



Final Report

NH HealthCost Quality Measure and Data Display Recommendations

February 28, 2018

Acknowledgments

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We would also like to thank the staff in the New Hampshire Health Insurance Department, who provided us with documents and assistance. In addition, a special thanks to the staff from Web and Mobile Development at the University of New Hampshire for implementing the interim content deliverables on NH HealthCost.

The New Hampshire Health Insurance Department funded this research. However, any views expressed in the report are those of the research team alone.

About the Human Services Research Institute

The Human Services Research Institute (www.hsri.org) is a nonprofit, mission-driven organization that works with government agencies and others to improve health and human services and systems, enhance the quality of data to guide policy, and engage stakeholders to effect meaningful systems change.

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Executive Summary

The New Hampshire Insurance Department (NHID) is charged with promoting and protecting the public good by ensuring a safe and competitive insurance marketplace through the development and enforcement of the insurance laws in the State of New Hampshire. To improve health care price transparency, the NHID developed [NH HealthCost](#), a website that provides information on estimated health care costs and the quality of services at different providers and facilities in New Hampshire. The website serves as a resource for consumers to make informed health care decisions, supplying them with information on what they may pay and the quality they can expect to receive.

The NHID is seeking to expand the health care quality information available on NH HealthCost to support an expanded focus on health care *value* and to help spur improvement in this area. To this aim, the NHID contracted with the Human Services Research Institute (HSRI) to research and recommend potential quality measures for inclusion on the site.

We examined over 480 potential new quality measures, along with the 32 quality measures already included on NH HealthCost and rated the most appropriate measures based on their utility to NH consumers; the feasibility of NHID staff accessing, implementing, and updating the data; and the credibility of the data source.

There is solid evidence to suggest that focusing on fewer measures—those that are routine, actionable and meaningful to consumers—can create more impact.

To demonstrate health care value and allow users to more easily make connections between cost and quality data, we recommend that the NHID adopt a “less is more” approach. Displaying fewer, more relevant quality measures allows users to quickly access desired information.

We’re also recommending related enhancements to the user interface, including a framework that organizes the measures into a meaningful information hierarchy—incorporating consumer-friendly definitions to help users understand the meaning and relevance of quality data, better understand available content, and more easily relate the information to their own care.¹



Patient-Centered Care

Meeting a patient’s wants and needs.



Timely Care

Reducing waits and harmful delays for those who give and receive care.



Effective Care

Providing services proven to get results.



Safe Care

Protecting patients from medical errors and does not cause harm.

¹ Hibbard JH, Pawlson LG. Why Not Give Consumers a Framework for Understanding Quality? Joint Commission Journal on Quality Improvement 2004 June. 30(6); 347-351.

Based on our knowledge of best practices in the field of health care transparency websites and our discussions with the NHID and key stakeholders in New Hampshire, we recommend that the NHID incorporate the five new measures listed below and reduce its existing quality measure set by half, focusing on the measures that ranked highest according to our scoring system. By focusing on fewer measures—those that are routine, actionable, and meaningful to consumers and clinicians—the website can create more impact.

Framework Domain	Category	Measure	Consumer-Friendly Measure Name
Patient-Centered Care	Patient Experience	Patient survey summary star	Overall Patient Experience
Effective Care	Low Back Pain	OP-8 Outpatients with low-back pain who had an MRI without trying recommended treatments (such as physical therapy) first	Patients with Low Back Pain Who Received MRI Before Recommended Treatments
Effective Care	Colonoscopy	OP-29 Percentage of patients receiving appropriate recommendation for follow-up screening colonoscopy	Patients with Normal Colonoscopy Who Received Appropriate Recommendation for Follow-Up
Safe Care	Healthcare-Associated Infections	HAI-5 Methicillin-resistant Staphylococcus Aureus (MRSA) Blood Laboratory-identified Events (Bloodstream infections)	Patients Infected with MRSA While at Hospital
Safe Care	Healthcare-Associated Infections	HAI-6 Clostridium difficile (C.diff.) Laboratory-identified Events (Intestinal infections)	Patients Infected with C.diff While at Hospital

To implement these suggestions, we recommend the following steps:

1. Download the most recent quality data files and analyze according to the documentation provided.
2. Work with NHID’s web designer to implement data, design, and content updates:
 - a. Add and remove quality measures from the website, as indicated.
 - b. Modify the data displays to align with the mock-ups provided. Elements of the Quality of Care data display can be carried through to the Health Costs section to create a consistent user experience.
 - c. Implement the framework, including adding the domains, and updating the measure categories, names, and descriptions for consistency and understandability.
 - d. Implement roll-over text to provide users with the ability to drill down to get more information if they so desire.
 - e. Create a Quality of Care Methodology page to live in the About section of the website.
3. Incorporate the new quality framework and measures into other sections of the website, such as A Guide to Health Insurance, and marketing materials for NH HealthCost.

