

Designing Smart Commercial Insurer Networks

2.8% of Commercially Insured Health Spending (0.83% of Total Health Spending)

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Author: Jonathan Gruber, Massachusetts Institute of Technology

Issue Summary: There is extensive variation in provider prices within narrow geographic areas for health care services, like planned lower-limb MRI scans, where quality does not vary meaningfully. The Centers for Medicare and Medicaid Services (CMS) has designated 70 health care services as “shoppable.” These are services that can be scheduled in advance, that are routinely provided in non-urgent settings, and where quality is relatively undifferentiated. Services include imaging studies, routine joint replacements, therapy services, and maternity services. The California Public Employees Retirement System (CalPERS) has experimented with establishing a “reference price” for a subset of shoppable services, like joint replacements, and only offering reimbursements at or below that reference price. If CalPERS beneficiaries choose to attend care locations with services priced over the reference price, the beneficiary is responsible for the difference between the reference price and the provider’s price. This difference does not count toward an individual’s deductible or out-of-pocket maximum. Evidence from CalPERS suggests that reference pricing can effectively steer policyholders toward lower-priced options and nudge providers with prices above the reference price to lower their prices. Collectively, this has resulted in reductions in health spending. This brief describes a proposal that would extend this type of reference pricing program to all of the CMS shoppable services, and then quantifies the scale of the savings from this proposal.

Policy Recommendation: Commercial insurers could introduce “smart networks,” which offer broad networks for differentiated services (e.g., cancer care) but have reference prices for the CMS list of 70 shoppable services. CMS has introduced regulations requiring providers to post their negotiated reimbursements for the 70 shoppable services. Under a smart network plan, insurers would only offer reimbursements on the 70 CMS services that were equal to the median commercial reimbursement in each hospital referral region. Patients who chose to attend a provider with prices above the median rate in their hospital referral region would be responsible for all costs above the median reimbursement amount. Any patient spending above the median would not count toward their deductible or out-of-pocket maximum. A patient’s internist could request an exemption from the reference pricing plan if there were appropriate clinical justifications.

Potential Savings: Based on our analysis of data from the Health Care Cost Institute (HCCI), the 70 CMS shoppable services account for approximately 10% of commercial health spending (exclusive of prescription drug spending). If all the care for those 70 services that were currently being delivered at locations with above median reimbursements were reimbursed at the median rate, it would lower health spending in the HCCI commercially insured population by approximately 2.8% (exclusive of prescription drug spending). Generalized across the universe of the commercially insured, this type of policy would generate savings of approximately \$30 billion. This proposal does not account for wider reductions in provider prices that could occur from this type of program—nor for potential offsets in prices of non-shoppable services by providers.

Related Literature and Evidence:

CMS-specified shoppable services accounted for 12% of 2017 health care spending among individuals with employer-sponsored insurance (2020). Health Care Cost Institute. (Aaron Bloschichak, Anna Milewski, Katie Martin). Accessed Nov 18, 2020. <https://healthcostinstitute.org/hcci-research/cms-specified-shoppable-services-made-up-12-of-2017-health-care-spending-among-people-with-employer-sponsored-insurance-1>.

What if Price Transparency Reduced Commercial Price Variation? (2020). Health Care Cost Institute. (Kennedy, Kevin, William Johnson, John Hargraves). Accessed Nov 18, 2020. <https://healthcostinstitute.org/hcci-research/what-if-price-transparency-reduced-commercial-price-variation>.

Increases in Consumer Cost Sharing Redirect Patient Volumes and Reduce Hospital Prices for Orthopedic Surgery. (2013). *Health Affairs* 32 (8): 1392-1397 (Robinson, James C. and Timothy T. Brown).

Background

Commercial health insurance companies in the US construct networks of providers for their policyholders. In general, insurance plans that limit the breadth of their networks are able to negotiate lower prices with providers than plans with broad networks. These lower reimbursements are generally passed along to policyholders in the form of lower premiums and lower out-of-pocket costs (Gruber and McKnight 2016). Research suggests that such narrow provider networks can deliver care of equal quality at significantly lower costs—but that insurers may use them to deter enrollment of particularly sick enrollees (Shepard 2016).

