Via EMAIL

March 23, 2018

Honorable Bill Cassidy, M.D
Honorable Michael Bennet
Honorable Chuck Grassley
Honorable Tom Carper
Honorable Todd Young
Honorable Claire McCaskill
United States Senate
Washington, DC

Dear Senators Cassidy, Bennet, Grassley, Carper, Young, and McCaskill:

We are pleased to learn of the Health Care Price Transparency Initiative and commend you and your colleagues for focusing on helping patients find and use high quality, high value health care. We appreciate the opportunity to offer recommendations to this Initiative and reflect on our experience developing and implementing state-sponsored health price transparency initiatives around the country.

Freedman HealthCare is a focused consulting firm that helps states and nonprofit organizations put health data to work. Since 2010, we've helped clients in 29 states collect and analyze health care data, often with the goal of helping patients make informed decisions about the cost and quality of care. We support our clients to expand consumer-facing price comparison tools as well as value-based insurance design projects. We have worked with clinicians, hospitals, insurers, Medicaid experts, data analysts and state regulators to help move these efforts forward. We are committed to helping health care achieve the Triple Aim through every possible legislative, policy, program and marketplace option.

In our work with multi-payer claims database (MPCD) organizations, we see well-crafted, thoughtful efforts in many states beyond those noted in your letter. We see a common thread of payers, providers, employers and policy groups working collaboratively to provide data for thoughtful decision-making at every level of health care. At the same time, we also see great variation among the states and regional alliances in accomplishing this goal. Our comments here touch on the great advances seen in both state mandated multi-payer claims database reporting as well as by the numerous regional collaboratives formed around the country.

Price Transparency and Beyond: The Value of Multi-Payer Claims Databases

Eighteen states currently operate MPCDs under state authority to systematically collect detailed health plan data, including: member eligibility information; medical, behavioral health, pharmacy and dental claims (including the actual payment amounts for all services); and provider information. Another 14 regional organizations publish price or quality information, or both, derived from MPCDs. MPCDs contain cross-payer and cross-setting information that is unavailable from other data sources and is critical for work in pursuit of the Triple Aim of better care, healthy people/healthy communities, and affordable care[1]. For example, hospital-discharge datasets contain inpatient hospital information but offer information about outpatient care, the amounts paid for services and, in some states, even the name of the hospital itself. Similarly, Medicare data provides insight for Medicare beneficiaries only, and since Medicare uses administered pricing, its data sheds little light on market-wide health pricing and other economic questions. By virtue of their rich and broad data, MPCDs support many public health, policy, performance improvement, and consumer empowerment goals. The table below highlights several relevant examples.

Role	Examples
Market reform and consumer empowerment	**Price transparency tools** **Comparative quality of providers** **Modeling alternative payment models** **Estimating consumer out-of-pocket expenditures**
Market function and health economics	Medical inflation Market share of insurers and providers Provider price variation Analysis of effects of proposed mergers or expansions Quantifying cross-subsidization by socioeconomic status Evidence-based health care policy development
Performance measurement and improvement	Quality measurement and reporting Tracking patient outcomes of drugs, devices, procedures Population health management Predictive modeling over time and across payers Practice pattern variation Risk-adjusted total medical expense Accountable Care Organization performance and benchmarking Hot spotting Utilization rates Actual vs. expected access to care as affected by consumer out-of-pocket expenditures
Public Health	Incidence and prevalence of illnesses and injuries Disparities in health and treatment, by age, gender, socioeconomic status, geography and payer or coverage type Monitoring of topics of interest, such as cancer, hepatitis C, opioid prescribing, treatment of overdoses, utilization of inpatient and outpatient substance abuse services, etc.

[1] AHRQ National Quality Strategy http://www.ahrq.gov/workingforquality/reports/annual-reports/nqs2011annlrpt.pdf as required under Affordable Care Act §3011

Role	Examples
Research	Rare diseases Health services research Evaluation of aspects of health care reform Clinical effectiveness research Cost effectiveness analysis Impact of EHRs

Across all these priority areas, MPCDs complement and extend existing data sources by bringing the power of large numbers to understanding American health, health insurance, and health care delivery. The need for a comprehensive source of detailed cross-setting care data—exactly what is contained in MPCDs—only grows in importance as health care continues its rapid transformation away from inpatient hospital care and towards outpatient medical and behavioral health settings.

State Innovators

As the Transparency Initiative explores additional opportunities to increase price and cost transparency, numerous state and regional organizations are building data resources to provide greater insight into price and quality for audiences with varying perspectives on health system change. Some examples (not an exhaustive list) include the following:

Colorado's Center for Improving Value in Health Care (CIVHC) operates the state's all payer claims database. Established in 2010, CIVHC ramped up and delivered its first price variation report in 2012. CIVHC partners with organizations across the state on projects that drive towards value. Recent projects look at health care quality measures, cost of care and a forthcoming price comparison website.

In **Missouri**, the regional MPCD Midwest Health Initiative (MHI) convenes payers, providers and employers around a shared goal of improving health and the quality and affordability of care. Using their extensive data resources, MHI drives conversations about high utilization rates for potentially unnecessary emergency department use and building a shared understanding of health care costs and utilization. MHI also publishes ChooseWellSTL.org, which provides comparative quality information for two dozen nationally-standardized measures for primary care practice sites as well as CMS hospital quality data.

The **Washington** Health Alliance annually publishes Community Checkup showing health care quality and value at medical groups and hospitals in the state.

The states of **New Hampshire** and **Maine** sponsor price and quality reference tools f**or patients to use in finding high value care at the patient's choice of provider and insurance plan. Virginia Health Information** provides average prices by region for common tests and procedure, highlighting that the same service varies in price if provided at a hospital, a physician's office or at a freestanding location (known as an ambulatory surgical center). Minnesota HealthScores, sponsored by a local regional collaborative, allows a user to compare quality, procedure-specific prices and total cost of care comparisons by the medical group.

The state of **Maryland** published cost and quality information on WeartheCost.org, using data from their multipayer claims database to show the range of prices for knee and hip replacements, vaginal

deliveries and hysterectomies. The information helps patients understand the full cost of these medical events, including the expected total price as well as the portion attributable to potentially avoidable complications. The website shows the average cost of a knee replacement at a specific hospital, including services such as diagnostic procedures, all inpatient services, surgeons and anesthesiologist's fees, post-op physical therapy as well as the average costs stemming from incidents such as post-op infection.

Other reports, projects and research include:

- The **Minnesota** Department of Health has started publishing a series of reports showing price variation among hospitals using date from the state mandated database.
- The **Arkansa**s APCD reported on EpiPens cost trends by payer.
- **Florida'**s Health Price Finder

Other states in the process of developing multi-payer databases include **Delaware**, **New York**, **Hawaii** and **Washington** state.

Look to state innovation for price and quality data strategies. These efforts demonstrate a range of thoughtful approaches and can serve as models for expanded efforts.

What information do patients need about price and quality?

We believe that price and quality transparency is an essential – and often overlooked – component of mitigating cost trends and ensuring value in the US healthcare system.

- Duke University researchers found that cost was discussed in about 30% of medical appointments, yet patients want direction from their physicians.
- Duke researchers also found that 52% of cancer patients wanted to discuss costs with their physician, but only 19% had done so.
- Once patients have access to price comparison data, 82% of those who compared prices say they will do so again and 62% say they saved money (Robert Wood Johnson study).
- And, according to the same study, 57% of those who haven't looked at health care price information say they would like to know the prices of medical services in advance, and 43% would choose less expensive doctors if they knew the prices in advance.