1. Measure Findings and Recommendations

The NHID contracted with HSRI to research and recommend quality metrics to expand the quality information available on the NH HealthCost website. These enhancements are intended to help consumers evaluate the value (a combination of cost *and* quality) of health care services and to provide comparative information for health care providers that could spur improvements to the overall health system. With this project, we were tasked with:

- Identifying appropriate rating criteria for scoring data measures;
- Conducting an environmental scan, and reviewing and selecting measures to rate;
- Presenting data recommendations;
- Recommending how to organize, describe, and present the quality information on NH HealthCost; and
- Documenting final display recommendations and data specifications, including but not limited to data references, vintage information, methodologies, and processing information.

This section documents our findings and recommendations for quality measures to include on NH HealthCost and provides our recommendations for publicly displaying the data. We also detail the methods we used to arrive at these findings.

The Starting Point

Existing Measures on NH HealthCost in July 2017

Quality Measures (33)

- Patient Experience (9) – one measure was removed from the site in January 2018.
- Stroke Care (8)
- Time and Effectiveness (12)
- Venous Thromboembolism (4)

Cost Measures (157)

Medical

- Ambulance Services (5)
- Behavioral Health (6)
- Chiropractic (2)
- Emergency Visits (3)
- Laboratory Services (25)
- Office Visits (18)
- Outpatient Tests/Procedures (19)
- Physical Therapy (7)
- Radiology (32)

Dental

- Diagnostic (9)
- Preventive (6)
- Restorative (8)
- Orthodontics (1)
- Other Services (2)

Prescriptions*

- Brand Name Drugs (5)
- Generic Drugs (9)

*Prescription measures were temporarily removed from the site as of July 2017.

In our experience, health care transparency websites often follow one of two approaches:

1. Limit the quantity of measures and report on the most consumer-friendly measures, or
2. Report on as many measures as possible.

To date, NH HealthCost has followed the second approach: Reporting on as many measures as possible. Despite potential challenges from NHID constituents regarding the removal of quality measures that have existed on NH HealthCost, we recommend that the website limit the number of measures being reported. This “less is more” approach is intended to help consumers quickly access desired information and drill down into measure details without becoming overwhelmed or distracted.

Scoring Results for Quality Measures

Integrating meaningful quality data into health care transparency websites is vital to combatting the belief among consumers that higher cost equals higher quality. Additional quality data, links, or integrated sources—combined with the existing information on NH HealthCost (NHHC)—will help empower consumers to make value-based health care decisions.

To identify meaningful quality measures for inclusion on the site, we examined more than 480 measures from a variety of data sources. We did an initial screening for relevancy to consumers, alignment with procedures on NHHC, and ease of implementation. We scored the resulting 17 measures in five categories: usefulness to NH consumers, the feasibility of securing and implementing the data, the timeliness of the data, and the trustworthiness of the data source. Our methods are detailed in Section 4 of this report ([“Methodology”](#)) and complete scoring results can be found in [Appendix 3](#). We also scored the 32 existing quality measures on NH HealthCost using the same criteria. We recommend that NHID add 5 new quality measures to the website (from among those with a total score of 17 or higher based on our scoring system), retain 19 existing quality measures (that scored a 17 or higher), and remove 13 existing quality measures that received a low score, leaving 24 quality measures. The score of 17 represented a natural cut-off point, since all other new measures scored a 15 or below. More information on the [measure scoring](#) can be found in the [Methodology](#) section.

Measures Recommended for Inclusion

The five new measures we recommend for inclusion are presented in [Exhibit 1](#). Each measure was given a unique ID to allow us to track measures to their original scoring, where “N” indicates a new measure and “E” indicates an existing measure. We then organized each measure into a Framework Domain and Category, as described in the [“Data Display Recommendation”](#) section of this report, and provided a consumer-friendly description and data source for each measure.

