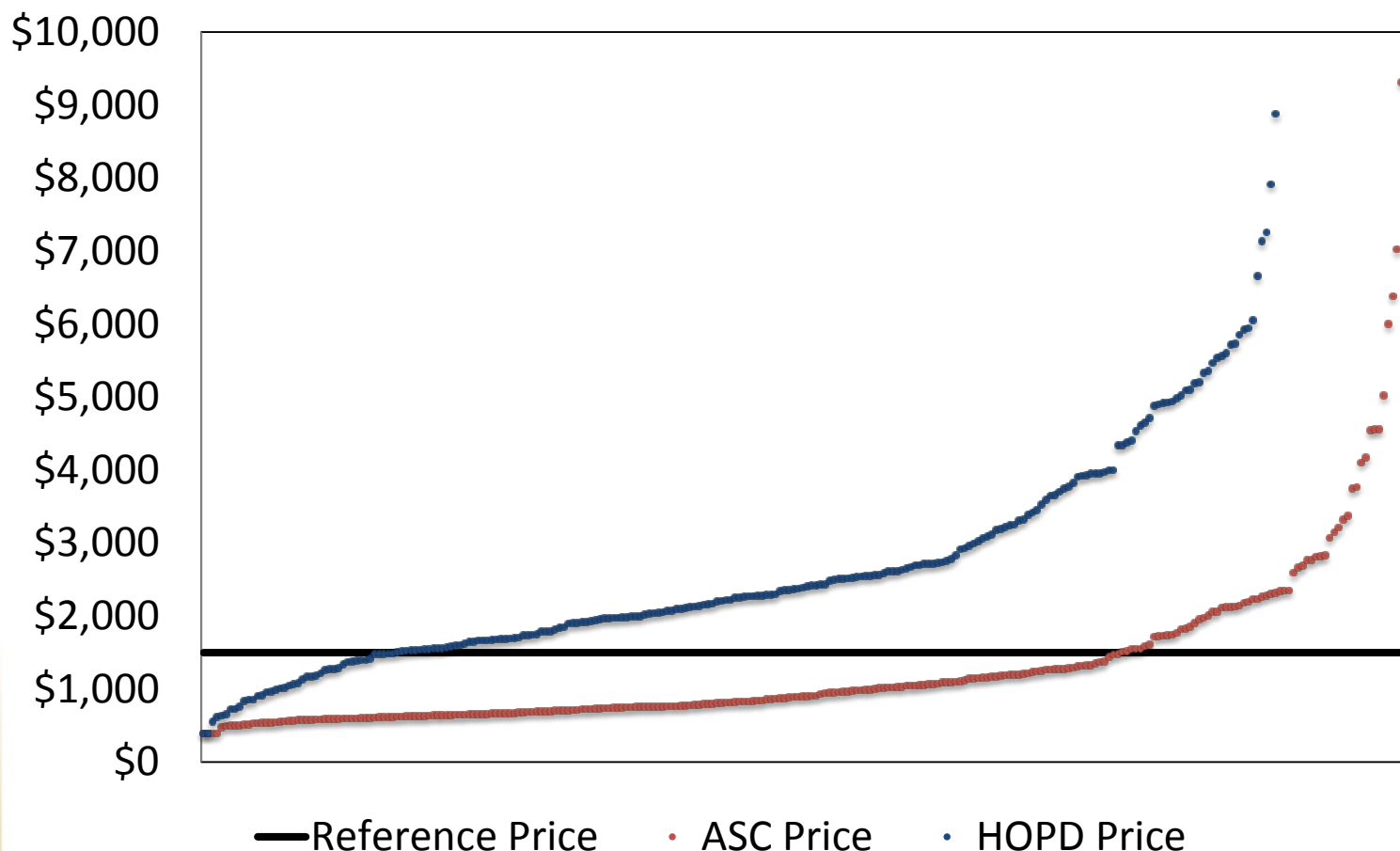
# Overview



- Confluence of two challenges
  - Rise in consumer cost sharing
  - Mobile health information technology
- Price transparency tools
- Impacts on choices and prices

# The Problem: Variation in Prices for Similar Services

Range in Colonoscopy Prices Across California Hospitals  
(HOPD) and Ambulatory Surgery Centers (ASC)



# A Consumer-Oriented Strategy

## 1. Increased patient financial responsibility

- Higher levels of consumer cost sharing
- New forms of consumer cost sharing

## 2. Revolution in information technology

- “Big Data” allows collection of vast amounts of price and quality data
- Mobile technologies (iPhone) allows low-cost easy access
- “High-touch” programs supplement “high-tech” initiatives



