

CONSUMER-CENTRIC EVALUATION OF HEALTH CARE PRICE AND QUALITY TRANSPARENCY TOOLS

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 **ALTARUM**

SOLUTIONS TO ADVANCE HEALTH

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Executive Summary

States and other stakeholders are developing public-facing health care price and quality tools to help consumers navigate the health care marketplace. Some proponents expect these web-based tools will drive value in the health system by enabling consumers to make informed choices about where and from whom they receive care. Many transparency tools have been launched in recent years (by state entities and insurers) and a variety of stakeholders are eager to learn which tools are best. This has led researchers at organizations such as New York State Health Foundation, Consumer Reports and Altarum to evaluate these tools for their functionality and usefulness.

This study employed a unique approach designed to emulate consumers’ real-world experience of trying to schedule needed health care. Using six common, non-emergency medical scenarios, we tested six highly ranked health care transparency tools (see Table ES-1) with real consumers and evaluated their ability to navigate the tools to get desired information.

The findings reveal a deep divide between the information that consumers would typically seek and the information provided by the transparency tools. Moreover, our cognitive interviews revealed that consumers would not typically turn to a web-based comparator tool to select a provider. Indeed, many were surprised to learn that tools like the ones tested in this exercise even existed. Instead, they would ask friends, family, use Google and call their insurance plan (if the person had insurance) to get needed information before scheduling a procedure.

While a few of the tested tools received high marks from the consumers, for the most part, the tools did not emphasize the type of information that patients most desired. Cost, for example, was not typically a key attribute for our insured participants. People generally thought that price depended upon what insurance they had but did not realize that prices can also vary among providers. In order to determine the price of a service, participants told us they would call insurance companies (if insured) and providers. Their primary goal was to obtain an estimate of the out-of-pocket cost, not to compare prices. These sentiments help explain why the ability to search for prices is not high on consumers’ list of desired attributes for transparency tools.

**Table ES-1:
Selected Tools & Medical Scenarios**

Tools Selected
Colorado’s CIVHC
CompareMaine
Maryland Hospital Guide
Minnesota Health Scores
New Hampshire HealthCost
WaMonAHRQ
Medical Scenarios Selected
Lipid Profile
MRI
Physical Therapy
Colonoscopy
Arthroscopic Knee Surgery
Knee Replacement



All participants emphasized that information on physician attributes was of key importance when seeking care. Specifically, they wanted to know:

- ▲ Were doctors' names and credentials visible?
- ▲ Was there a photo of the doctor?
- ▲ Was location and contact information available?
- ▲ Who offered the earliest appointment?

On this key dimension, the tools that we tested fared poorly, with only three of the tools providing location information and no tools providing physician attributes like photo, earliest appointment or other information that consumers desired.

The key quality attributes that interested our interviewees were customer service, a provider's "bed-side" manner and friendliness of physician and office staff. In general, the tools fared well on these dimensions, with all six providing some form of patient experience data, although it was somewhat ambiguous to participants what the term "patient experience" meant. With respect to variation in clinical quality, participants expected providers to be relatively consistent. This stemmed from the belief that non-emergency medical procedures were fairly common and presented little risk of a poor medical outcome.

To the extent they were inclined to use cost or quality information, our participants expressed a preference for seeing this information side-by-side. Americans are now used to shopping for a wide variety of goods and services online and have well-developed approaches to how to assess value. Our interviewees told us that, in general, they are willing to accept a slightly lower quality rating for a dramatically lower cost. Though they generally had not seen quality ratings for medical care, the interviewees indicated that they would take less than perfect ratings "with a grain of salt," given that most people do not like having to receive medical care. Because of this, perfect ratings raised suspicions, slightly above average ratings were not interpreted negatively, and only extremely low ratings raised red flags.

The diversity of approaches to price and quality transparency tools, low consumer uptake and the fact that a variety of rubrics have been used in prior scoring efforts suggests there is still much to learn about successful design of, and role for, these tools. This study finds major gaps in how consumers approach scheduling non-urgent medical care and the type of information offered in highly ranked health care transparency tools. The findings also suggest a path forward. The strongest parts of existing tools can be emulated by other tools; strong adherence to user-centered design can increase consumers' trust and use of the tools; and, by making the most sought-after information prominent (e.g., physician attributes), tool designers can help connect consumers to corollary information on price and quality.



Background

For more than a decade, policymakers and payers have explored the role and impact of consumer-facing health care price and quality tools on the health system.¹ The impetus to develop these tools reflects beliefs that range from “*these tools help keep consumers safe in the marketplace*” to “*these tools will discipline the market and cause it to deliver better value.*” Proponents will often cite the high and rising out-of-pocket costs facing consumers as a rationale for providing these tools. A plethora of consumer-facing transparency tools² have been developed as a result, but some studies find limited uptake by consumers to date.³

The diversity of approaches to price and quality transparency tools, along with low consumer uptake, suggests there is still much to learn about successful design of, and role for, these tools. Eager to learn which approaches work best, several researcher teams have evaluated these tools for their functionality and usefulness, including previous efforts by Altarum,⁴ Consumer Reports⁵ and the New York State Health Foundation.^{6,7}

In this fresh twist, Altarum’s *Consumer-Centric Evaluation of Health Care Price and Quality Tools* uses an approach that emulates consumers’ real-world experience as they try to schedule needed health care, exploring the types of information they would seek and where they would go to find it.