Exhibit 1. Recommended New Quality Measures

ID	Framework Domain	Category	Measure	Consumer-Friendly Measure Name	Consumer-Friendly Description	Data Source
N1	Patient-Centered Care	Patient Experience	Patient survey summary star	Overall Patient Experience	A summary rating on the hospital's overall performance for patient experience based on patient survey responses.	CMS HCAHPS
N3	Effective Care	Low Back Pain	OP-8 Outpatients with low-back pain who had an MRI without trying recommended treatments (such as physical therapy) first	Patients with Low Back Pain Who Received MRI Before Recommended Treatments	Outpatients with low back pain who had Magnetic Resonance Imaging (MRI) before trying recommended treatments, such as physical therapy.	CMS Outpatient Prospective Payment System, Hospital Outpatient Quality Reporting Program
N4	Effective Care	Colonoscopy	OP-29 Percentage of patients receiving appropriate recommendation for follow-up screening colonoscopy	Patients with Normal Colonoscopy Who Received Appropriate Recommendation for Follow-Up	Patients ages 50-75 with a normal colonoscopy, without biopsy or polypectomy, who received a recommendation for a follow-up colonoscopy in at least 10 years.	CMS Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting
N6	Safe Care	Healthcare-Associated Infections	HAI-5 Methicillin-resistant Staphylococcus Aureus (MRSA) Blood Laboratory-identified Events (Bloodstream infections)	Patients Infected with MRSA While at Hospital	The ratio of inpatients who contracted the blood stream infection Methicillin Resistant Staphylococcus Aureus (MRSA) during their hospital stay to the expected rate of infection. The national score is 1 and the lower the ratio the better.	National Healthcare Safety Network
N7	Safe Care	Healthcare-Associated Infections	HAI-6 Clostridium difficile (C.diff.) Laboratory-identified Events (Intestinal infections)	Patients Infected with C.diff While at Hospital	The ratio of inpatients who were infected with Clostridium difficile (C.diff), a bacteria that causes intestinal infections, during their hospital stay to the expected rate of infection. The national score is 1 and the lower the ratio the better.	National Healthcare Safety Network

As mentioned, we recommend that NHID add five of the seven top-ranked new quality measures. Below we explain the rationale for excluding two of the top-ranked measures.

ID	EXCLUDED MEASURE	REASON FOR EXCLUDING
N2	<i>PQRS_gp_112_1 Percentage of women 50-74 years of age who had a mammogram to screen for breast cancer</i>	Although this measure scored a 17, only 1 of the 30 New Hampshire group practices reporting data via Physician Compare, Physician Quality Reporting System submitted data for this measure.
N5	<i>OP-30 Percentage of patients with history of polyps receiving follow-up colonoscopy in the appropriate timeframe</i>	This measure also scored a 17, but stakeholders questioned whether two colonoscopy measures were necessary and suggested that they might cause confusion. We recommend that NHID go with the more general colonoscopy measure as it relates to more consumers: <i>OP-29 Percentage of patients receiving appropriate recommendation for follow-up screening colonoscopy.</i>

In terms of the existing quality measures, 19 measures received a total score of 17 or higher and are recommended for inclusion. These are presented in [Exhibit 2](#), along with consumer-friendly language recommendations.

In addition to scoring the measures, we reviewed Google Analytics data from December 2016 – November 2017 to examine user behavior in relation to the existing quality information on NH HealthCost. These insights informed our recommendations for the interim deliverable and are provided in [Appendix 7](#).

For reference, there were 2,219 pageviews of the quality data from December 2016 – November 2017. Most of the existing measures that we recommend keeping fall within the top 20 quality measures most frequently viewed and account for a majority of the traffic to the Quality of Care section:

- 15 are recommended for inclusion (8 Patient-Centered Care, 6 Timely Care and 1 Effective Care) and accounted for 60% of overall traffic to the Quality of Care section on the website.
- 3 are recommended for removal and resulted in 8% of overall traffic: Anticoagulation Therapy for Atrial Fibrillation/Flutter, ACE inhibitor or ARB for LVSD, and Intensive Care Unit (ICU) VTE Prophylaxis.
- 2 no longer exist on the website: Staff “always explained” and 30-Day Readmission Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA).