As a result, potential enrollees may prefer broad networks because of the option-value of accessing high-quality specialists if they are severely ill and out of concern for receiving a surprise medical bill in an emergency. However, providers with a strong reputation tend to be able to negotiate higher

prices (Cooper et al. 2019b). These prices get passed along to consumers in the form of higher insurance premiums.

Rather than relying on either narrow or broad networks, insurance plans could integrate reference pricing for health care services where quality does not vary and patients can plan care in advance. This would allow providers to offer network breadth for services that are emergent or where quality varies and maintain choice but drive lower spending for services where care is relatively routine. This type of blended network—what is referred to here as a “smart network”—would seek to achieve savings by steering patients toward lower-priced providers for the range of potentially “shoppable” services outlined by the CMS.

Evidence Base

There is substantial variation in the price of routine health care services across providers in narrow geographic areas. For planned lower-limb MRI scans, for example, where service quality does not vary substantially, provider prices for patients with commercial insurance can vary by a factor of five or more within cities (Cooper et al. 2019a; Cooper et al. 2019b). There is a growing body of work which suggests that if insurers cap their reimbursements at a market average, equip patients with pricing information, and require patients to cover any reimbursements over the insurer’s contribution—generally referred to as “reference pricing”—patients are less likely to attend high-priced providers, providers respond by lowering their prices, and health spending goes down as a result (Robinson et al. 2013).

The most prominent example of this sort of reference pricing program has been introduced by CalPERS. Research on the CalPERS reference pricing program for orthopedic surgery has found that, after a reference pricing program was introduced, surgical volume increased by 21% at low-priced facilities and decreased by 34.3% at high-priced facilities, and the average prices of providers dropped by between 4.6% and 18% in response to the program (Robinson et al. 2013). A similar program for screening colonoscopies increased the rate at which patients sought care from an ambulatory surgical center (rather than accessing that care in the more-expensive hospital setting) by 14.6% (Aouad 2019).

Recently, CMS designated 70 health care services as potentially shoppable and required health care providers to post their negotiated prices for these procedures (see Appendix 1 for a complete list of these services). These services include certain physician office visits, certain lab and pathology services, outpatient radiology services, and a basket of planned medical and surgical services. This proposal analyzes the potential savings if insurers introduced a reference pricing plan for the 70 health care services designated as shoppable by CMS.

Policy Recommendation

Under a smart networks plan, insurers would preserve choice and a broad network for high-acuity and unplanned medical services, but introduce a reference pricing plan for the 70 services deemed shoppable by CMS. For those 70 services, insurers would reimburse up to the median negotiated amount per service per hospital referral region. Patients could attend providers with prices over the designated reference price, but if they did, they would be responsible for all payments above the reference price. Those payments would not count toward a patient's deductible or out-of-pocket maximum. Patients could receive an exemption from the reference pricing program via a written request from their internist, which would be reviewed by the payer.

Potential Savings

For each shoppable service, we used data from the HCCI to identify the savings if all such services currently delivered at an above-median priced provider were reimbursed at the median allowed amount for that hospital referral region. As Table 1 illustrates, the universe of CMS shoppable services accounts for approximately 10% of health care spending on the commercially insured in the HCCI database. Under a smart networks plan, spending on those services would decrease by 28%, which would lower total non-drug health spending by 2.8%. If these savings were applied across all commercial health plans, a back-of-the-envelope estimate is that such a proposal would reduce health spending by approximately \$30 billion annually.

There are a few caveats to this estimate. First of all, it does not account for any higher out-of-pocket costs to patients who choose to go to providers that charge above the median price. The total savings to the health care system should include these patient costs. On the other hand, as the CalPERS example suggests, such a plan would cause prices to fall at the most expensive facilities—which would lower not just covered but out-of-pocket costs and may spill over beyond the commercially insured to other populations. Finally, if providers see a sizeable reduction in revenues from this policy, they may compensate to some extent by raising prices on non-shoppable services. Such an approach would be most constructive within a broader framework that more systematically addresses high prices in the health care sector.