Some states are making rapid progress in delivering price information to patients. For example, similar lab tests are performed everywhere, yet the price can vary dramatically. New Hampshire's HealthCost website, a national leader in price transparency, enables patients to look up average prices. The state found that prices for the 20 most common lab tests at the 25 largest labs varied more than 10-fold, from $11 to $123.

In working with states to promote use of their rich data sources for various audiences, our teams find that both patients and clinicians struggle to have meaningful conversations about price and quality. Clinicians often do not know how much a procedure or test costs. Issues mentioned include having insufficient time to meet with patients, rigid insurer rules around referrals and delegation of scheduling responsibility to administrative staff. In one project, FHC learned that clinicians would accept coaching and support for conversations about unnecessary care, thereby indirectly addressing the cost of imaging services.

- **Support an ongoing educational campaign to build a national conversation about how to find high quality, low price health care services:** Just like reminders to get flu shots, save water and recycle more, the public conversation needs to expand to include awareness of the price of specific services. Both patients and clinicians will have a learning curve about how to use and apply price and quality information. We recommend that future initiatives around price and quality transparency include a long-term, well-supported strategic plan to help both groups learn how to have productive conversations about comparing price and quality.

What role should all payer claims databases play in increasing price and quality transparency? What are the barriers to utilizing these tools?

Limitations on data sources: To fully realize their potential, any MPCD – state mandated or voluntary -- must include data from the majority of beneficiaries. State mandated databases often have access to data for insurance policies sold in the commercial market; Medicaid, Medicare and state employees. Regional collaboratives may have some or all the same data sources as state-mandated MCPDs and add to that employer contributed data for self-insured plans. Neither state-mandated nor regional collaboratives include price or quality data for federal employees, active service members and veterans, civilian military employees or those served by Indian Health Services. The impact of such gaps is much greater in some states than in others.

Until the 2016 SCOTUS *Gobeille* decision[2], state-mandated MPCDs could collect data for a majority of commercially-insured individuals, whether enrolled in ERISA self-insured plans, ERISA fully-insured plans, health insurance exchange plans, or other types of plans. Because of the *Gobeille* decision, many state mandated MPCDs have essentially lost access to the data of over half of the commercially-insured population. A data loss of this size severely weakens the power and insight available in MPCDs and restricts the ability of MPCD data to help ERISA Plans, their sponsors and beneficiaries.

- **Mandate submission of self-insured data:** To ensure that data on more than half of the commercially-insured population is included in any price analysis, one option is for Congress to amend ERISA to permit state collection of self-insured plans' data. Adoption of a nationally standard dataset would reduce the costs to insurers and states, and help rapidly expand the use of MPCDs. A second option is to authorize creation of a federal MPCD/data collection program whereby the Department of Labor could create a centralized data collection structure.

- **Ensure that payers provide detail on all payments**: As payers move away from fee-for-service toward value-based reimbursement, the "traditional" claims data must be augmented with information about alternative payment models. Augmented data collection strategies will be needed. The Oregon Health Authority's alternative payment methods data collection process was developed in collaboration with data submitters and offers a template for how other states and data collectors might approach collecting this data. For more information, see Appendix G here)

Limitations on sharing data: State mandated MPCDs encounter obstacles in reporting data that stem from federal laws and requirements. Ensuring HIPAA protections on personal health information

[2] https://www.supremecourt.gov/opinions/15pdf/14-181_5426.pdf

typically occurs by following methodologies and approaches that are well-documented and well-accepted in the healthcare policy and reporting community. However, several obstacles remain.

- **Clarify Anti-Trust Rules Regarding Public Reporting of Price Information**: States and regional organizations find that provider protection provisions in FTC Statement 6 inhibit provider-specific cost reporting. The safe harbor rules permit reporting statistics based on an aggregation of at least 5 providers' data and that no single provider comprises more than 25% of the total. Any other reporting, including naming providers, will be evaluated on a case-by-case basis. States could move forward more expeditiously and overcome objections with a clear sense that the state or non-profit organization would be not be subject to DOJ anti-trust action for publishing price data.

- **Require payers to provide substance use disorder data for public health reporting, including price and quality:** SAMHSA quite rightly protects the privacy of persons receiving substance use disorder (SUD) treatment. These identity protections are well established in multi-payer databases, which collect many other types of sensitive data. Risk-averse payers interpret the SAMHSA rules quite broadly and therefore redact records throughout the dataset, for all settings of care, even when a SUD diagnosis is embedded in treatment records for unrelated services. As a result, MPCDs are not able to fully realize the price for SUD services and lose an unknown amount of information about the price of other services. Here, Congress can offer guidance to SAMHSA about the need to allow payers to include this data in submissions to MPCDs.

Resource availability: At some point in its lifecycle, all MPCDs struggle with finding and keeping adequate funding. The annual cost of securely collecting, storing and analyzing data in a small to mid-sized state ranges between $1.5 and $3.0 million per year, less than 0.01%[3] of any state's annual total cost of healthcare for its residents. Many MPCDs originated and/or expanded with federal grants programs; Congress should continue to support these efforts with new grant programs that can sustain the advances already made.

How do we advance greater awareness and usage of quality information paired with appropriate pricing information?

In our work in several states that have collected, analyzed and published price and quality information, we see that the websites themselves are effective data delivery tools. We are also learning that, as with any product or service, effective marketing drives general interest. To increase use of the important information on these sites, the Initiative should recognize the diverse efforts already underway to raise public awareness about price transparency and available resources, including:

- Launch events
- Press releases
- Ongoing social media postings (e.g., the state health department's Twitter feed)
- Small advertisements (e.g., the state health department's Facebook page)

[3] Freedman, J, Green, L, Landon, B,: "All-Payer Claims Databases – Uses and Expanded Prospects after *Gobeille,"* New England Journal of Medicine, December 8, 2016,N Engl J Med 2016; 375:2215-2217 DOI: 10.1056/NEJMp1613276, accessed March 23, 2018 at http://www.nejm.org/doi/full/10.1056/NEJMp1613276,

Weave price transparency into the mainstream: We see increased interest when the information is framed in ways that resonate with patients. For example, a typical state agency press release might report that a certain percentage of the state's hospitals rated highly on patient satisfaction measures. However, many more social media users responded to a post that said: "Like a clean hospital room? Find out which local hospital's patients reported as the cleanest and which ones they didn't at…." MPCDs need to find specialized expertise to get the message out and to bring the issues to the forefront. The Initiative should consider creating best practices for such efforts.

Personalization matters! We have also learned that the information must be tailored to the consumer. A set of "best practices" might be a combination of the best features of the following:

- Drilldown Capability: New Hampshire Health Cost returns information based on the website visitor's information about insurance and preferred travel distance
- Specific providers, as on the Maine, New Hampshire and the forth coming Colorado websites
- Clear distinction between the cost of a specific procedure (e.g., cost of taking an x-ray) compared to the patient's total price (e.g., cost of taking an x-ray plus the radiologist's fee).
- Minimal number of clicks to reach the answer on the website
- Optimized for mobile devices.

States and regional collaboratives have made great progress using local resources and transitional grants. The Initiative could jumpstart similar efforts across the country by creating a central resource to share best practices, provide data analysis instructions and supply action plan templates.

Other approaches to transparency

Preferred options minimize barriers to obtaining price and quality information through publishing data on freely accessible websites. If the Initiative chooses a different path to transparency, we observe that several states currently require providers and payers to offer service estimates upon request or post a price list. To strengthen these measures, suggestions include:

- Require both providers and payers to provide immediate (perhaps in less than 1 hour from request) firm quotes of prices or good-faith estimates, enforceable under state and federal consumer protection laws, ERISA and state insurance law, and public health law.
- Alternatively, providers could be required to post prices prominently on their premises and, if they have a website, prominently on their websites, for a wide range of services.