Exhibit 2. Recommended Existing Quality Measures

ID	Framework Domain	Category	Measure	Consumer-Friendly Measure Name	Consumer-Friendly Description	Data Source
E1	Timely Care	Emergency Department	Average time patients spent in the emergency department, after the doctor decided to admit them as an inpatient before leaving the emergency department for their inpatient room	Time Spent in the Emergency Department After Being Admitted Before Getting to Room	The average time patients spent in the Emergency Department, after the doctor decided to admit them as an inpatient, before leaving the Emergency Department for their hospital room.	CMS Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting
E2	Timely Care	Emergency Department	Percentage of patients who came to the emergency department with stroke symptoms who received brain scan results within 45 minutes of arrival	Patients with Stroke Symptoms Who Received Head CT Scan at Arrival	Patients with stroke symptoms who went to the Emergency Department and received a brain scan within 45 minutes of arrival.	CMS Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting
E3	Timely Care	Emergency Department	Average time patients spent in the emergency department, before they were admitted to the hospital as an inpatient	Time Spent in the Emergency Department Before Being Admitted	The average time patients spent in the Emergency Department before they were admitted to the hospital as an inpatient.	CMS Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting
E4	Timely Care	Emergency Department	Average time patients spent in the emergency department before being sent home	Time Spent in the Emergency Department Before Being Discharged	The average time patients spent in the Emergency Department before being sent home.	CMS Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting
E5	Timely Care	Emergency Department	Average time patients spent in the emergency department before they were seen by a healthcare professional	Time Spent in the Emergency Department Before Seeing Healthcare Provider	The average time patients spent in the Emergency Department before they were seen by a healthcare provider.	CMS Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting
E6	Timely Care	Emergency Department	Average time patients who came to the emergency department with broken bones had to wait before receiving pain medication	Time Spent Before Receiving Pain Treatment for Long Bone Fracture	The average time patients who came to the Emergency Department with broken bones had to wait before receiving pain medication.	CMS Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting

ID	Framework Domain	Category	Measure	Consumer-Friendly Measure Name	Consumer-Friendly Description	Data Source
						Outpatient Quality Reporting
E7	Timely Care	Heart Attacks	Heart attack patients given PCI within 90 minutes of arrival (PCI is a procedure considered to be effective for opening blocked blood vessels that cause heart attacks. It is important that this therapy be given quickly after a heart attack is diagnosed.)	Patients Given PCI (to Open Blocked Vessels) Within 90 Minutes of Arrival	Heart attack patients who were given Percutaneous Coronary Intervention (PCI) within 90 minutes of arrival. PCI is a non-surgical procedure for opening blocked blood vessels that cause heart attacks.	CMS Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting
E8	Effective Care	Heart Attacks	Outpatients with chest pain or possible heart attack who got aspirin within 24 hours of arrival	Patients with Chest Pain or Possible Heart Attack Received Aspirin at Arrival	Outpatients with chest pain or possible heart attack who received aspirin within 24 hours of arrival.	CMS Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting
E9	Timely Care	Heart Attacks	Average number of minutes before outpatients with chest pain or possible heart attack got an ECG	Time Spent Before Receiving Electrocardiography (ECG)	The average time before outpatients with chest pain or possible heart attack received an ECG to record the electrical activity of their heart at rest to determine if they were having a heart attack.	CMS Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting
E10	Patient-Centered Care	Patient Experience	Patients who reported that the area around their room was "Always" quiet at night	Area Around Room Was Always Quiet at Night	Patients who reported that the area around their room was "always" quiet at night.	CMS HCAHPS
E11	Patient-Centered Care	Patient Experience	Patients who reported YES, they would definitely recommend the hospital	Hospital Recommended	Patients who reported that they would "definitely" recommend the hospital.	CMS HCAHPS
E12	Patient-Centered Care	Patient Experience	Patients who reported that their doctors "Always" communicated well	Doctors Always Communicated Well	Patients who reported that their doctors "always" treated them with courtesy and respect and listened carefully.	CMS HCAHPS
E13	Patient-Centered Care	Patient Experience	Patients who reported that their nurses "Always" communicated well	Nurses Always Communicated Well	Patients who reported that their nurses "always" explained things in a way they could understand, treated them with courtesy and respect, and listened carefully.	CMS HCAHPS