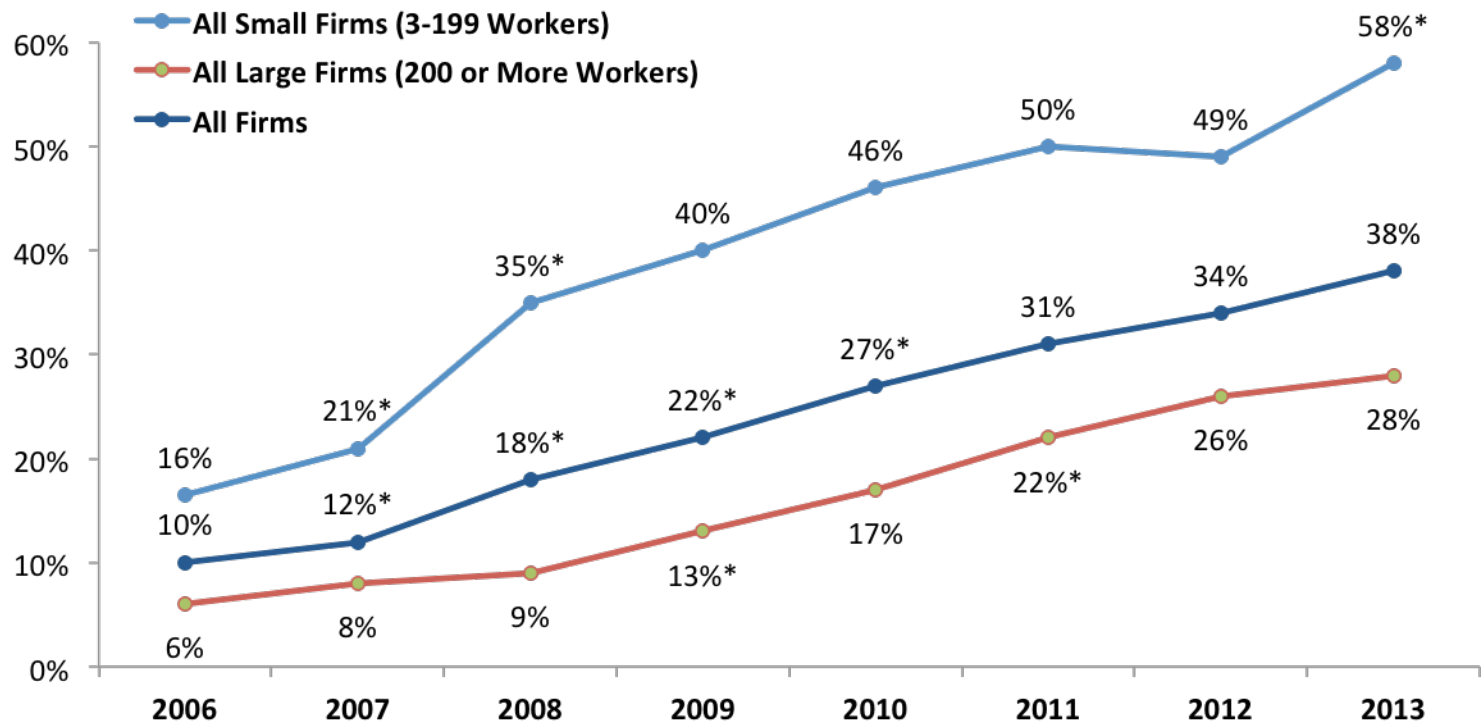
# 1. Consumer Financial Responsibility

- Private health insurers continue down the path of increasing consumer cost sharing
- This makes the consumer/patient more sensitive to:
  - Is the test or treatment necessary?
  - If so, where can it be obtained most cheaply?
  - Where can I get information on price and quality?
- Of course, cost sharing raises important concerns about equitable access to care, and about the ability of consumers to make good choices



# Employers Move towards High Deductibles

Require Patient to Pay Initial \$1000- \$5000 in Costs Incurred



Percentage of Covered Workers Enrolled in a Plan with a Deductible of \$1,000 or More for Single Coverage

## Plan selection by metal level

**“ObamaCare” Enrollees  
Choose High Cost  
Sharing (and low  
premium)**

**20%**

BRONZE

**9%**

GOLD

**5%**

PLATINUM

**2%**

CATASTROPHIC

**65%**

SILVER

Note: Percentages rounded by HHS.