Appendix

The appendix to this letter contains examples of existing price transparency reporting, including websites and reports. These items demonstrate the variety of topics that can be addressed with this data and ways that the data may be disseminated.

Conclusion

The Health Care Price Transparency Initiative is an important step forward in helping patients and their families make informed choices about their health care options. We hope that the Initiative will help drive the conversation forward and offer a clear path for this important work with:

- Congressional action to ensure that ERISA self-insured data are included in price transparency efforts
- Raising public awareness about price variation

- Expanding state authority to broadly collect and report health price data
- Creating a “best practices” resource for state and regional price transparency initiative sponsors

We would welcome an opportunity to participate in the work of the Initiative going forward, including joining roundtable conversations, helping frame recommendations and offering our insights from our work around the nation.

If you have any questions or would like further information about our work, please do not hesitate to call.

Sincerely,

John Freedman, MD MBA
President, Freedman Healthcare LLC

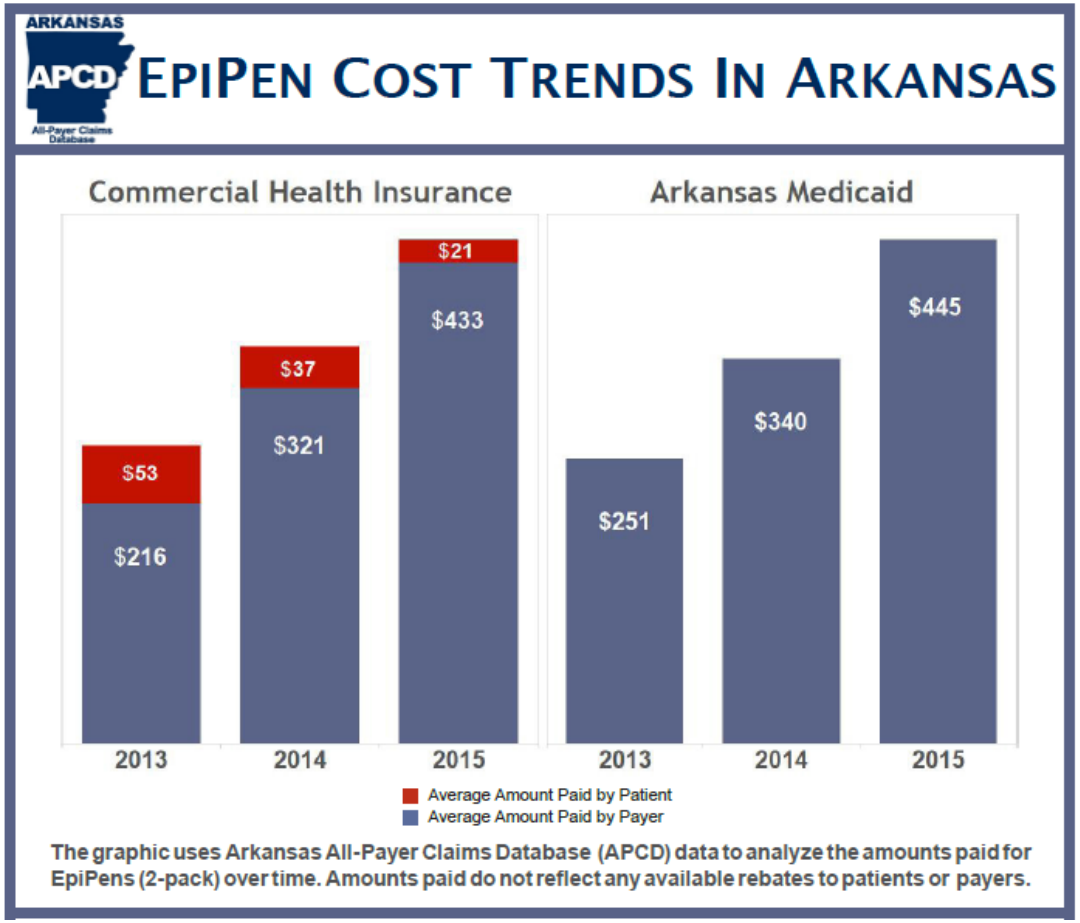
Attachment

APPENDIX

Examples of Different Types of Price Transparency From State Agencies and Regional Collaboratives

Arkansas

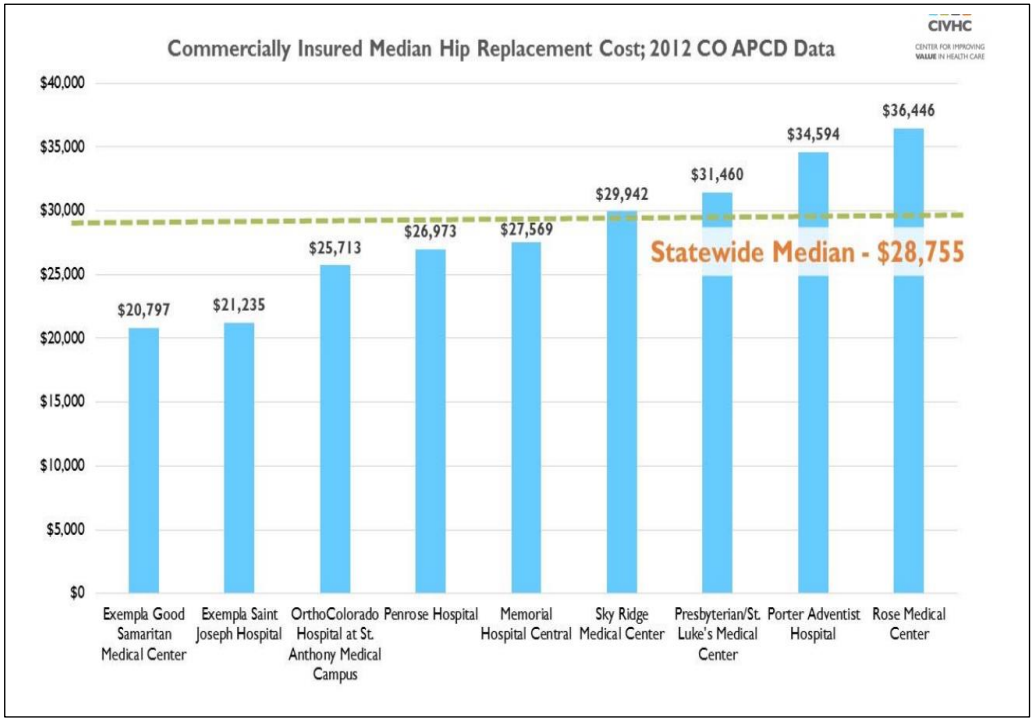
Cost Comparisons



Arkansas All Payer Claims Database used data to track the cost of EpiPens (2-pack) over the course of three years. The costs were broken down between commercial health insurance the state's Medicaid program.

Colorado

Cost Comparisons



The Center for Improving Value in Health Care (CIVHC) provides [cost comparisons] for a number of procedures, and additionally measures quality based on patient mortality.