ID	Framework Domain	Category	Measure	Consumer-Friendly Measure Name	Consumer-Friendly Description	Data Source
E14	Patient-Centered Care	Patient Experience	Patients who reported that their pain was "Always" well controlled	Pain Was Always Well Controlled	Patients who reported that hospital staff "always" asked about their pain and how to treat it.	CMS HCAHPS
E15	Patient-Centered Care	Patient Experience	Patients who reported that they "Always" received help as soon as they wanted	Help Was Always Received	Patients who reported that they "always" received help as soon as they wanted.	CMS HCAHPS
E16	Patient-Centered Care	Patient Experience	Patients who gave a rating of "9" or "10" (high)	Best Hospital Experience	Patients who reported a "9" or "10" on a scale of 0 to 10, with 0 being the "worst hospital possible" and 10 being the "best hospital possible."	CMS HCAHPS
E17	Patient-Centered Care	Patient Experience	Patients who reported that their room and bathroom were "Always" clean	Room Was Always Clean	Patients who reported that their hospital room and bathroom were "always" kept clean.	CMS HCAHPS
E18	Patient-Centered Care	Patient Experience	Patients who reported that YES, they were given information about what to do during their recovery at home	Hospital Staff Provided Discharge Information	Patients who reported that "yes," hospital staff asked about any help needed after leaving the hospital and gave information about what to do during recovery at home.	CMS HCAHPS
E19	Effective Care	Pregnancy	Percent of newborns whose deliveries were scheduled early (1-3 weeks early), when a scheduled delivery was not medically necessary	Mothers with Elective Delivery	Newborns whose deliveries were scheduled 1-3 weeks early, when a scheduled delivery was not medically necessary.	The Joint Commission

Stakeholder Feedback on Recommended Measures

In addition to reviewing and scoring measures, we spoke with four stakeholders in New Hampshire, identified by the NHID as individuals with key knowledge of and experience with quality data in New Hampshire. The insights derived from these conversations helped inform our recommendations. Summaries of each conversation, along with stakeholder contact information and our initial outreach email describing the project, are included in [Appendix 4](#).

Key Findings

All stakeholders echoed strong support for NH HealthCost and making health care cost and quality information publicly available to consumers, legislators, providers, and researchers alike. The website is known to inspire and challenge providers in New Hampshire to learn from one another. All stakeholders agreed that NH HealthCost is a valuable tool that provides a centralized repository of information; the more robust the website can become, the better.

Nearly all stakeholders encouraged revisiting the number of quality measures available on NH HealthCost. They believe that focusing on fewer measures—those that are routine, actionable and meaningful to consumers and clinicians—can create more impact.

The use of publicly available methodologies that are transparent and not behind proprietary software was encouraged.

No additional data sources were identified beyond those identified by the project team; all organizations appear to be utilizing the same sources to guide their work.

While stakeholders understand the challenges of selecting quality measures, one questioned the usefulness of hospital-level measures, noting they can be particularly difficult for consumers to understand.

One stakeholder expressed concerns with utilizing information from the Joint Commission, noting that only 7 of 26 hospitals in New Hampshire are accredited by the organization. This stakeholder felt that measures with data for as many hospitals as possible, including critical access hospitals, should be selected. Hospital Compare was cited as a data source that would produce results for more hospitals.

Feedback on Preliminary Measures

At the time of the stakeholder interviews, HSRI had selected five preliminary measures to recommend for inclusion on NH HealthCost. All five measures were well received; the following represents stakeholders' feedback on specific measures. One measure that was included on the final list of recommended measures, Patient Survey Summary Star, was not part of the initial set of recommendations and is not included in the list below.

ID	MEASURE	FEEDBACK
N3	<i>OP-8 Outpatients with low back pain who had an MRI without trying recommended treatments (such as physical therapy) first</i>	<p>Other work in New Hampshire supports the inclusion of this measure as a significant cost driver, particularly as it relates to the opioid epidemic.</p> <p>The only issue raised with this measure is that the measure is attributed to hospitals but is not directly controlled by hospitals.</p>
N4	<i>OP-29 Percentage of patients receiving appropriate recommendation for follow-up screening colonoscopy</i>	<p>One stakeholder questioned if both colonoscopy measures (OP-29 and OP-30) are necessary and wondered why colonoscopies are highlighted as opposed to other health care services and procedures. The same stakeholder also stated that while many middle-aged people tend to get colonoscopies, the motivation for using one or both measures is unclear.</p>
N5	<i>OP-30 Percentage of patients with history of polyps receiving follow-up colonoscopy in the appropriate timeframe</i>	<p>One stakeholder mentioned if a choice was needed between reporting on one Healthcare-Associated Infection, they would choose MRSA.</p>
N6	<i>HAI-5 Methicillin-resistant Staphylococcus Aureus (MRSA) Blood Laboratory-identified Events (Bloodstream infections)</i>	<p>The Department of Health and Human Services reports on hospital infections, and one stakeholder suggested that MRSA and C.diff are less important than they were 10 years ago since so many improvements have been made.</p>
N7	<i>HAI-6 Clostridium difficile (C.diff.) Laboratory-identified Events (Intestinal infections)</i>	<p>Another stakeholder called attention to the soil levels and how New Hampshire has a higher C.diff rate nationally, making the measure important to report on.</p>

Quality Measure Specifications

To facilitate the NHID's use of the recommended quality measures, we documented pertinent information for each measure and downloaded the most recent data, along with the official measure documentation. This information can be found in [Appendix 5](#) and is described below.