¹ These tools can also be important sources of action for other stakeholders like policymakers, employers, etc. See: Quincy, Lynn, and Amanda Hunt, [Revealing the Truth about Healthcare Price Transparency](#), Healthcare Value Hub, Research Brief No. 27 (June 2018).

² Human Services Research Institute, [Advancing Health Care Transparency: A National Inventory of Tools to Guide State Policy](#), New York. (July 2018).

³ Ibid.

⁴ de Brantes, Francois, et al., *Price Transparency & Physician Quality Report Card 2017*, Altarum and Catalyst for Payment Reform, Washington, D.C. (2017). <https://altarum.org/publications/price-transparency-and-physician-quality-report-card-2017>

⁵ Consumer Reports, *How to Get High-Quality, Low-Cost Healthcare*, Washington, D.C. (November 2016). <https://www.consumerreports.org/health-insurance/how-to-get-high-quality-low-cost-healthcare/> and [Services Research Institute \(July 2017\)](#).

⁶ [Human Services Research Institute \(July 2017\)](#).

⁷ There are also two efforts specific to tools in Massachusetts: [a 2015 effort by Healthcare for All Massachusetts](#) and a [2018 report](#) by the Pioneer Institute.



Project Approach

The diversity of approaches to price and quality transparency tools, low consumer uptake and the fact that a variety of rubrics have been used in prior scoring efforts⁸ suggests there is still much to learn about successful design of, and role for, these tools.

This study uses a consumer-led approach to develop the criteria for tool evaluation. Using six medical scenarios that consumers might face, Altarum analyzed the ability of six highly regarded transparency tools to deliver information that consumers might realistically seek. The scenarios represent a range of common medical needs, ranging from simple to more complex. A mix of privately insured and uninsured consumers was used to gauge the usefulness and functionality of the tools. As described in more detail below, the project had five phases:

1. Assemble patient expert panel
2. Identify tools to be evaluated
3. Identify medical scenarios to be used
4. Conduct cognitive interviews with privately insured and uninsured patients
5. Standardized testing using findings from interviews

PHASE 1: PATIENT EXPERT ADVISORY GROUP

We assembled a diverse panel of advisors with expertise in patient decision-making to review our methods and protocol, with special attention given to ensuring our proposed scenarios mirrored consumers' real-world experiences. Panel members included:

- ▲ **Stephanie Arenales**, Consumer Assistance Program Manager, Colorado Consumer Health Initiative
- ▲ **Stephanie Severs**, Health Insurance Literacy Lead, Covering Wisconsin
- ▲ **Pat Jolley**, RN, Director of Clinical Initiatives, Patient Advocate Foundation
- ▲ **Doris Peter**, Senior Advisor for the Informed Patient Institute (IPI) and part-time consultant to Yale/YNHH Center for Outcomes Research and Evaluation (CORE)⁹
- ▲ **Chuck Bell**, Programs Director for the advocacy division of Consumer Reports

Our advisors offered a rich variety of perspectives, challenged us and refined our approach. We thank them for their time. Altarum, not the advisors, bears full responsibility for any errors or omissions in this report.

⁸ See Appendix A for a comparison of prior scoring approaches.

⁹ Doris Peter was formerly head of Consumer Reports' Health Rating Center where she implemented a strategic plan and directed the technical development and publishing of health care quality ratings.



PHASE 2: IDENTIFY TOOLS TO BE EVALUATED

For two reasons, all price transparency tools considered for this project are free and available to the public. One, the idea underlying transparency tools is to provide ready access to cost and quality information, and this ideally would be true for patients who are currently without insurance. Two, we were not able to access insurance plan tools that were only available to plan members, hence these tools are not included in the evaluation. This means putting all providers on a level playing field, whether or not they belong to a given health plan network. The downside of the approach, of course, is the inability to estimate out-of-pocket costs after the insurance plan pays (discussed below).

To select the tools for testing, we considered publicly available tools identified as high performing in one or more previous scoring efforts by Altarum, Consumer Reports and New York State Health Foundation (see Table 1). Further, we looked for tools that:

- ▲ Include both price and quality data,¹⁰
- ▲ Feature provider-level information, and
- ▲ Contain information relevant for both hospital and non-hospital medical scenarios.

¹⁰ Since cost and quality both exhibit wide variation and are poorly correlated, it is critical that consumers have access to both types of information. See: Hussey, Peter, Samuel Werthemier and Ateev Mehrotra, [*The Association Between Health Care Quality and Cost: A Systemic Review*](#), National Institute of Health, Vol. 158 No. 1 (May 2016).



Table 1: How Highly Ranked Tools Fared in Our Tool Selection Rubric

Tool Name	State	Recent Transparency Scorecards			Price, Quality or Both?	Physician Level Data?	Hospital Level Data?
		NYS Health Foundation 2018 Report	Altarum 2017 Report (“A” highest)	Consumer Reports 2017 Scorecard (“1” highest)			
Guroo	National			5	Price	No	No
CIVHC	CO		C	4	Price, Quality	Yes (only for imaging scenarios)	Yes (only for imaging scenarios)
Illinois Hospital Report Card	IL	X			Price, Quality	No	Yes
The Hospital Guide	MD	X			Price, Quality		Yes
Get Better Maine	ME		C		Quality		
Compare Maine	ME	X	A	2	Price, Quality	Yes	Yes
Minnesota Health Scores	MN	X	A		Price, Quality	Yes	Yes
NH HealthCost	NH		A	3	Price, Quality	Yes	Yes (OP procedures only)
Fair Health Consumer	National			8	Price, Quality	No	No
Oregon Hospital Guide	OR		B		Price, Quality	No	Yes (only but not by procedure)
VHI All Payers Claim Database	VA		C		Price	No	Yes (only but not by procedure)
Hospital Report Cards	VT	X			Quality	No	Yes (limited scenarios)
Washington State MONAHRQ	WA	X			Quality		Yes (limited scenarios)
My Health Wisconsin	WI		C		Quality		Yes