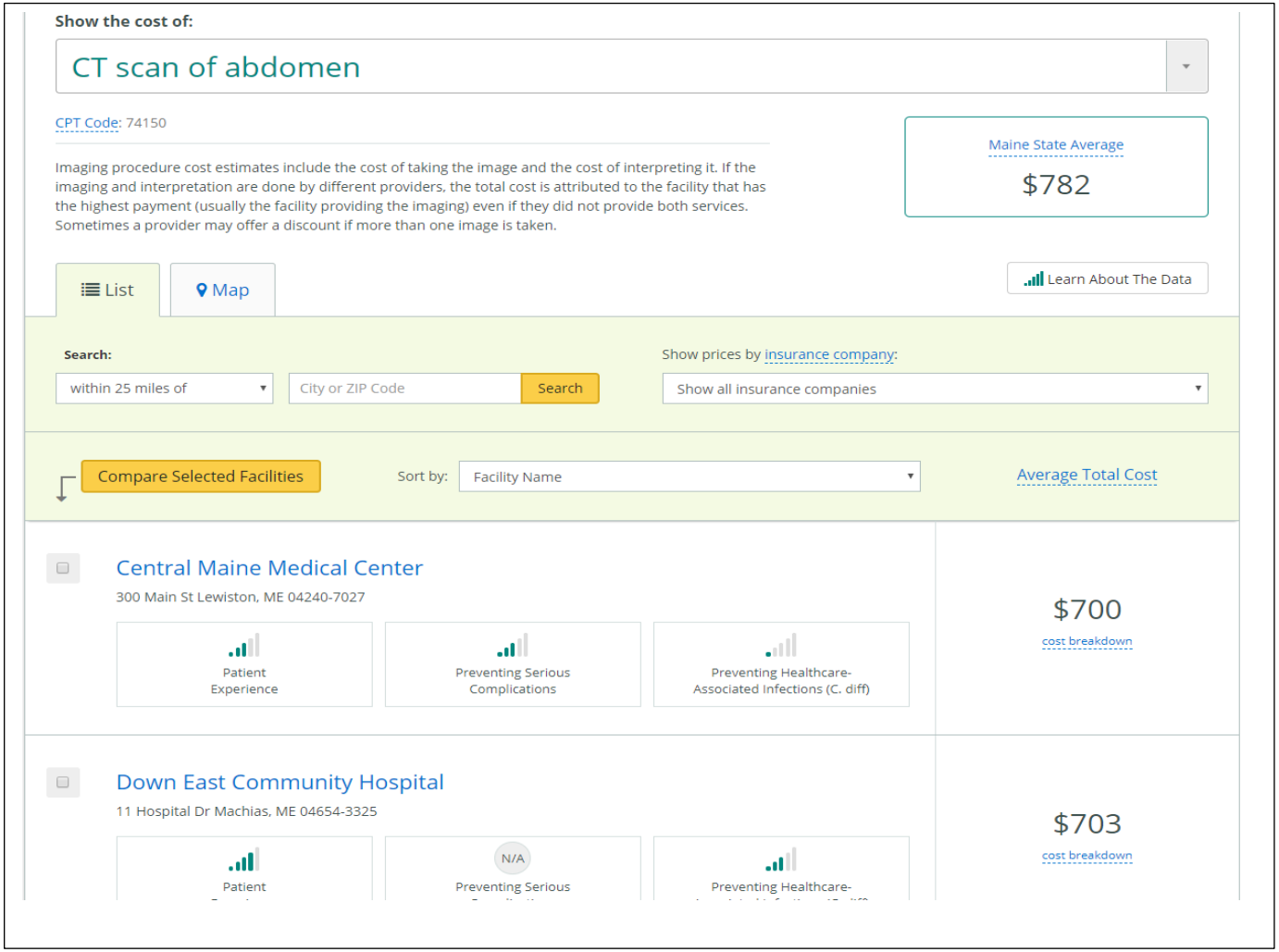
Quality Comparisons

CIVHC
CENTER FOR IMPROVING VALUE IN HEALTH CARE

	Hip Replacement: Mortality Rate Compared to State Average 2012
Animas Surgical Hospital	
Arkansas Valley Regional Medical Center	***
Aspen Valley Hospital	***
Avista Adventist Hospital	Average
Boulder Community Foothills Hospital	Average
Boulder Community Hospital	
Centennial Peaks Hospital	
Children's Hospital Colorado	
Colorado Acute Long Term Hospital	
Colorado Plains Medical Center	***
Colorado West Psychiatric Hospital	
Community Hospital	Average
Craig Hospital	
Delta County Memorial Hospital	Average
Denver Health Medical Center	Average
Denver Health Medical Critical Care	
East Morgan County Hospital	
Estes Park Medical Center	***
Exempla Good Samaritan Medical Center	Average
Exempla Lutheran Medical Center	Average

Maine

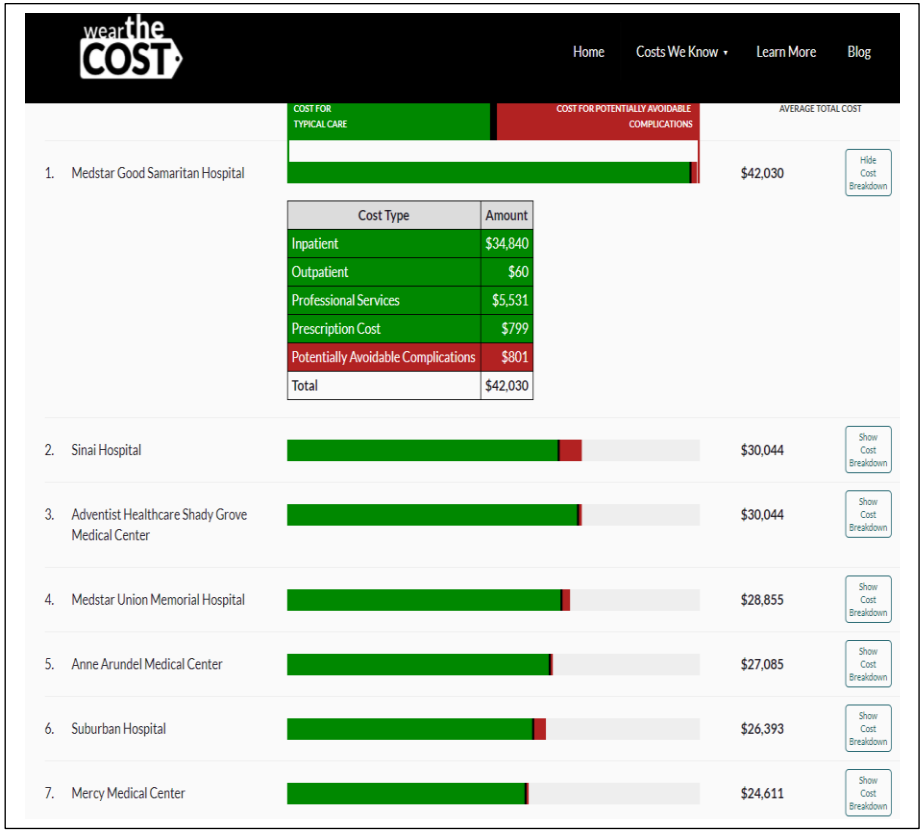
Cost & Quality Comparisons



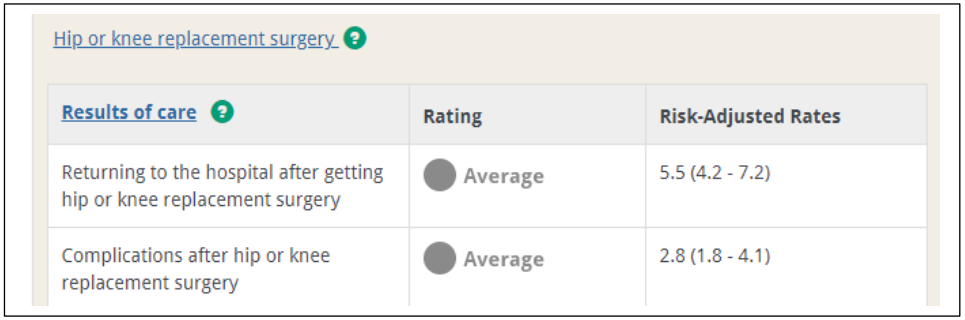
Maine Health Data Organization provides cost and quality snapshots by procedure. Quality is measured by patient experience, preventing serious complications, and procedure associated infections.