Recommended Measure Data Spreadsheet

Documentation for each measure includes:

- Measure Name
- Consumer-Friendly Measure Name
- Consumer-Friendly Description
- Data Source
- Data Source Website (where the data can be downloaded)
- Documentation Link
- Numerator Description
- Denominator Description
- Number of New Hampshire Providers with Data in the Current Release
- Risk Adjusted (whether the data are risk adjusted or not)
- Facility Type
- Date of Most Recent Data
- Update Frequency
- Date of Next Update
- Display Format (how the data are displayed)
- Measure Coding (whether a higher or lower score is better)
- NH Score (the New Hampshire score for the current time period)
- National Score (the National score for the current time period)

Measure Data

The zipped folder, *NewHampshireQualityDataFinalMaterials* contains a folder labeled *MeasureData*. This folder contains the most recent download of the hospital, New Hampshire and national data for each measure.

Official Measure Data Documentation

The zipped folder, *NewHampshireQualityDataFinalMaterials* contains a folder labeled *DataDocumentation*. This folder contains the official documentation for each recommended measure, which is summarized in the tables in [Appendix 5](#).

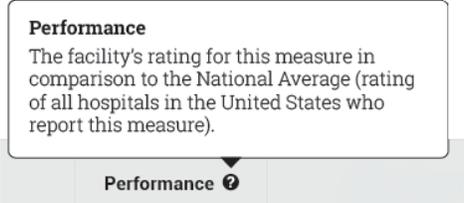
2. Data Display Recommendations

Communicating Measure Meaning to Consumers

Icons, graphics, text and user interface features and functionality contribute to clear and effective communication in website design. When these elements are successfully combined with the content strategy and information architecture, they can limit cognitive burden and drive engagement. Not only does this impact a user’s understanding of the content, but it leads to more exploration, translating to a deeper dive into available content and more time spent on the website. Below, we detail our recommendations for creating meaningful user experiences through an intertwined content strategy, information architecture and design elements. Furthermore, HSRI prepared an interim deliverable with suggestions for ways to simplify and improve consistency and understandability of the existing quality measures on NH HealthCost; these included modified quality categories, measure names, and descriptions. Following NHID’s approval, Web Mobile Development (WMD) launched these updates on NH HealthCost in January 2018. The manuscript of this supporting content is available in [Appendix 7](#).

Content Strategy

A content strategy is a plan for the creation, delivery, governance and maintenance of a website’s content. The existing content strategy for the data display on NH HealthCost appears to focus on displaying as many measures as possible. Brief, introductory summaries in the Health Costs and Quality of Care sections highlight what users can expect to see. Once a measure is selected, a user is met with a brief measure description, along with the data display. Roll-overs, identified by question mark icons on NH HealthCost, are a feature that allows users to hover their mouse over the icon for additional information. Lastly, users can click on a facility’s name to access the facility’s profile page, if desired.



Example of a proposed roll-over on NH HealthCost.

We recommend modifying the content strategy to focus on fewer measures—those that are routine, actionable and meaningful to consumers—to create more impact. While the data source and measure period are listed at the bottom of each data display, we recommend adding a link “Learn more about the methodology” to a new page, Quality of Care Methodology. A section dedicated

Source: [Centers for Medicare & Medicaid Services](#)

Measure Period: This data is based on actual patient experiences from April 2014 to March 2015. Results are from patient surveys that were collected from the National Hospital Consumer Assessment of Healthcare Providers and Systems.
[Learn more about the methodology](#)

to quality indicators is currently included in Methodology for Health Costs for Consumers; however, it is difficult to find. Removing that content and creating a new sub-page specific to the quality data adds to the credibility of the website and helps users access the valuable information more easily.

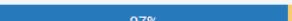
We support the other elements in the current content strategy: brief, introductory summaries highlighting what users can expect to see; brief measure descriptions on the data display; roll-over text; and links to the profile pages. We suggest that NHID keep these elements as they align with the idea of limiting cognitive burden, detailed below.

Limiting Cognitive Burden

Information overload occurs when users are presented with too much information, resulting in difficulty understanding an issue and effectively making decisions. A website's content strategy, information architecture, and user interface design are responsible for a user's experience and can help prevent information overload. To limit cognitive burden and increase the amount of time a user spends interacting on the website, it is important to layer information.