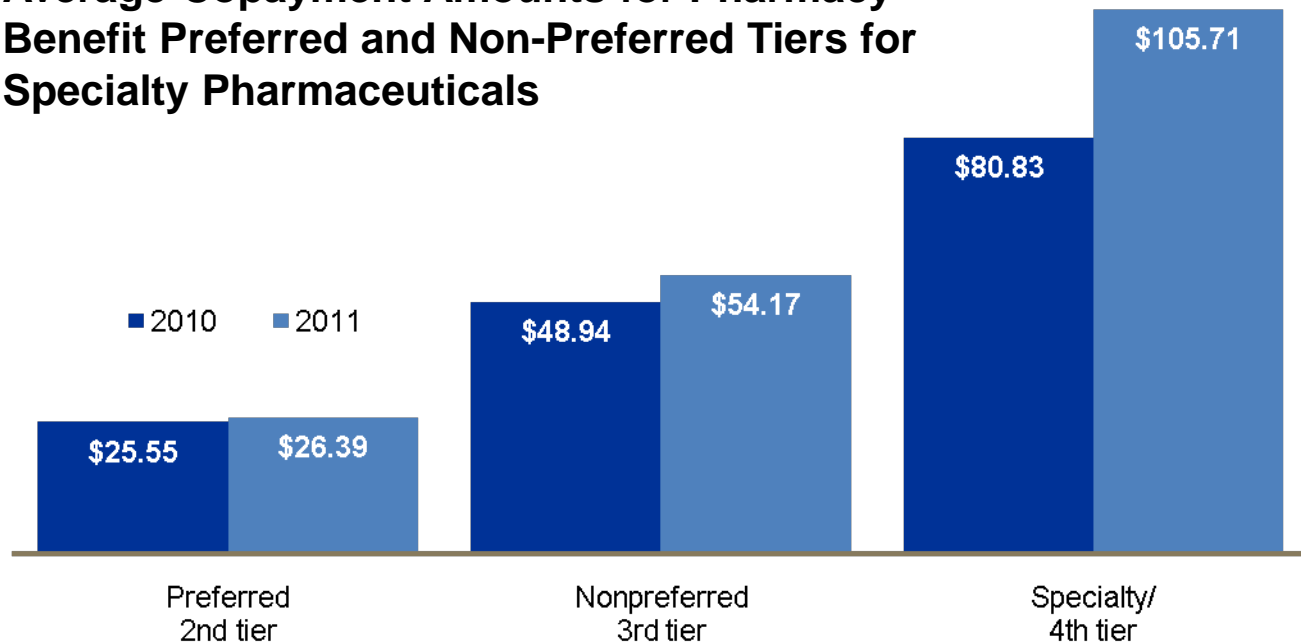




# Employers and Medicare Develop Drug Formularies with More Cost Sharing

- Main goal of tiered formularies is to encourage use of generic drugs and preferred (discounted) brands
- New focus on specialty drugs for cancer, MS, immune conditions

**Average Copayment Amounts for Pharmacy Benefit Preferred and Non-Preferred Tiers for Specialty Pharmaceuticals**



Source: Health Strategies Group, Specialty Pharmacy Management, December 2010.



# Problems with Consumer Cost Sharing

- Most cost sharing requirements do not distinguish between 'high-value' and discretionary services
  - Cost sharing has reduced adherence
- Cost sharing often does not vary according to the income and ability to pay of the consumer
  - It contributes to personal bankruptcy
- "Second generation" cost sharing designs improve over first generation
  - Some high-value services are provided free
  - Insurance plans for low-income people (Medicaid) require no cost sharing



## 2. Price Transparency Tools

- Insurers aggregate price data paid to each physician, hospital, laboratory, imaging center
- These data are made available to enrollees via desktop computer and mobile devices
- Focus is on services that are 'shop-able'
  - High variance in prices, without variance in quality
  - Non-emergency, to give consumers time to choose
- Currently, use of price tools is limited, but it is accelerating as the validity of the price data improves and consumers are exposed to more cost sharing responsibility





## Colonoscopy

Preventive colonoscopy, routine screening ⓘ

You pay: \$0

▲ There is a Reference Point Price of \$785 applied to facilities for this service

Sort by

Least expensive ▾

Distance

25 miles ▾

Type of colonosco...

Routine screening ▾

Refine your search

Show filters ▾



Compare

1-7 of 7

**Tarder, Gerald L., MD, PA**

Gastroenterology, Internal Medicine

Star Providers Network



8 reviews

Estimated price: \$703

Acme pays: \$703

You pay: \$0

Laser Surgery Center

2021 Ygnacio Valley Rd, Suite H102

Walnut Creek, CA 94598 (18 mi)

**Kung, Henry I., MD**

Gastroenterology, Internal Medicine

Star Providers Network



11 reviews

Estimated price: \$712

Acme pays: \$712

You pay: \$0

Laser Surgery Center

2021 Ygnacio Valley Rd, Suite H102

Walnut Creek, CA 94598 (18 mi)

**Lin, David H., MD**

Gastroenterology, Internal Medicine

Star Providers Network

Not rated

Estimated price: \$712

Acme pays: \$712

You pay: \$0

San Ramon Endoscopy Center

5801 Norris Canyon Rd, Suite 220

San Ramon, CA 94583 (8 mi)

[View 3 more addresses](#)**Hurwitz, Alfred L., MD**

Gastroenterology, Internal Medicine

Star Providers Network



9 reviews

Estimated price: \$725

Acme pays: \$725

You pay: \$0

South Bay Endoscopy Center

455 O'Connor Dr, Suite 340

San Jose, CA 95128 (24 mi)

**Friedman, Steven A., MD**

Gastroenterology, Internal Medicine

Star Providers Network



4 reviews

Estimated price: \$754

Acme pays: \$754

You pay: \$0

Laser Surgery Center

Show map



## About Colonoscopy

A colonoscopy is a procedure that allows a doctor to... [Learn more »](#)

See also:

[Gastroenterologist,](#)  
[Pediatric Gastroenterologist](#)

## Did you know?

Patients with normal colonoscopy results and a normal risk of colon cancer only need a colonoscopy every ten years.