Maryland

Cost Comparisons



Quality Comparisons

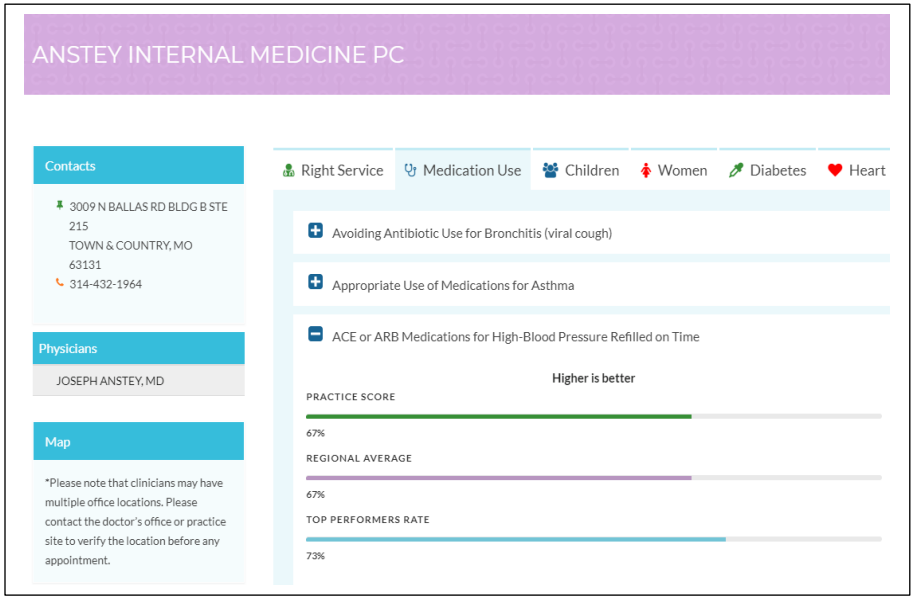


The Maryland Health Care Commission (MHCC) provides average costs for certain procedures by Hospital and includes the average Potentially Avoidable Complication (PAC) cost for each. Additionally, MHCC provides quality measures by a rating scale and risk-adjusted rates.

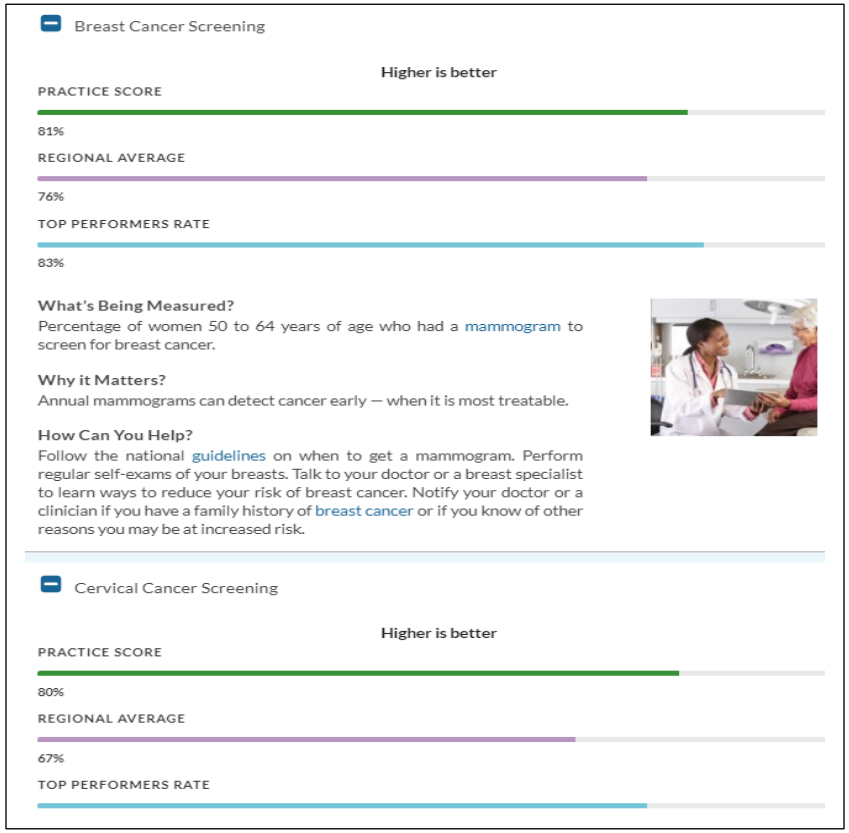
Midwest Health Initiative

State-Based Voluntary Collaborative

Quality Comparisons



The Midwest Health Initiative, a Missouri based non-profit, provides its data to Choosewell.org. This, in combination with hospital data from Centers for Medicare & Medicaid Services (CMS), provides quality measures for many Primary Care Physicians and Hospitals.



Minnesota

Cost Comparisons

TOTAL KNEE REPLACEMENT	AVERAGE PRICE	LOWER PRICE	HIGHER PRICE	HIGH-LOW RATIO	PRICE RANGE AND AVERAGE CASE PRICE (|)
Hospital with Highest Average Price	$35,171	$24,681	$46,732	1.9x	
2nd Highest	$34,007	$30,725	$37,479	1.2x	
3rd Highest	$32,556	$16,251	$46,974	2.9x	
Statewide Average Price	$23,997	$6,186	$46,974	7.6x	
3rd Lowest	$16,690	$7,949	$23,505	3x	
2nd Lowest	$16,688	$6,186	$38,809	6.3x	
Hospital with Lowest Average Price	$15,214	$6,186	$30,306	4.9x	

TOTAL HIP REPLACEMENT	AVERAGE PRICE	LOWER PRICE	HIGHER PRICE	HIGH-LOW RATIO	PRICE RANGE AND AVERAGE CASE PRICE (|)
Hospital with Highest Average Price	$33,667	$15,093	$38,409	2.5x	
2nd Highest	$31,135	$10,373	$43,359	4.2x	
3rd Highest	$29,802	$6,666	$43,359	6.5x	
Statewide Average Price	$24,335	$6,666	$43,359	6.5x	
3rd Lowest	$17,260	$6,666	$28,277	4.2x	
2nd Lowest	$17,081	$6,666	$43,359	6.5x	
Hospital with Lowest Average Price	$16,146	$6,666	$31,253	4.7x	