A "less is more" approach that begins with basic, simplified information helps users grasp initial concepts and affords them the ability to complete tasks quickly and efficiently and drill down to more detailed and methodological information if they so desire. User interface design elements—show/hide functionality, roll-overs, modal windows, and purposefully placed links to other relevant content on the website—can be incorporated into a website's design to help users navigate with ease and more easily focus on the information they are viewing. As supported by the usability study conducted on NH HealthCost by Mad*Pow in August 2017, a carefully designed user interface should clearly guide users throughout the site, and infographics and videos should only be used to help support content, not explain how to use the information. Appealing and familiar website elements help engender trust and encourage exploration.

We highly recommend the use of word icons to convey performance instead of, or in addition to, rates or percentages. Unlike symbols, which require a user to refer to a legend to understand the meaning, descriptive words embedded into icons remove cognitive burden by quickly communicating if care is above, near or below the average. NH HealthCost currently displays word icons next to a bar graph with the performance score. We recommend continuing to display the data in this manner, as users can easily access the numeric values if interested.

<input checked="" type="checkbox"/> Select Providers to Compare Sort by Facility ▾		Performance ⓘ	National Average: 94% 
<input checked="" type="checkbox"/> Exeter Hospital		▼ Below the average	87% 
<input checked="" type="checkbox"/> Franklin Regional Hospital		● Near the average	97% 
<input type="checkbox"/> Frisbie Memorial Hospital		▲ Better than average	100% 
<input type="checkbox"/> Mary Hitchcock Memorial Hospital		● Near the average	94% 
<input checked="" type="checkbox"/> Monadnock Community Hospital		● Near the average	99% 

Information Hierarchy

A website’s information hierarchy is the means in which the content is organized. As detailed in the [design recommendations](#), there are several opportunities for a user to access quality information. These entry points include the home page, Quality of Care in the primary navigation, links from the call-outs on cost data displays, links from the Guide to Health Insurance, and links from the provider profile pages.

Once a user accesses Quality of Care, they are met with a brief description of health care quality, a search box, and categories of measures. At the onset, all measures can be hidden; however, in the example below, a user would have clicked on Patient Experience to show the available measures. The guesswork of understanding what measures are within a category can be removed by accurately and succinctly naming categories. In this case, less is not necessarily more. If a user cannot efficiently scan a list of categories and glean the types of measures available, they may get frustrated and leave the website. Or, they may utilize the search on the website.



Quality care is getting the care you need when you need it.

Are health care providers in New Hampshire providing high quality care? [View data on patient experience and health care services and procedures to see how your provider compares to others.](#)



Patient-Centered Care

Meeting a patient's wants and needs.



Timely Care

Reducing waits and harmful delays for those who give and receive care.



Effective Care

Providing services proven to get results.



Safe Care

Protecting patients from medical errors and does not cause harm.

I'm interested in quality of:

Patient-Centered Care

▼ Patient Experience

Area Around Room was Always Quiet at Night

Hospital Recommended by Patients

Doctors Always Communicated Well

Nurses Always Communicated Well

Pain was Always Controlled Well

Help Was Always Received

Best Hospital Experience

Room was Always Clean

Hospital Staff Provided Discharge Information

Timely Care

> Emergency Department

> Heart Attacks

Effective Care

> Colonoscopy

> Heart Attacks

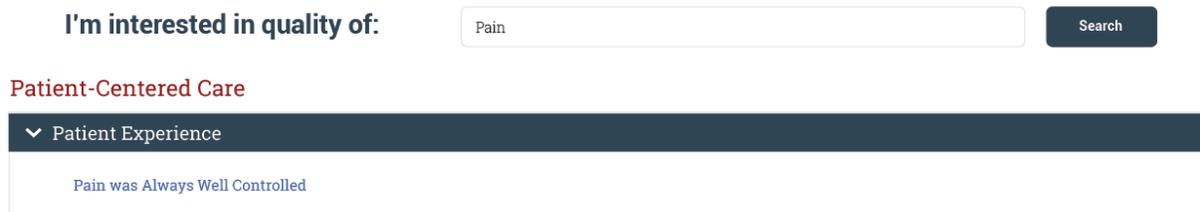
> Low Back Pain

> Pregnancy

Safe Care

> Healthcare-Associated Infections

As supported by Mad*Pow’s usability findings, we recommend that the search functionality be amended so that only relevant results appear at the top of the search results, rather than requiring the user to scroll categories to see what measures are visible and matched the search terms.