[Learn more](#)

## Your plan coverage

## Colonoscopy:

Fully covered, up to Reference Point price.

## Sigmoidoscopy:

Fully covered every 5 years for all adults over 50, or younger with higher risk of

**Web-based and mobile applications allow consumers to “shop” for health care with real time information on price, quality and location of providers**

primary care for adults

Search

Searching near 4375 Piedhill Road Pleasanton CA 94568  
Change search location »

## Primary Care for Adults

What to expect during your visit | See also: Child Primary Care, Lab Test, Influenza

Post

**YOU PAY**  
**\$80 - \$307**  
Total costs: \$80 - \$307  
Cost estimates are for a first visit.

### Refine your search

**Distance**  
25 miles  
**Type of care**  
Help with problems  
**First visit**  
☒ Yes  
☐ No

### Show only

☐ Taking new patients (191)  
☐ Extended or weekend hours (36)  
☐ Female (77) ☐ Male (122)  
☐ Result with ratings (23)

### Specialties

☐ Adult - Family Medicine (11)  
☐ Family Medicine (102)  
☐ General Practice (103)  
☐ Geriatric - Internal Medicine (39)  
☐ Geriatric Medicine (26)  
☐ Internal Medicine (144)

### Price range

\$80 \$307

Order: **least expensive** | About this rating

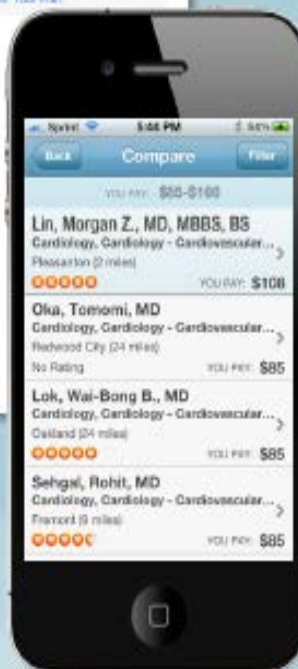
1-19 of 2054 results

<b>De Wolf, William Robertson, MD</b> Internal Medicine Star Providers Network 12 Camino Encinas Orinda, CA, 94563 (20 mi) (925) 204-6188	★★★★★ 7 reviews	<b>YOU PAY \$80</b> Total cost: \$80
<b>Beyzer, Lyudmila, MD</b> Internal Medicine In Network 100 La Casa Via, Suite 103 Walnut Creek, CA, 94598 (10 mi) (925) 935-5290	★★★★★ 2 reviews	<b>YOU PAY \$89</b> Total cost: \$89
<b>Callaghan, Rachel C, MD</b> Internal Medicine In Network 350 38th St, Suite 100 Oakland, CA, 94609 (21 mi) (510) 204-6290	★★★★★ 2 reviews	<b>YOU PAY \$89</b> Total cost: \$89
<b>Wherry, Jeffrey Alan, MD</b> Family Medicine Star Providers Network 1100 E Stanley Blvd, Suite 117 Livermore, CA, 94550 (8 mi) (925) 371-6665 View 1 more address	★★★★★ 2 reviews	<b>YOU PAY \$91</b> Total cost: \$91
<b>Annamathan, Manjan N, MD</b> Internal Medicine Star Providers Network 200 Joseo Figueroa Ave, Suite 230 San Jose, CA, 95118 (22 mi) (408) 929-6822	★★★★★ 1 review	<b>YOU PAY \$92</b> Total cost: \$92
<b>Talebi, Perviz Sagheb, MD</b> Family Medicine Star Providers Network 20700 Lake Chabot Rd, Suite 107 Castro Valley, CA, 94546 (8 mi) (510) 899-1822	★★★★★ 2 reviews	<b>YOU PAY \$93</b> Total cost: \$93
<b>Wilson, Vanessa Valencia, MD</b>	★★★★★	















### Your plan

Status:  
Deductible: ☐ Consume: ☐  
Remaining deductible: \$2170  
View Your Plan



**These tools now are available on mobile devices so that consumers can make 'real time' choices**

*Demo version of Castlight solution; prices and data have been modified to maintain confidentiality*