Table notes: The NYS Health Foundation report did not rank websites on a scale but provided a ‘snapshot’ of highly ranked websites. This guide gave high ratings to “California Health care Compare,” however that site is no longer active. Altarum’s 2017 report ranked tools on an alpha scale (A-F); those with “C” or higher were included. Altarum researchers gave an “A” to CA CHPI, however the site is no longer active. Consumer Reports ranked tools based on 1-8, with 1 being the highest, 8 the lowest rank; a tool called “Amino” was omitted from our list due to employers’ need to purchase –not free to consumers.



As shown in Table 1, only 2 tools met the full criteria:

- ▲ Compare Maine
- ▲ Minnesota Health Scores

Four additional tools were selected because of their high rank and because they met most of the criteria, bringing the total for testing to six tools:

- ▲ Colorado’s Center for Improving Value in Healthcare (CIVHC)
- ▲ Maryland’s Hospital Guide¹¹
- ▲ NH HealthCost
- ▲ Washington State MONAHRQ (WaMONAHRQ)¹²

PHASE 3: SELECT MEDICAL SCENARIOS FOR TESTING

The medical scenarios we tested were based on care that lends itself to being shopped for in advance, constituting approximately 33%-40% of spending in the U.S.¹³

Table 2: Selected Medical Scenarios
Lipid Profile
MRI
Physical Therapy
Colonoscopy
Arthroscopic Knee Surgery
Knee Replacement

Potential scenarios were reviewed by our panel of patient expert advisors and selected based on the following attributes:

- ▲ Familiar to consumers
- ▲ Ranged from simple to more complex treatments
- ▲ Cost and/or quality variation suggests consumers need help to safely navigate their choices.¹⁴
- ▲ Supported by one or more of our selected tools.¹⁵

Table 2 shows the final scenarios selected for inclusion.

¹¹ MD and WA’s transparency tools utilize the same underlying platform from the Agency of Healthcare Quality and Research. This platform, known as MonAHRQ, allows organizations to input their own data into the website, and MonARHQ will analyze the data to provide an overview of metrics in the state.

¹² Washington state rolled out a new tool since our testing began: [Washington HealthCare Compare](#), which provides consumers with information on procedure costs and quality measures.

¹³ Frost, Amanda, David Newman and Lynn Quincy, “Health Care Consumerism: Can the Tail Wag the Dog?” *Health Affairs* (March 2, 2016). See also: White, Chapin and Megan Eguchi, *Reference Pricing: A Small Piece of the Health Care Price and Quality Puzzle*, National Institute for Health Care Reform (Oct. 1, 2014).

¹⁴ A study of Chicago-based employer claims data found significant price variation for MRI of the lower back without dye, diagnostic colonoscopy and knee arthroscopy. See also: Chernew, Michael, et al., *Are Healthcare Services Shoppable? Evidence from the Consumption of Lower-Limb MRI Scans*, Yale Institution for Social and Policy Studies (July 2018) and Rosenthal, Elisabeth, “In Need of a New Hip, but Priced Out of the U.S.,” *New York Times* (Aug. 3, 2013).

¹⁵ As discussed in the findings section, transparency tools rarely provide information on the full range of



PHASE 4: CONSUMER-TESTING OF TOOL/SCENARIO COMBINATIONS

Using an interview guide reviewed by our patient expert advisors,¹⁶ an Altarum qualitative researcher engaged in one-on-one cognitive interviews and usability testing with 10 consumers in Michigan.

Cognitive interviewing uses a single participant and a trained moderator to explore how consumers make sense of information within a document or website. Despite a small number of participants, this technique yields rich and nuanced data because consumers' actions can be precisely observed, and their responses explored in a consistent manner. At the same time, the one-on-one approach gives the moderator flexibility to explore individual responses in-depth. Commonly, a small number of well-constructed cognitive interviews can yield reliable information that can be used to extrapolate to a larger population.¹⁷

Altarum recruited a convenience sample of consumers between the ages of 18 to 64, who were privately insured or uninsured, and able to participate in an in-person interview. We also screened for participants who were proficient in spoken and written English. All interviews took place in Altarum's Ann Arbor office. Participants were paid \$75 for their time.

During the interviews, our researcher asked participants open-ended questions about how they typically acquire non-urgent medical care. She provided each interviewee a medical scenario and asked how they would proceed, allowing for the possibility that they would not think to use a transparency tool. In the final part of the interview, the researcher prompted interviewees to search for information on their medical scenario with two specific transparency tools. Their interviews and screen interactions were recorded and transcribed into long-form notes.

It was not possible to test every medical scenario-tool combination in this way due to resource constraints. The combinations that were tested in this manner are listed in Table 3.

medical scenarios. Therefore, we did not limit the scenarios to those that are available in all tools.

¹⁶ The interview guide is available upon request from Altarum.