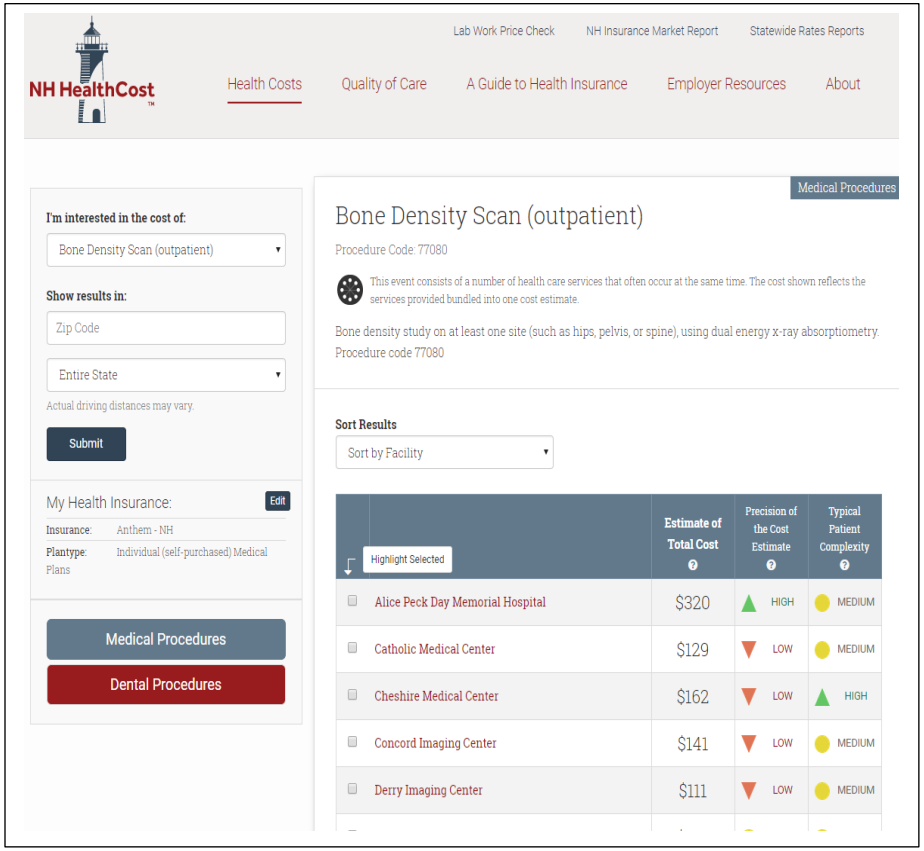
NORMAL DELIVERY	AVERAGE PRICE	LOWER PRICE	HIGHER PRICE	HIGH-LOW RATIO	PRICE RANGE AND AVERAGE CASE PRICE (|)
Hospital with Highest Average Price	$9,626	$2,872	$12,303	4.3x	
2nd Highest	$8,857	$3,980	$12,303	3.1x	
3rd Highest	$8,643	$2,872	$12,303	4.3x	
Statewide Average Price	$5,975	$2,872	$12,303	4.3x	
3rd Lowest	$4,551	$2,872	$7,979	2.8x	
2nd Lowest	$4,536	$2,872	$9,419	3.3x	
Hospital with Lowest Average Price	$4,412	$2,872	$10,352	3.6x	

C-SECTION DELIVERY	AVERAGE PRICE	LOWER PRICE	HIGHER PRICE	HIGH-LOW RATIO	PRICE RANGE AND AVERAGE CASE PRICE (|)
Hospital with Highest Average Price	$18,723	$11,930	$22,831	1.9x	
2nd Highest	$18,355	$4,693	$22,831	4.9x	
3rd Highest	$17,599	$10,781	$22,831	2.1x	
Statewide Average Price	$10,234	$4,693	$22,831	4.9x	
3rd Lowest	$7,744	$4,693	$21,495	4.6x	
2nd Lowest	$7,595	$4,693	$11,995	2.6x	
Hospital with Lowest Average Price	$7,471	$4,693	$13,949	3x	

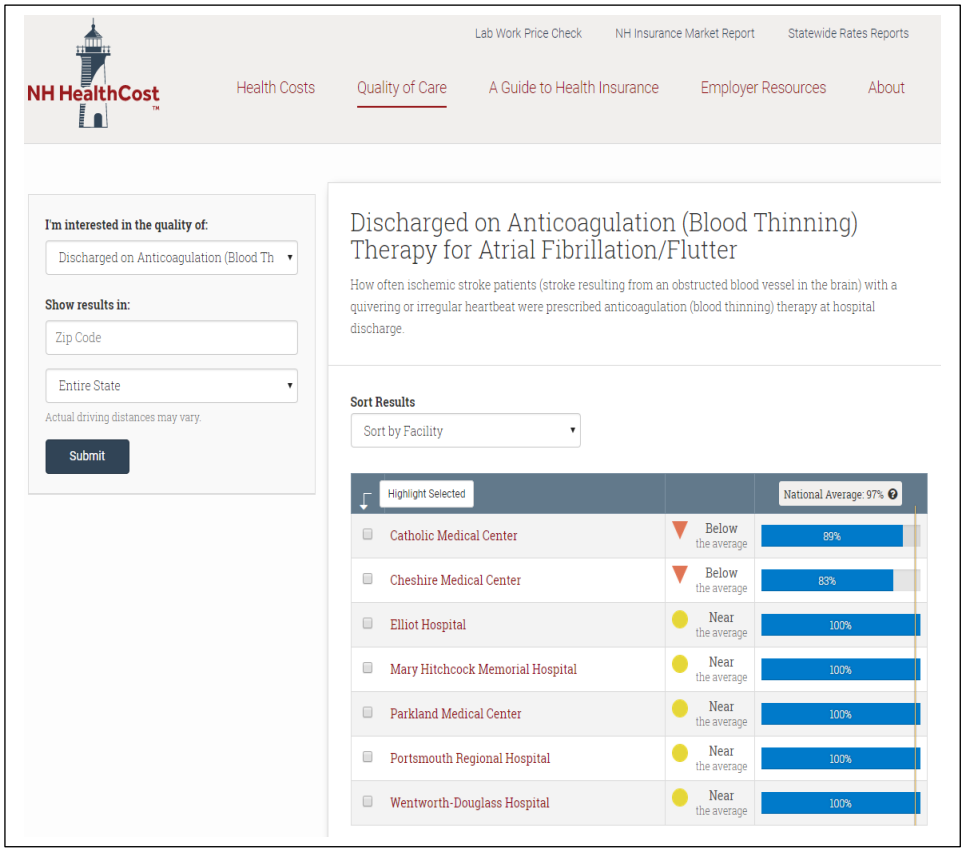
Minnesota Department of Health has used their All Payer Claims Database to publish a series of reports observing a wide range of healthcare costs.