Company (logos hyperlinked)	Product	Business Model	Platform	Notes
Castlight Health 	Insights: Employer analytics; Controls: plan benefits program; Connect: integrate programs; Care: employee consumerism	Business-to-business contracts with larger employers like at&t, Liberty Mutual, Land O Lakes	Varied – web tools, delivered insights, mobile tools for employees	Flagship price transparency firm with strong IPO – one of few digital health firms to go public. Support currently has been wavering based on use
Stroll Health 	In-office cost information & decision-making tool for providers and consumers	Sells directly to physicians, providers, payors to get apps used by consumers when they are making decisions	App for providers & consumers and Reports for customers	Start-up company, not yet launched. Interesting in trying to get in-office instead of the existing consumer-facing websites & static insights
iTriage & Aetna 	Aetna updated existing iTriage app for members of some insurance companies by adding price comparison information from <b>Healthcare Bluebook</b>	iTriage can be downloaded by consumers but, would contract with insurers for specific data & tools for members	Mobile integrated data platform, iTriage already provides healthcare services information and is adding new services	<a href="http://mobihealthnews.com/40624/aetna-partners-with-newtopia-adds-price-transparency-to-itriage/">http://mobihealthnews.com/40624/aetna-partners-with-newtopia-adds-price-transparency-to-itriage/</a>
myEasy 	myEasyBook is an online health care shopping tool for consumers with high deductible plans.	Tool for UHC members	Integrated in with members' claims, transparency tools and in-network providers.	<a href="http://mobihealthnews.com/28504/unitedhealthcare-adds-online-appointment-booking-price-checking-for-members/">http://mobihealthnews.com/28504/unitedhealthcare-adds-online-appointment-booking-price-checking-for-members/</a>
Guroo, "Numbers no c" 	Consumer-facing website listing cost information from >70 common health conditions & services based on claims data from four major insurers	Run by non-profit, Health Care Cost Institute ( <a href="http://www.healthcostinstitute.org/">http://www.healthcostinstitute.org/</a> )	<ul style="list-style-type: none"> <li>- Consumer-facing Website</li> <li>- Has received Medicare Data as a "Qualified Entity"</li> </ul>	Launched cost information, quality metrics and list of services planned for launch
CommonCents (previously) 	Digital Insurance card which allows consumers to see all of their benefit information in one place	Consumer-facing tool  Unknown if B2B sales are a component	Android & iOS app <i>"Coming soon: appointment scheduling, records exchange, checkin, cost transparency and mobile payments"</i>	<a href="http://mobihealthnews.com/28787/mobile-enabled-insurance-card-company-medlio-launches-app-sees-medical-payments-opportunity/">http://mobihealthnews.com/28787/mobile-enabled-insurance-card-company-medlio-launches-app-sees-medical-payments-opportunity/</a>
Healthcare Bluebook 	"Search for Fair Prices" –tools for all healthcare stakeholders by obtaining & integrating "Fair Price" information	Consumer free "Fair Price" tool, Employer "premium" version, provider / payor / partner integration	<ul style="list-style-type: none"> <li>- Consumer-facing free tool website</li> <li>- Tailored services for customers</li> </ul>	<a href="http://www.forbes.com/forbes/2009/0803/medicine-surgery-costs-cut-your-doctor-bills.html">http://www.forbes.com/forbes/2009/0803/medicine-surgery-costs-cut-your-doctor-bills.html</a>
Healthsparq 	HealthSparq partners with 67 health plans to help over 78 million health plan members make smarter health care choices	Sells to Health Plans & Employers to "Empower Members"	<ul style="list-style-type: none"> <li>- Tailored search and information portal for customers</li> <li>- Data &amp; insights as a part of sale</li> </ul>	"HELPING PEOPLE MAKE SMARTER HEALTH CARE CHOICES"
Pokitdok 	Pokitdok broadly is a data integration platform for everything from billing/claims to EMR, also has a <a href="#">Price transparency marketplace</a>	Sells to healthcare stakeholders to integrate data	<ul style="list-style-type: none"> <li>- Website for consumers &amp; providers</li> <li>- Providers can "claim practice" and manage information</li> </ul>	Start-up company <a href="http://www.xconomy.com/san-francisco/2014/01/06/pokitdok-ceos-radical-idea-transparent-pricing-in-primary-care/">http://www.xconomy.com/san-francisco/2014/01/06/pokitdok-ceos-radical-idea-transparent-pricing-in-primary-care/</a>
Health in Reach 	Great Dentists & Doctors, Affordably; Compare Licensed Professionals; Get Exclusive Discounts & Deals; Make Your Appointment Online	Brings consumers to website to "shop" and partners with providers to integrate profiles, appointments, etc.	<ul style="list-style-type: none"> <li>- Consumer-facing website &amp; information</li> <li>- Providers can sign-up for a profile</li> </ul>	Start-up company, merged with PriceDoc, was one of the "first" price transparency platforms
My Medical Shopper 	Save your employees money. Save your business money. Reverse the trend of rising healthcare costs.	Sells information & platform to employers to manage healthcare costs	<ul style="list-style-type: none"> <li>- Employer-focused website with Consumer-facing tab as well</li> <li>- Search &amp; browse procedures &amp; providers</li> </ul>	
GoodRx 	Helps consumers find lowest-cost prescription drugs and coupons for drugs – even for pet medications	Sells APIs, widgets, data to employers & other companies	<ul style="list-style-type: none"> <li>- Website for consumers</li> <li>- Partnerships with doctors &amp; "groups"</li> </ul>	<a href="http://www.imedicalapps.com/2014/03/goodrx-patients-prices-medications/">http://www.imedicalapps.com/2014/03/goodrx-patients-prices-medications/</a>