Table 1: Savings if All Cases above the Median Price in Each HRR Were Paid at the Median

	Share of Total Health Spending	Savings from Capping Prices at the Median	Savings, as a Share of Total Health Spending, from Capping Prices at the Median
Evaluation and Management	1.28%	25.68%	0.321%
Radiology Services	1.88%	39.28%	0.739%
Medicine and Surgery Services	6.82%	25.51%	1.74%
Total			2.8%

Note: For each procedure/visit that the CMS designated as shoppable (exclusive of lab testing), we calculated the amount spent per procedure/visit as a percentage of total health spending in the HCCI data exclusive of pharmaceutical spending. We then estimated the savings on each procedure/visit if the payments for these services were capped at the median price paid per HRR. We then calculated the total reduction in health spending from imposing these caps. In Appendix 1, we note the savings per individual procedure.

Appendix 1: Savings per CMS Shoppable Procedure/Visit (Page 1)

	Share of Total Health Spending	Savings from Capping Prices at the Median	Savings, as a Share of Total Health Spending, from Capping Prices at the Median
Evaluation and Management Services			
Psychotherapy (30 minutes)	0.01%	40.02%	0.002%
Psychotherapy (45 minutes)	0.01%	40.05%	0.002%
Psychotherapy (60 minutes)	0.10%	14.92%	0.015%
Family Psychotherapy w/o patient	0.00%	25.11%	0.001%
Family Psychotherapy with patient	0.02%	18.53%	0.004%
Group Psychotherapy	0.01%	57.04%	0.008%
New Patient Office Visit or other outpatient visit (30 minutes)	0.36%	27.09%	0.098%
New Patient Office Visit or other outpatient visit (45 minutes)	0.26%	25.31%	0.065%
New Patient Office Visit or other outpatient visit (60 minutes)	0.07%	31.6%	0.022%
Initial New Patient Preventative Evaluation age 18–39	0.11%	22.89%	0.025%
Initial New Patient Preventative Evaluation age 40–64	0.08%	20.58%	0.016%
Radiology Services			
CT Scan, Head or Brain w/o contrast	0.35%	43.83%	0.154%
MRI Scan of brain before and after contrast	0.21%	36.12%	0.077%

Appendix 1: Savings per CMS Shoppable Procedure/Visit (Page 2)

	Share of Total Health Spending	Savings from Capping Prices at the Median	Savings, as a Share of Total Health Spending, from Capping Prices at the Median
X-ray, lower back, minimum four views	0.03%	51.93%	0.014%
MRI Scan of lower spinal canal	0.14%	35.02%	0.047%
CT Scan, Pelvis, with contrast	0.00%	43.00%	0.002%
MRI Scan of leg joint	0.15%	31.73%	0.048%
CT scan of abdomen and pelvis with contrast	0.50%	44.58%	0.224%
Ultrasound of abdomen	0.06%	45.95%	0.028%
Abdominal ultrasound of pregnant uterus, greater or equal to 14 weeks, 0 days, single or first fetus	0.04%	33.16%	0.014%
Ultrasound pelvis through vagina	0.15%	46.06%	0.071%
Mammography of one breast	0.04%	35.84%	0.014%
Mammography of both breasts	0.04%	24.98%	0.010%
Mammography, screening, bilateral	0.16%	22.27%	0.036%
Medicine and Surgery Services			
Spinal fusion except cervical without major comorbid conditions or complications	0.44%	24.79%	0.110%

Appendix 1: Savings per CMS Shoppable Procedure/Visit (Page 3)

	Share of Total Health Spending	Savings from Capping Prices at the Median	Savings, as a Share of Total Health Spending, from Capping Prices at the Median
Major joint replacement or reattachment of lower extremity without major comorbid conditions or complications	1.14%	19.45%	0.222%
Cervical spinal fusion without major comorbid conditions or complications	0.11%	22.23%	0.025%
Uterine or adnexa procedures for non-malignancy without major comorbid conditions or complications	0.15%	23.02%	0.034%
Removal of one or more breast growths, open procedure	0.03%	22.69%	0.007%
Shaving of shoulder bone using an endoscope	0.24%	21.80%	0.053%
Removal of one knee cartilage using an endoscope	0.21%	29.23%	0.063%
Removal of tonsils and adenoid glands, patient younger than age 12	0.07%	20.88%	0.015%
Diagnostic examination of esophagus, stomach, and/or upper small bowel using an endoscope	0.07%	32.64%	0.023%
Biopsy of the esophagus, stomach, and/or upper small bowel using an endoscope	0.67%	27.69%	0.185%
Diagnostic examination of large bowel using an endoscope	0.37%	24.03%	0.090%
Biopsy of large bowel using an endoscope	0.64%	25.34%	0.162%
Removal of polyps or growths of large bowel using an endoscope	0.39%	23.51%	0.093%
Ultrasound examination of lower large bowel using an endoscope	0.00%	13.65%	0.000%