¹⁷ Cognitive interviewing does not require high numbers of participants to get a reliable sense of consumers' reactions. For example, 80% of usability problems are uncovered with five (5) participants and 90% with ten (10) participants. Virzi, Robert A., "Refining the Test Phase of Usability Evaluation: How Many Subjects is Enough?" *SAGE Journals*, Vol 34, No. 4 (Aug. 1, 1992).



Table 3: Medical Scenario-Tool Combinations Used in Cognitive Interviews

Privately-Insured Individuals				
Medical Scenario	Tool 1	Tool 2	Age	Sex
Lipid Profile	Compare Maine	MN Health Scores	26	Female
MRI	CIVHC	Washington State MONAHRQ	20	Male
Physical Therapy	MN Health Scores	NH HealthCost	38	Female
Colonoscopy	Compare Maine	MN Health Scores	34	Male
Arthro Knee Surgery	MD Hospital Guide	NH HealthCost	25	Female
Knee Replacement	Washington State MONAHRQ	MD Hospital Guide	31	Male
Uninsured Individuals				
Medical Scenario	Tool 1	Tool 2	Age	Sex
Lipid Profile	Compare Maine	MN Health Score	30	Female
MRI	Washington State MONAHRQ	CIVHC	27	Female
Physical Therapy	Compare Maine	MN Health Score	27	Female
Knee Replacement	MD Hospital Guide	Washington State MONAHRQ	29	Male

PHASE 5: STRUCTURED TEST

In the final part of the exercise, Altarum staff tested the remaining tool-scenario combinations. As described in detail below, the attributes that we looked for were shaped by what consumers told us was most important to them.

Table 4 lists the tool-scenario combinations tested by Altarum staff. These combinations were determined by the tools’ ability to provide information for the specific medical scenario.



Table 4: Available Tool-Medical Scenario Combinations Used in Structured Tests

Transparency Tool	Medical Scenarios					
	Lipid Profile	Imaging Test	Physical Therapy	Colonoscopy	Arthroscopic Knee Surgery	Knee Replacement
CIVHC		X				
Maryland Hospital Guide		X			X	X
Compare Maine	X	X	X	X	X	X
Minnesota Health Scores	X	X	X	X		X
NH HealthCost	X	X	X	X	X	
Washington State MONAHRQ (WaMONAHRQ)		X				X



Findings

As described below, the findings from our study reveal a deep divide between how consumers approach the task of seeking non-emergency medical services and the resources that highly ranked transparency tools provide. At the same time, our interviewees provided valuable ideas about how transparency tools could be improved.

TYPICAL CONSUMER SEARCH PROCESS WOULD NOT LEAD TO ONLINE TRANSPARENCY TOOLS

To begin our interviews, we asked general questions about how consumers would approach the task of finding a provider for medical care. Interviewees revealed that, when faced with a non-emergency medical procedure, they were mainly concerned about finding a provider who was close to home that had an opening and accepted their insurance (for those with coverage). They typically turned to Google or asked friends and family for recommendations. To learn about cost, they called their insurance company or providers directly. Although participants sought price information, they rarely compared prices. Those who were insured expected their co-pay or co-insurance to be consistent, regardless of the provider. Occasionally, participants sought quality from Google star reviews.

It was clear that cost and quality comparison tools would be difficult to find based on consumers' Internet search. Moreover, the consumers did not know these types of tools existed and were, therefore, not seeking them out as a possible source of information.

Only one tool, CompareMaine, could handle all six of our common medical scenarios (see Table 4). Limited scenarios that consumers can search for greatly decreases the tools' appeal.

USER INTERFACES TYPICALLY RECEIVED POOR MARKS

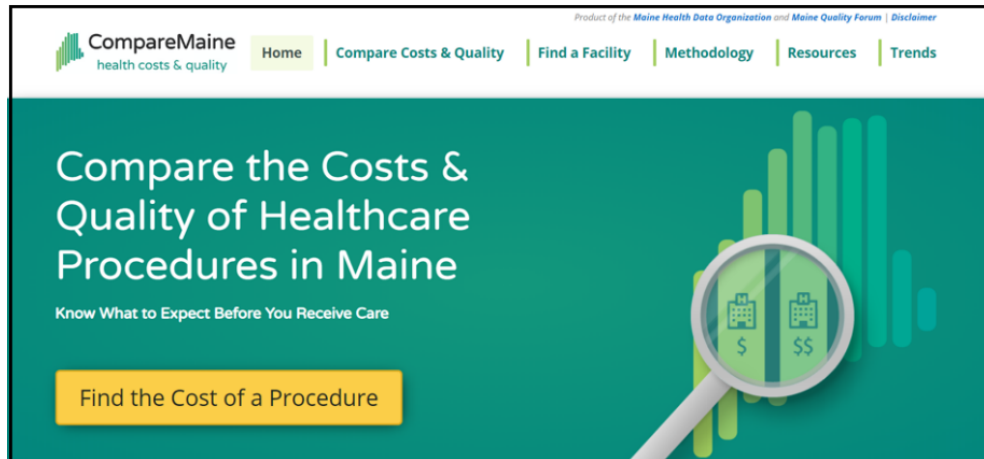
Once directed to a transparency tool, our interviewees expressed mixed feelings about the user interface, with some tools getting very low marks. Even if directed to a transparency tool (for example, by a well-placed sponsored ad), consumers told us that their purpose would not have been apparent.