New Hampshire

Cost Comparisons



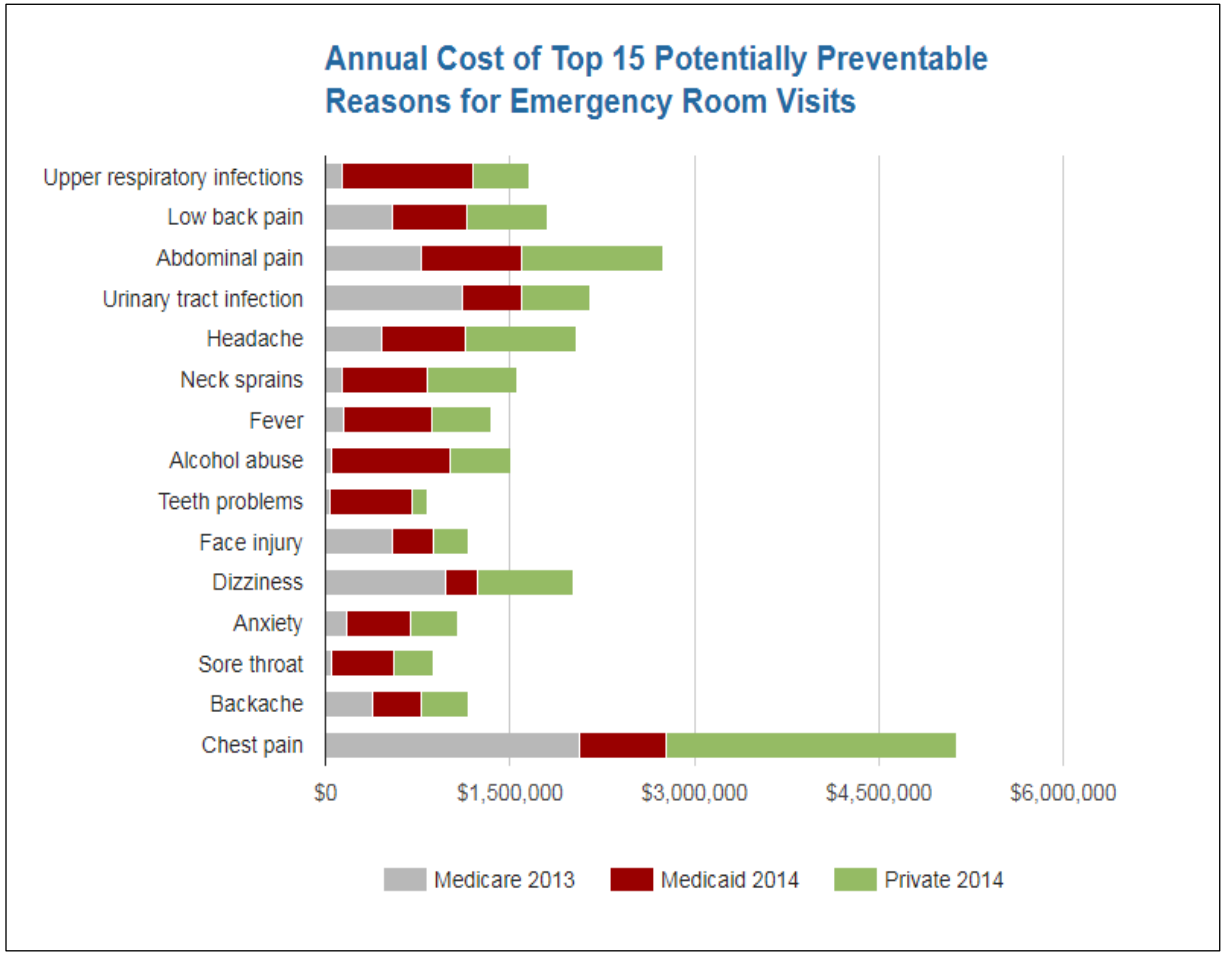
Quality Comparisons



New Hampshire HealthCost™ provides procedure costs by hospital in addition to cost precision levels and average level of patient complexity. Quality measures are also provided for patient experience, effective care, stroke care, and leg clot treatments.

Rhode Island

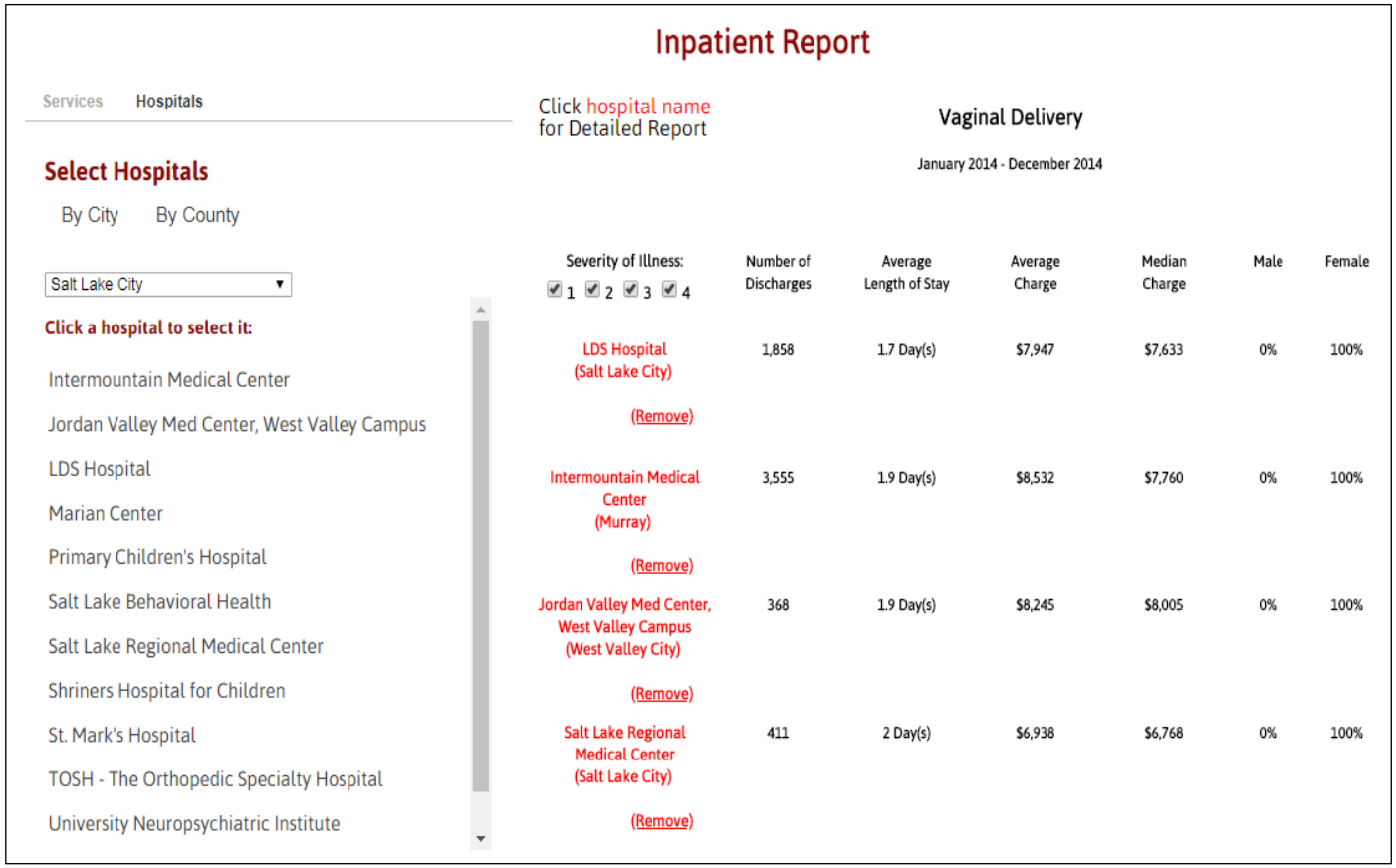
Cost Comparisons



Rhode Island's APCD known as HealthFacts RI, used its data to provide annual costs of the top 15 preventable reasons a person utilizes the emergency room.

Utah

Cost Comparisons



Inpatient Report

Services Hospitals

Select Hospitals

By City By County

Salt Lake City

Click a hospital to select it:

- Intermountain Medical Center
- Jordan Valley Med Center, West Valley Campus
- LDS Hospital
- Marian Center
- Primary Children's Hospital
- Salt Lake Behavioral Health
- Salt Lake Regional Medical Center
- Shriners Hospital for Children
- St. Mark's Hospital
- TOSH - The Orthopedic Specialty Hospital
- University Neuropsychiatric Institute

Click hospital name for Detailed Report

Vaginal Delivery

January 2014 - December 2014

Severity of Illness: 1 2 3 4	Number of Discharges	Average Length of Stay	Average Charge	Median Charge	Male	Female
LDS Hospital (Salt Lake City) (Remove)	1,858	1.7 Day(s)	$7,947	$7,633	0%	100%
Intermountain Medical Center (Murray) (Remove)	3,555	1.9 Day(s)	$8,532	$7,760	0%	100%
Jordan Valley Med Center, West Valley Campus (West Valley City) (Remove)	368	1.9 Day(s)	$8,245	$8,005	0%	100%
Salt Lake Regional Medical Center (Salt Lake City) (Remove)	411	2 Day(s)	$6,938	$6,768	0%	100%

The Utah Department of Health in a joint effort with the Utah Hospital Association, provides cost comparisons for a wide range of procedures.