Appendix 1: Savings per CMS Shoppable Procedure/Visit (Page 4)

	Share of Total Health Spending	Savings from Capping Prices at the Median	Savings, as a Share of Total Health Spending, from Capping Prices at the Median
Removal of gallbladder using an endoscope	0.24%	22.79%	0.054%
Repair of groin hernia, patient age 5 or older	0.06%	20.30%	0.012%
Biopsy of prostate gland	0.03%	33.21%	0.011%
Surgical removal of prostate and surrounding lymph nodes using an endoscope	0.02%	23.66%	0.004%
Routine obstetric care for vaginal delivery, including pre- and post-delivery care	0.31%	13.07%	0.041%
Routine obstetric care for cesarean delivery, including pre- and post-delivery care	0.20%	12.03%	0.024%
Routine obstetric care for vaginal delivery after prior cesarean delivery, including pre- and post-delivery care	0.01%	12.36%	0.001%
Removal of recurring cataract in lens capsule using laser	0.01%	25.69%	0.002%
Removal of cataract with insertion of lens	0.15%	24.80%	0.037%
Electrocardiogram, routine, with interpretation and report	0.37%	33.68%	0.124%
Insertion of catheter into left heart for diagnosis	0.00%	28.99%	0.001%
Sleep Study	0.07%	31.79%	0.021%
Physical Therapy, therapeutic exercise	0.80%	40.58%	0.325%

Addendum

This addendum was prepared by the Health Care Affordability Lab at Yale.

Since this brief's publication, new research and policy developments have continued to substantiate the need for reform in commercial insurer pricing for shoppable services. Specifically, smart networks—which cap reimbursements for shoppable, non-differentiated services, like MRI scans, while preserving broad, more generous networks for specialized care, like cancer services—can enable commercial insurers to cut spending on shoppable services, many of which show high price variation without differences in quality. New research shows that many services deemed shoppable by CMS exhibit extensive variation in prices ([Philips and Whaley 2025](#)). Patients, under the right conditions, can switch from high- to low-cost providers.

To create savings, smart networks reimburse up to a reference price for certain services where shopping is possible. Any costs that exceed a service's reference price must be covered by enrollees. Insurers can base these rates on different standards, such as Medicare reimbursement rates, but this brief suggests insurers set each reference price at the median negotiated amount per service in a hospital referral region. The services covered by reference prices must be shoppable, meaning that their quality remains the same across providers and patients can plan them in advance. By making enrollees responsible for additional costs beyond the reference price, smart networks compel enrollees to shop for cheaper providers, reducing insurance spending.

The California Public Employees Retirement System (CalPERS), which manages health benefits for California public employees, has implemented reference prices for certain shoppable services. The original brief details how reference pricing successfully led CalPERS enrollees to shop for low-cost services, and new research shows how reference pricing has led CalPERS to save on reimbursements, as patients shopped and providers cut prices. [Aouad et al. \(2021\)](#) find that mean insurer payments for total joint replacement fell by \$6,762 per procedure (23%) while mean patient out-of-pocket payments rose by \$1,800 (79%). The averages, however, mask that the out-of-pocket increases were concentrated at the top of the spending distribution. Patients below roughly the 85th percentile saw no significant change, while those at the 90th percentile paid about \$6,256 more, reflecting the minority who chose high-priced providers and covered the difference. In essence, the program worked as intended, creating strong incentives for patients to avoid higher-priced providers. However, policymakers may want to keep this patient cost in mind when designing smart networks, especially if the patient's ability to shop is unclear.

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