Participants were more confident when the site had an obvious "next step," such as a big yellow button or an indicator of where they should click for cost information (see Exhibit 1). A high number of choice points that existed between the first screen and the desired information increased the likelihood that consumers would end their search.¹⁸

¹⁸ In a 2017 study, researchers found that simple websites are more appealing to consumers and increase utilization of a website. See: Garrett, Renee, et al., "A Literature Review: Website Design and User Engagement," *Online Journal of Communication and Media Technologies*, Vol. 6 No. 3 (July 1, 2017).



Exhibit 1: Example of an “Obvious Next Step” from the CompareMaine Tool



Almost all participants agreed that the selected transparency tools were not as intuitive as the websites they typically visit. People have become accustomed to a certain level of sophistication in web design and lack of clarity can erode willingness to use the site, despite the perceived value of the information. This is especially important to consider as most Americans do not yet shop for health care, thus creating tools that are aesthetically pleasing and intuitive may be an important factor in determining their uptake. Well-designed sites also convey a sense of legitimacy, something that shoppers look for when assessing how much to trust reviews available on the web.

The Structured Test: Home Page Design

For the structured test, the Altarum research team first assessed the complexity of the tools' home pages, noting if:

- ▲ next steps were easily identified,
- ▲ the location of the desired information was clear, and
- ▲ there was a search bar for finding procedures or providers.

Home page designs varied drastically across our six tools—on some websites, finding a place to search for medical services was difficult. NH HealthCost and CompareMaine's home pages clearly indicated how to begin searching for providers, whereas Maryland's Hospital Guide provided many possible options for next steps.

Table 5 summarizes our findings with respect to the user-interface features that interviewees identified as important.



Table 5: User Interface and Desired Attributes on the Homepage

Tool	“Obvious” First Step	Number of Possible Entry Points* on Homepage	Search Bar Present?
Colorado CIVHC	Yes, but only if slide show advances	6	Yes, but does not allow a search for cost or quality information
Maryland Hospital Guide	No	28	No
Compare Maine	Yes	10	Yes
Minnesota Health Scores	No	22	No
NH HealthCost	No	8	Yes
Washington State MONAHRQ	No	7	No

*Note: “Entry points” are the number of possible options on the tool’s homepage for locating the cost and quality information on the site. See Appendix B for rubric.

The Structured Test: Physician Attributes

Our cognitive interviews revealed that consumers most desired a lengthy list of physician attributes when selecting a provider. Interviewees wanted to know:

- ▲ Were doctors’ names and credentials visible?
- ▲ Was there a photo of the doctor?
- ▲ Was location and contact information available?
- ▲ Which doctor can give me the earliest appointment?
- ▲ Can I learn about the provider’s communication style/attitude towards customer service?
- ▲ Which types of insurance does the provider accept?
- ▲ Does the site provide visual ratings (stars, colors, etc.) or patient reviews?

Many of our interviewees typically rely on user reviews or quality star ratings when selecting service providers or products, with some even using Google stars to assess health care providers. These consumers looked for similar features on the transparency tool websites.

Participants generally have a sophisticated, or at least a well thought out, way they interpret reviews. They are more trusting of ratings when they have a higher the number of reviewers. They also believe that provider reviews are negatively affected by the fact that people generally don’t like being sick or in medical situations and should be given a handicap. In other words, interviewees expressed that they would take a less-than-perfect rating “with a grain of salt,” given that most people do not like having to receive medical attention. Because of this, perfect ratings raised suspicions, slightly above average ratings were acceptable, and extremely low ratings were seen as red flags.



Customer service often came up in quality-related conversations. Interviewees wanted to know if the providers and office staff were warm and friendly. These factors are important to individuals generally, but perhaps especially so when they are in vulnerable health situation. Several participants indicated they would use a doctor's photo to help assess friendliness.¹⁹

Our uninsured interviewees identified very specific types of providers that they would look for if they needed care. Several typically utilized urgent care for their medical needs. They believed that urgent care was not very good medical care, and that it is reserved for those who had no other option. Additionally, one uninsured woman mentioned using Planned Parenthood. After comparing costs, she discovered that the cost of services at Planned Parenthood was lower than what she would have to pay without insurance at her primary care physician or urgent care.

NOTE: None of the tools assessed had any information on Planned Parenthood clinics, and only NH HealthCost provided data for urgent care centers.

The Structured Test: Physician/Facility Location and Contact Information

Location and provider availability were important factors for our interviewees. Looking across the six transparency tools:

- ▲ All tools had **facility** (hospitals and clinics) location information.
- ▲ Only three tools (MN,²⁰ ME and NH) possessed information on **physician** location.
- ▲ Only two tools (ME and MN) listed phone numbers for hospitals and clinics.
- ▲ Only one tool (MN) showed phone numbers for medical groups.

In our structured test, Altarum staff discovered out-of-date and inaccurate phone number information. Inaccuracies are not surprising in light of well-documented evidence of errors in the provider directories provided by private health plans,²¹ but lack of reliability nonetheless undermines the value of such tools to consumers.

All websites allowed the user to filter facility search results by ZIP code, but only three tools provided a link that showed facility location on a map. Only one tool, Minnesota Health Scores, provided this capability for medical groups.

In this regard, the information provided by transparency tools was less valuable than that which surfaced from a simple Google search.

¹⁹ Altarum's *Right Place, Right Time* (2017) report also found that consumers rely on physician photos to assess the friendliness of the doctor. See: Duke, Christopher, et al., *Right Place, Right Time*, Altarum, Washington, D.C. (Jan. 2017). <https://altarum.org/sites/default/files/uploaded-publication-files/RPRT%20Executive-Summary.pdf>

²⁰ Minnesota Health Scores only contains information for medical groups, not individual physicians.