Vermont

Cost Comparisons

Table Set 13. Back Surgery

Rates per 1,000 members. Commercially insured, ages 20-64. Adjusted for age and gender. 2008 claims data.

VERMONT BACK SURGERY					
HOSPITAL SERVICE AREA	AVERAGE MEMBERS	PROCEDURES	ADJ. RATE PER 1,000	95% LCL	95% UCL
Barre	25,534	95	3.67	2.97	4.49
Bennington	11,219	26	2.25	1.47	3.29
Brattleboro	9,559	18	1.81	1.07	2.86
Burlington	67,850	201	3.01	2.61	3.46
Middlebury	10,700	39	3.57	2.54	4.88
Morrisville	7,798	27	3.39	2.23	4.93
Newport	6,754	17	2.45	1.43	3.93
Randolph	4,700	13	2.67	1.42	4.56
Rutland	21,196	65	2.97	2.29	3.78
Springfield	8,781	21	2.30	1.43	3.52
St. Albans	13,032	56	4.32	3.26	5.61
St. Johnsbury	7,145	16	2.18	1.25	3.54
White River Junction	12,343	35	2.75	1.92	3.83

Table Set 14. Total Plan and Member Medical Payments

Rates per member per month (PMPM). Commercially insured under age 65. Adjusted for age and gender. 2008 claims data. Pharmacy not included.

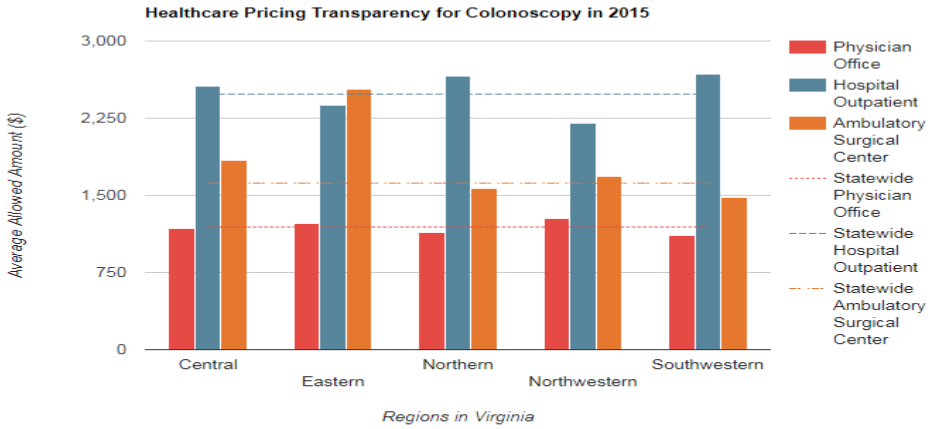
VERMONT TOTAL PLAN AND MEMBER MEDICAL PAYMENTS					
HOSPITAL SERVICE AREA	MEMBER MONTHS	PAYMENTS (MILLIONS)	PAYMENTS PMPM	HOSPITAL/ FACILITY PROPORTION	PHYSICIAN/ OTHER PROPORTION
Barre	403,387	$109.1	$265	59.9%	40.1%
Bennington	176,197	$52.0	$284	63.4%	36.6%
Brattleboro	147,152	$38.5	$246	62.7%	37.3%
Burlington	1,094,378	$257.7	$240	50.7%	49.3%
Middlebury	169,992	$44.5	$256	55.9%	44.1%
Morrisville	122,343	$32.9	$260	62.0%	38.0%
Newport	101,649	$32.5	$301	69.8%	30.2%
Randolph	71,817	$20.1	$264	66.9%	33.1%
Rutland	328,298	$102.2	$297	65.0%	35.0%
Springfield	135,131	$38.5	$270	64.9%	35.1%
St. Albans	208,608	$53.4	$257	58.4%	41.6%
St. Johnsbury	110,894	$32.4	$279	66.3%	33.7%
White River Junction	192,991	$55.4	$275	65.6%	34.4%

Vermont's All Player Claims Database known as VHCURES, created a report which provides the number of times a procedure was provided, in addition to overall healthcare expenditures by county. Costs were additionally broken down between hospital facility and physician costs.

Virginia

Cost Comparisons

+ Statewide	$ 1,192 Physician Office	$ 2,484 Hospital Outpatient	$ 1,619 Ambulatory Surgical Center



Regional Pricing Transparency

Colonoscopy (2015)

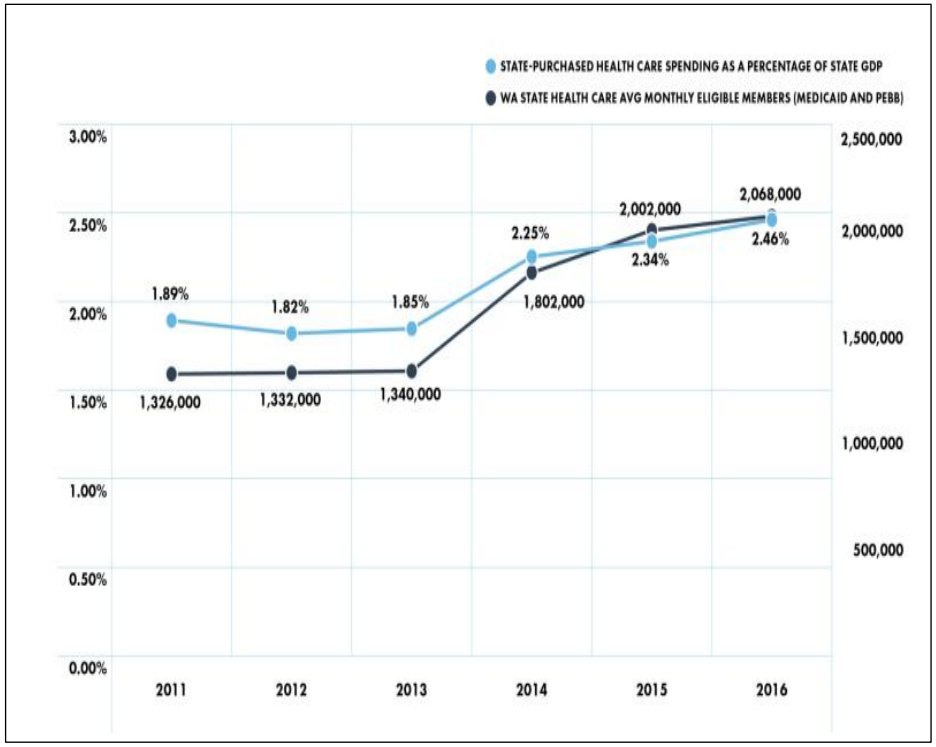
+ Central VA	$ 1,179 Physician Office	$ 2,564 Hospital Outpatient	$ 1,838 Ambulatory Surgical Center
+ Eastern VA	$ 1,225 Physician Office	$ 2,380 Hospital Outpatient	$ 2,532 Ambulatory Surgical Center

Virginia uses its APCD data to provide procedure costs by state region. The costs are further separated by location of service, Physician Office, Hospital Outpatient, and Ambulatory Center.

Washington Health Alliance

State-Based Voluntary Collaborative

Cost Comparisons



Quality Comparisons

The Washington Health Alliance, a state-based voluntary collaborative, uses APCD data for an array of reports and measures. During its 2017 Community Checkup, it provided figures on healthcare spending between state-purchased health care and Medicaid over six years. Additionally, they reported quality measures (rankings) for state medical groups for commercially insured Washington residents.