# Transparency Value Proposition to Employers and Consumers



## **One-Stop Shopping**

Combined experience for both **Medical** and **Pharmacy**



## **Pricing**

Comprehensive pricing insight across therapies, channels, retailers



## **Consumer Reports**

Presents industry-leading Consumer Reports Best Buy drug reports for information and education



## **Savings and Quality Alerts**

Generates savings opportunity and quality alerts combining both **Medical** and **Pharmacy** knowledge



# Transparency is Supported by Educational and Motivational Programs



**Kraft** **CASTLIGHT HEALTH**

Wouldn't it be great if you could easily shop for health care just like you do for everything else?

**BUT YOU CAN!**

**YOUR KRAFT BENEFIT: CASTLIGHT HEALTH**

**SIGN UP OR LOG IN TODAY AND COMPLETE A SEARCH IN CASTLIGHT BEFORE AUG. 16 TO BE AUTOMATICALLY ENTERED TO WIN A FREE iPad!\***

\*While all adult family members can register for Castlight, only employees are eligible for the drawing. Employees already registered are also eligible - just log in and perform a search before Aug 16 to win!



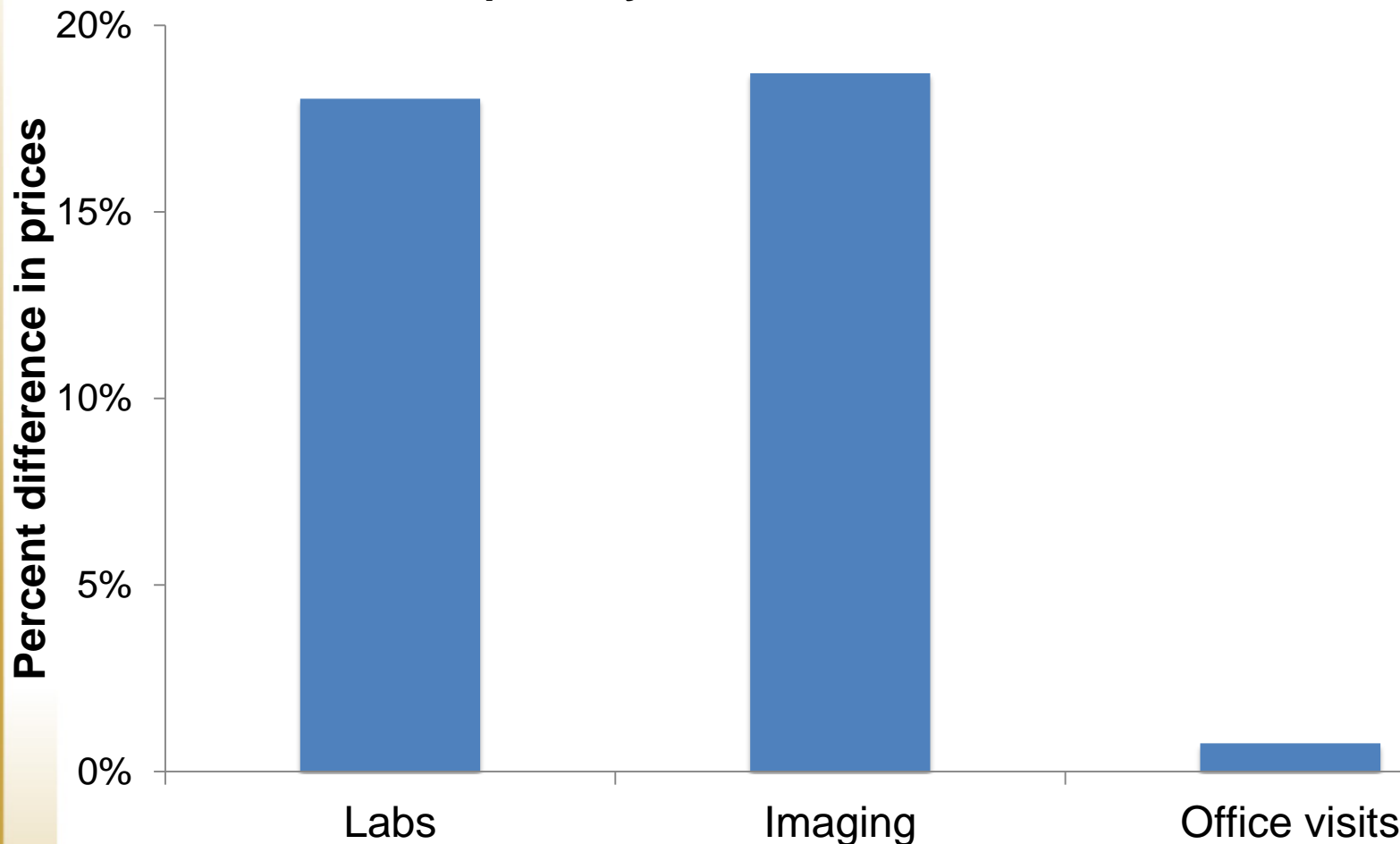
# Supporting Price Transparency with High-Touch Services