²¹ Provider network inaccuracies are common and can result in unexpected out-of-pocket costs and surprise medical bills for consumers.



The Structured Test: All Other Desired Physician Attributes were Missing

None of the highly ranked tools that we evaluated included information on the following physician attributes:

- ▲ Doctor’s name and credentials
- ▲ Photo of doctor
- ▲ Earliest appointment available
- ▲ Provider’s communication style/attitudes towards customer service
- ▲ Types of insurance the provider accepts

The Structured Test: User Reviews and Visual Ratings

None of the tools evaluated provided reviews similar to those commonly found on other websites, such as Amazon.

Nevertheless, all of the tools had some type of visual rating, although the approaches used to calculate the ratings varied greatly depending on the tool (see Table 6).

Table 6: Use of Visual Ratings by Highly Ranked Transparency Tools

Tool Name	Does the Site Use Visual Provider Ratings?	Type of Visual Rating	Explanation of Rating
Colorado CIVHC	Yes	Star rating for overall patient experience	Patient experience ratings are based on the results of the Hospital Consumer Assessment of Healthcare Providers and Systems survey. Explanation provides a link to a website that explains the survey, including measures used, in greater detail.
Maryland Hospital Guide	Yes	Star rating for overall patient experience and arrow rating for specific procedures	The overall star rating shows how well a hospital, facility or physician performed on a combination of 64 individual quality measures, on average, compared to other providers across the U.S. Arrow ratings for specific procedures do not explain the benchmark for comparison.



Table 6: Use of Visual Ratings by Highly Ranked Transparency Tools (continued)

Tool Name	Does the Site Use Visual Provider Ratings?	Type of Visual Rating	Explanation of Rating
Compare Maine	Yes	Visual bar graph for overall patient experience	The visual bar graph rates specific measures (such as patient experience and MRSA prevention) on a “worse-to-better” scale. The tool does not provide an easily-accessible explanation of what constitutes “better” and “worse” or what factors were used to determine these ratings. (This information is located in another area of the website that would likely be difficult for consumers to find.)
Minnesota Health Scores	Yes	Percentages and various visual indicators	Percentages and visual indicators demonstrate providers’ performance on specific quality indicators relative to the state average.
NH HealthCost	Yes	Star rating for overall patient experience; percentages and arrow ratings for other factors, such as room cleanliness and hospital experience	Percentages and arrow ratings demonstrate providers’ performance on specific quality indicators relative to the state average. The methodology for overall patient experience star ratings is unclear.
Washington State MONAHRQ	Yes	Arrow rating for a variety of quality measures; mostly for specific procedures	Many facilities do not have enough information to report a rating and the tool does not provide a clear benchmark for the ratings provided.



VIEWS ON COST OF SERVICES

A strong body of research shows that patients typically prefer to know the cost of medical services in advance, but not necessarily because they intend to compare prices.²² Our interviewees expressed similar sentiments, but provided additional context for these views. For example, interviewees were generally unaware that cost varies by provider. They knew that price depended upon what insurance they had, but not where they used that insurance.

Participants who knew that prices vary typically did not associate higher cost with higher quality services. Instead, they assumed that some providers charge more based on location (higher overhead expenses for office space) or that higher prices corresponded to office décor and amenities. These sentiments help explain why consumers did not think it was important for transparency tools to compare medical treatment prices across providers.

Even after interviewees were informed that prices vary by provider, participants with insurance did not perceive the tools' pricing information as valuable. Specifically, they were unclear of whether the prices displayed represented the co-pay or total cost for the procedure. They also questioned whether the prices they saw would be the same for all insurance types. Without this context, pricing data was essentially meaningless.

Those who viewed the CompareMaine site were initially intrigued to see a “cost breakdown,” but ultimately walked away unsure of how the distribution of doctor and facility fees would ultimately affect their bill.

The Structured Test: Actionable Information on Cost

Although cost was not a high priority for our interviewees, we assessed each tool's ability to provide actionable cost information for consumers. To understand the tools' capabilities, Altarum staff assessed if the website:

- ▲ provided a patient's out-of-pocket cost, and
- ▲ included an explanation of what the cost estimates represent.

The WaMONAHRQ tool was removed from this part of the assessment because it exclusively provides quality data.

Unsurprisingly, none of the tools calculated out-of-pocket costs for the consumer. This was expected, since the tools are unable to account for the insured patient's cost-sharing rules and status of any annual deductible. The only tool that attempted to cater to this need was NH HealthCost, which requires consumers to report their insurance status and insurer in order to advance. If a patient chooses the “I do not have insurance” option, they are provided the total average cost of a procedure, along with some information on self-pay discounts for certain facilities.

²² Quincy (June 2018).



Overall, the costs provided typically represented total average costs, which does not account for insurance coverage or self-pay discounts. Of the six evaluated, NH HealthCost and Compare Maine were the only tools that provided a detailed explanation of what the cost numbers represent. Because NH HealthCost information is payer-specific, the tool explained that the cost estimates represent the *total* cost before insurance discounts. (The tool also noted that a payer could potentially deny the coverage of a certain procedure.) In contrast, Compare Maine broke down facility and provider costs paid by the insurance company. However, the website did not explain how much of the cost would be covered by insurance or estimate the out-of-pocket cost for the patient.