- Some insurers supplement price transparency platform with person high-touch programs
- Example: insurer telephones patients to offer options on alternative providers who charge lower prices, thereby saving money for consumers
- Consumers are more likely to respond to this combination of high-touch with high-tech program than to high-tech digital platform alone



# Impact: Consumers Who Use Price Transparency Tools Switch to Low-Priced Providers

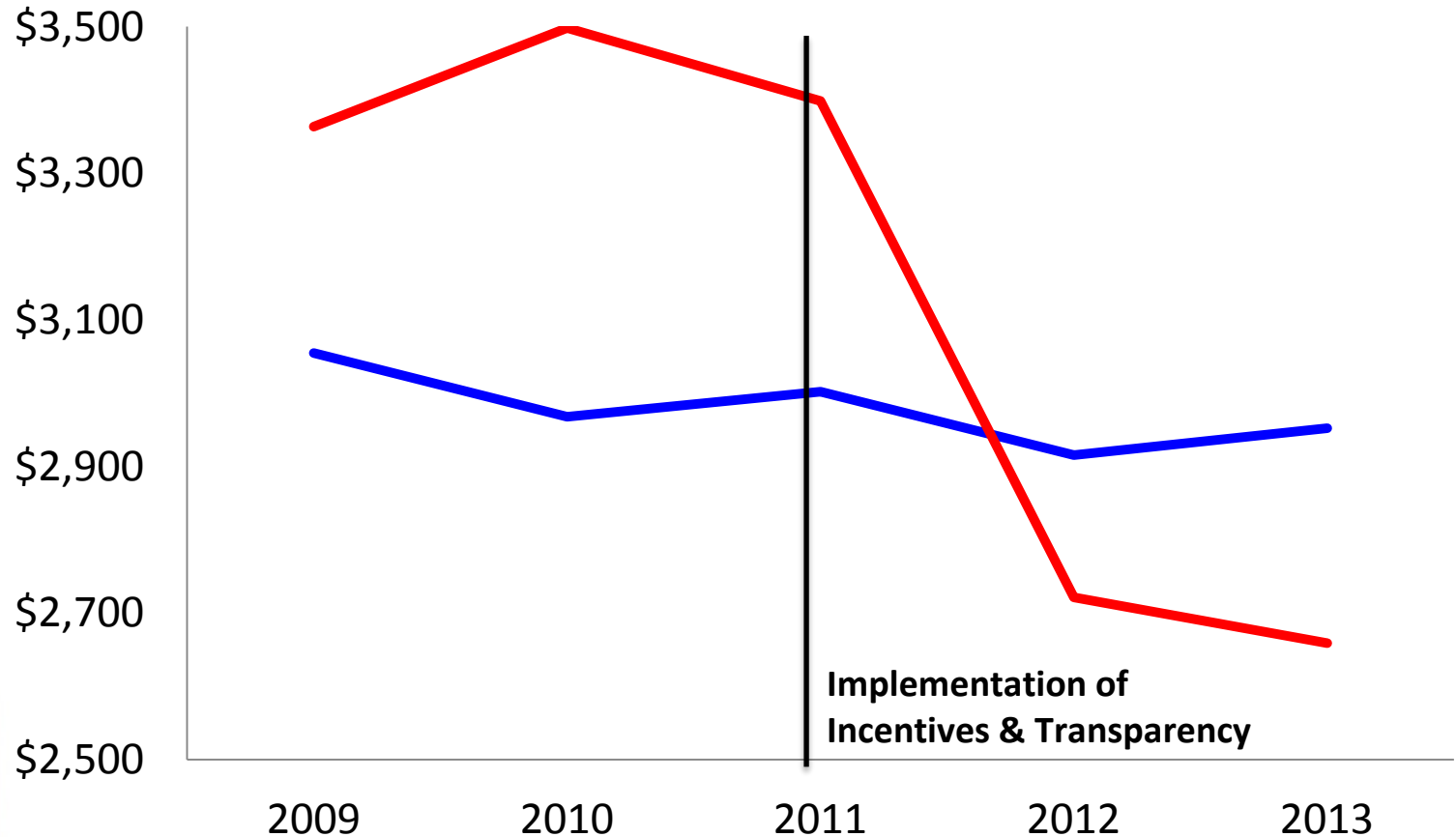
## Percentage Savings for Patients Who Used Online Price Transparency to Search for Providers



Whaley C, Schneider Chafen J, Pinkard S, and et al. 2014. "Association between Availability of Health Service Prices and Payments for These Services." JAMA 312 (16): 1670–76..