VIEWS ON QUALITY INFORMATION

As noted above (and confirmed by other researchers), interviewees identified customer service as a key quality indicator.²³ Specifically, they were keenly interested in knowing if providers and office staff are warm and friendly. Interviewees also desired information on cleanliness when assessing the quality of a facility.

Some participants were not concerned by variation in clinical quality. The two main reasons cited for this reveal the importance of context when considering how people decide where to receive non-emergency medical care.

Reason 1: Our testing location, Ann Arbor, MI, has a highly ranked medical system. Thus, participants felt confident that any using provider within the system would yield positive results.

Reason 2: Participants believed that quality for routine scenarios—such as a colonoscopy or lab test—is relatively uniform. They did, however, express that rare or life-threatening medical needs would warrant more careful consideration.

²³ In myriad studies, consumers and patients reveal that the term “health care quality” conjures up the desire for good bedside manner, respectful treatment from doctor, kind office staff and sometimes the cleanliness of the facility. Consumers do not immediately think of clinical outcomes and they do not believe there is much variation in these outcomes. See, for example: Consumers Union, *Health System Transformation- Consumers’ Views on Cost and Quality*, Washington, D.C. (March 2015); Rogut, Lynn, Pooja Kothari and Anne-Marie J. Audet, *Empowering New Yorkers with Quality Measures That Matter to Them*, United Hospital Fund, New York, N.Y. (December 2017). <https://nyshealthfoundation.org/wp-content/uploads/2017/12/empowering-new-yorkers-with-quality-measures-dec-2017.pdf>; University of Utah Health, *Value Survey Results Interactive Dashboard*, <https://uofuhealth.utah.edu/value/> (accessed on April 11, 2019).



The Structured Test: Quality Information

All tools tested had quality information of varying types:

- ▲ All six tools reported patient experience information for hospitals (see Table 6), conveyed with visual clues (like stars). Specific patient experience information varied—it typically included overall satisfaction and sometimes included whether the patient would recommend the provider.
- ▲ Four tools (MD, MN, NH and WA) rated the cleanliness of the hospital facility.
- ▲ Four tools (MD, MN, NH and WA) reported on the perceived communication skills of doctors and nurses.
- ▲ Four tools provided information on patient safety. ME, NH and WA provided information on health care-associated infections such as MRSA or C. diff. MN provided a rating for “hospital acquired conditions,” but did not provide detail on which specific conditions.²⁴
- ▲ Three tools (MD, NH and WA) provided outcome data. Some outcome measures shown include: how often patients develop bed sores, how often patients contract blood clots after surgery and infections after catheter removal. However, WA’s tool reported that many hospitals did not collect enough data to report outcomes.
- ▲ Two tools (MN and WA) provided information on patient readmission rates for specific conditions, death rates for specific conditions and complications in surgery.

There was considerable variation in how quality information was displayed and how much supporting information was provided. For example, the NH tool is fairly thorough, alerting users that the data is updated annually and describing how “averages” were calculated for benchmarking purposes. In contrast, the MD does not report how often the data is updated, nor does it explain how averages were calculated.

USE OF COST AND QUALITY INFORMATION SIDE-BY-SIDE

To the extent that they were inclined to use cost and quality information at all, our participants preferred seeing this information side-by-side. This allowed them to use “shopping strategies” similar to those they would use on sites like Yelp and Amazon.

Participants expressed that marginally lower ratings would not deter them from purchasing services if they were considerably less expensive. This was especially true for low-risk and non-invasive procedures. For instance, participants were willing to select a lab for routine lab work that had a low price tag, even if the lab received low-quality ratings. They believed that, at worst, they would have a mildly uncomfortable experience and would know to avoid that location in the future.

²⁴ McGiffert, Lisa, [Medical Harm: A Taxonomy](#), Altarum Healthcare Value Hub, Research Brief No. 9 (November 2015).



The Structured Test: Cost and Quality Side-by-Side

Only Colorado’s tool provided cost and quality information side-by-side (see Exhibit 2). As noted above, most of the tools provided cost and quality information separately and, often, for different medical scenarios. For example, Minnesota Health Scores provides cost information for most medical scenarios, but only provides quality information for knee surgeries. NH HealthCost allows the user to view “tabs” with cost and quality information, but does not present the data side-by-side.

Exhibit 2: CIVHC Shopping Page

The screenshot shows the CIVHC 'Shop for Health Care Services' page. It features a search interface with dropdown menus for 'Select Service' (Bone Density test of spine or hips (CPT 77080)), 'Select Your ZIP Code' (80003), and 'Sort List By' (Closest Distance). Below the search fields is a table of results:

Facility Name	Distance (Miles)	Price Estimate		Quality
		Average Price	Price Range	Patient Experience
HealthOne North Suburban Medical Center	4.9	\$380	\$380-\$470	★★★★☆
Denver Health Medical Center	7.7	\$180	\$180-\$180	★★★★☆
SCL St Joseph Hospital	8.0	\$300	\$260-\$480	★★★★☆
National Jewish Health	8.8	\$320	\$70-\$330	*
Centura Health St Anthony North Health Campus	9.0	\$90	\$80-\$120	★★★★☆
HealthOne Rose Medical Center	9.4	\$550	\$300-\$700	★★★★☆

On the right side of the page, there are links for 'Other Procedures File', 'Imaging Variation Graphic', 'Episode Procedure Variation Graphic', and 'FAQs'.

Study Limitations

Our cognitive interviews provided the basis for our findings and informed the design of the structured test. While this intensive, interactive approach provided a rich source of information, there are several drawbacks that limit the extent to which these findings can be generalized to the broader population. Interviewees were typically young, unmarried, and childless. Additionally, all lived within driving distance of Altarum’s Ann Arbor, MI, office. Participants typically had little previous interaction with the health care system and were, therefore, providing information about how they *expect* they would act when facing the imagined medical scenarios (rather than describing how they had handled non-emergency medical procedures in the past).



Conclusion

The diversity of approaches to price and quality transparency tools, low consumer uptake and the existence of a variety of criteria used in prior scoring efforts suggests there is still much to learn about successful design of, and role for, these tools. This study finds major gaps in how consumers approach scheduling non-urgent medical care and the type of information offered in highly ranked health care transparency tools.

The Altarum research team worked with real consumers to understand the most important information consumers need to research providers and treatments. Our interviews yielded three main themes:

- ▲ Physician and facility information is highly desired, particularly information on location, phone number and other physician attributes (e.g., picture and educational credentials).
- ▲ Quality information is desired, especially if it reliably estimates customer service and friendliness. Both ratings and user reviews help consumers assess the reliability of the information, as does a photo of the doctor. In certain locations and for common procedures, people don't worry about clinical quality (i.e., outcomes).
- ▲ To the extent they wish to use cost information, people want it side-by-side with quality information. The ability to control for quality increased interviewees' willingness to use cost information.

The six highly rated tools that we tested performed well on the second dimension but poorly on the first and third. Moreover, their primary purpose—providing comparative price information—did not align with consumers' preferences and, in some cases, the available information was neither understandable nor actionable for our interviewees.

This study demonstrates a need for greater caution when it comes to claiming that transparency tools “meet patients' needs” and makes a strong case for testing user interfaces to ensure that they are consumer friendly.

The findings also suggest a hopeful path forward. The strongest parts of existing tools can be emulated by others; strong adherence to user-centered design can increase consumers' trust and use of the tools; and, by making the most sought-after information (i.e. physician attributes) prominent, tool designers can connect consumers to corollary information on price and quality. Future tools should adopt a simple design; heavily emphasize physician attributes, star ratings and user reviews that patients desire; and use nudges to introduce other information that strengthens consumers' ability to make informed decisions.



Appendix A: How the Consumer-Centric Rubric Compares to Prior Rubrics

As an aid to our readers, this reference compares the rubric used in this evaluation to the attributes emphasized by prior scoring efforts.

Table A: Rubric Comparison

Major Category	Rubric	Altarum 2019	Altarum 2017	Consumer Reports	Honest Health (NYSHHealth)	HCFAMA
Aids in decision making	Provider- and service-specific data	X	X	X	X	X
	Cost information includes total price to be paid	X			X	
	Differentiation between total and out-of-pocket spending	X			X	X
	Insurances accepted by facility or provider	X		X	X	
	Meaningful units, like episode of illness		X			X
	Basic provider info: gender, language spoken, communication style, etc.	X		X	X	X
	Search functions available for price and quality	X		X		X
	Ability for side-by-side comparisons of quality and price information	X		X	X	X
	Appointment availability	X		X		
	Physician or facility location	X			X	
	Visual rating for quality information	X			X	
	Outcome measures	X			X	
	Comprehensive-ness	IP facility data	X	X	X	
OP facility data		X	X	X		X
Physician-specific data		X	X	X		
Behavioral health						X



Major Category	Rubric	Altarum 2019	Altarum 2017	Consumer Reports	Honest Health (NYSHHealth)	HCFAMA
	Prescription drugs				X	X
	Volume of procedures that facility or physician has done	X				
	Ability to filter or sort by price, location, physician or other factors			X		
Accessibility	Free	X	X	X		X
	Easy to find online	X	X	X		X
	Accessible on mobile devices	X	X		X	X
	Accessible for non-English speakers				X	X
	Ease-of-use for consumers	X	X	X	X	X
	Accessible to those with disabilities					X
	Consumer engagement					
	Uses CPT codes for searching procedures					
Data Quality	Detailed overview of data components used for ratings	X	X	X		
	Cost and quality data comes from reputable data source (e.g., state APCD, CMS)		X	X		
	Meaningful and comprehensive quality measures (i.e. outcome measures)	X	X	X	X	
	Explains methodology for assessing quality information	X		X	X	
	Timeliness of data	X	X			



Appendix B: Assessment of Home Page Choice Points

Interviewees strongly preferred an “obvious first step” on transparency tool home pages. Additionally, high numbers of choice points between the first screen and the desired information increased the likelihood that consumers would end their search. In Table 5 of this report, Altarum staff counted the possible choice points on each tool’s home page using the rubric in Table B.

Table B: Rubric for Possible Entry Points ²⁵	
<i>Included in Count</i>	<i>Excluded from Count</i>
Any hospital- and physician-specific data (i.e. price, quality)	Contact information specific to tool (does not include physician or facility contact information)
Physician and hospital information (i.e. location, contact information)	Social media & sharing
Links and resources	Health insurance information
Compare options such as “Quick Compare”	“Sign-up for updates”
“Browse options”	Health topic-specific information (unless included in list of reviewed scenarios)

²⁵ “Entry points” are the number of possible options on the tool’s homepage for locating the cost and quality information on the site.