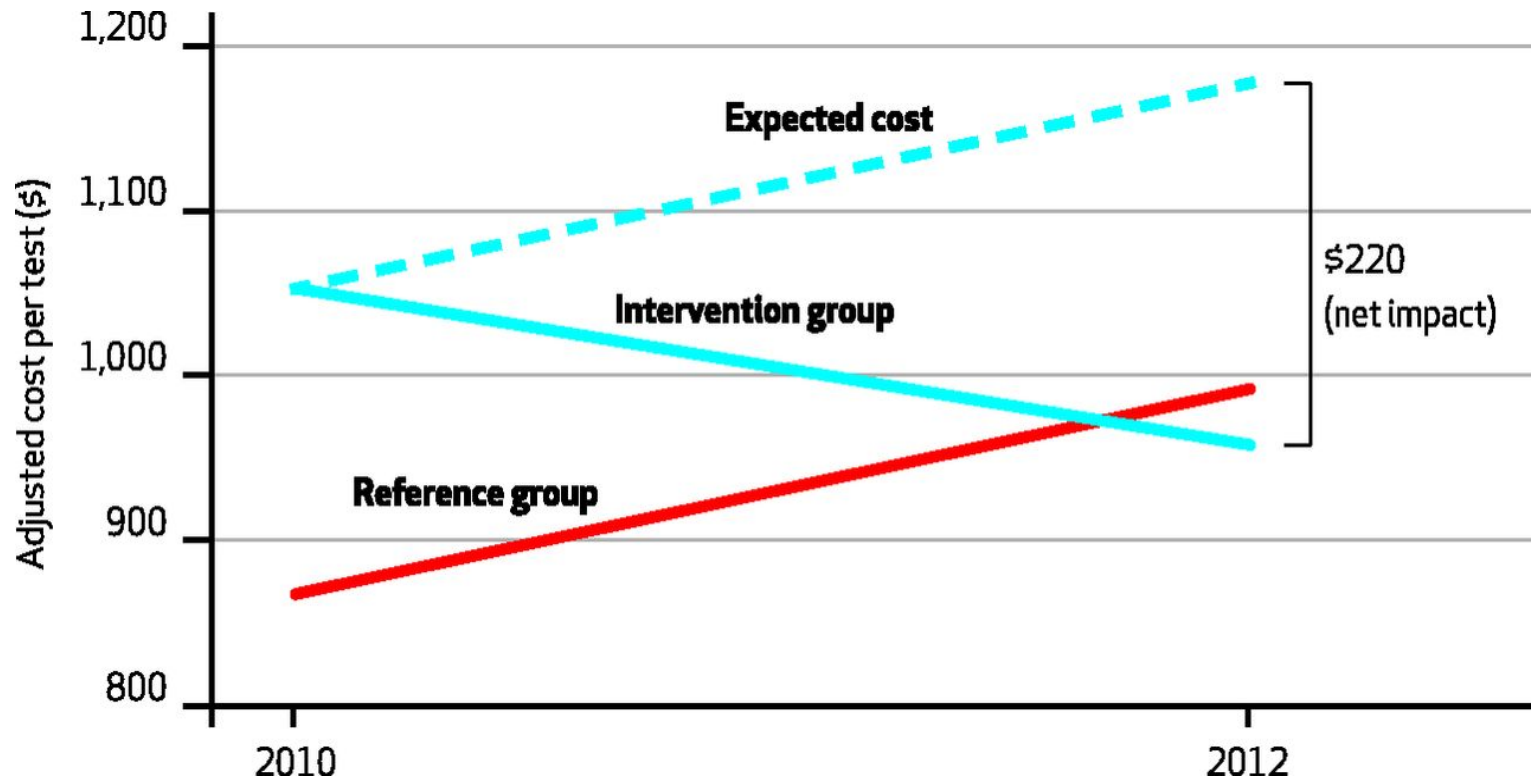
## Impact: Providers Reduce Prices to Compete

**Price Paid for Cataract Surgery for Patients Facing Incentives (Red Line), Compared to Patients without Incentives**



Source: Robinson et al. Health Affairs 2015; 34(3):415-422.

## Impact: Price Per MRI Scan for Patients With Price Transparency and High-Touch Support (Intervention Group)



Source: Wu et al. Health Affairs 2014;33:1391-1398

# Challenges of Price Transparency Tools

- Prices often are presented for limited or incomplete numbers and episodes of care
- Consumers care about the total price of their procedure, not individual components
- Prices often are based on small numbers of patient claims, as each insurer creates its own index
- Prices do not differentiate between high-value and low-value components of care
- Price data often are not accompanied by quality
- Consumers are only beginning to use price tools



# Summary

- The US health care system is become more focused on the consumer
- Consumer cost sharing is increasing
- Mobile health platforms offer price and quality data in a quicker and easier format





The Berkeley Center for Health Technology (BCHT) promotes the efficiency and effectiveness of health care through research and education on the development, insurance coverage, payment, and appropriate use of medical technologies.

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