Frameworks, specifically when paired with consumer-friendly definitions, help users understand the meaning and relevance of quality data, better understand the available content, and more easily relate the information to their own care.² The Agency for Healthcare Research and Quality (AHRQ)³ supports a framework put forth by the Institute of Medicine (IOM)⁴ that highlights the six aims for the health care system: safe, effective, patient-centered, timely, efficient and equitable.

We recommend implementing a consumer-friendly version of the framework that incorporates definitions—as presented by AHRQ⁵ and in line with a presentation delivered at an Annual Meeting of the Aligning Forces for Quality Initiative⁶. Additionally, to more easily map measures in each domain of the framework, we have created categories to house applicable measures. Details on the measures associated with each framework domain and category can be found in [Exhibit 1: Recommended New Quality Measures](#) and [Exhibit 2: Recommended Existing Quality Measures](#).



² Hibbard JH, Pawlson LG. Why Not Give Consumers a Framework for Understanding Quality? Joint Commission Journal on Quality Improvement 2004 June. 30(6); 347-351.

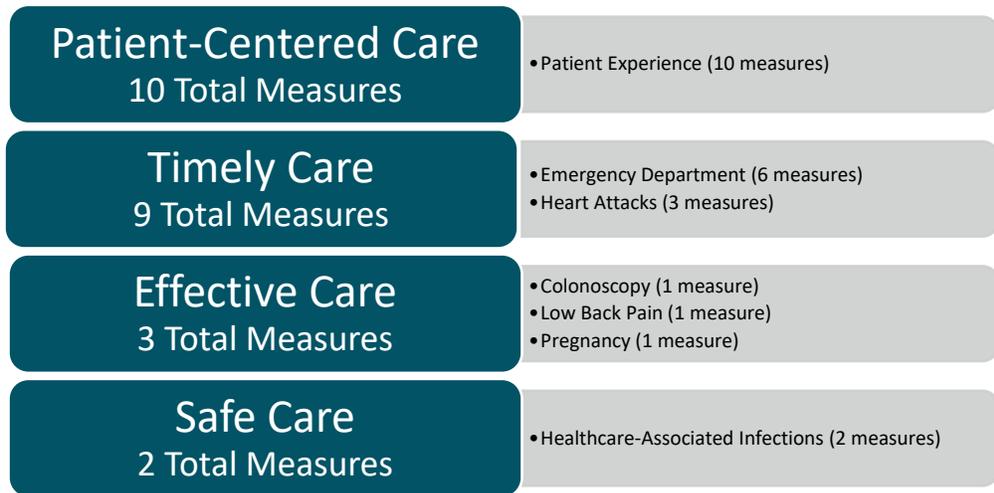
³ The Six Domains of Health Care Quality. (2015, July 17). Retrieved February 2018, from <https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/sixdomains.html>

⁴ Institute of Medicine (IOM). Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, D.C: National Academy Press; 2001.

⁵ Organizing Measures by Quality Domain. (2016, February 22). Retrieved February 16, 2018 from <https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/organize/qualitydomain.html>

⁶ Hibbard JH, Greene J, Daniel D, Rabson B, Lambiosa B. Giving Consumers a Framework for Understanding Quality. Presentation delivered at the Annual Meeting of the Aligning Forces for Quality initiative, sponsored by the Robert Wood Johnson Foundation. Chicago, IL. May 2009.

The image below outlines the framework domains, categories within each domain, and the number of measures in each category. The total number of measures in each domain are also listed.



Design Recommendations

The data display designs are provided in [Appendix 6](#). The leading enhancements include:

1. Modifying the page layout from a two-column layout to a one-column layout. This improvement addresses feedback from the usability study that Mad*Pow conducted, which showed that users focused their attention to content in the main area of the website and overlooked information in the left side bar. The increased white space gained with this modification also helps guide users through the information hierarchy and focus their attention. This enhancement impacts the following content and functionality:
 - a. The summary for Quality of Care moves above the measure selection.
 - b. The drop-down for selecting another measure is at the top of the page.
 - c. The location search is highlighted in a box above the data display.

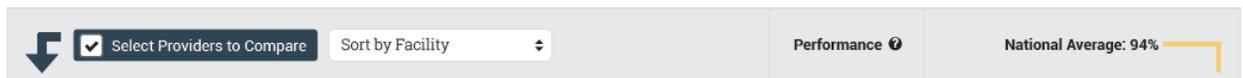
The screenshot shows the NH HealthCost website navigation bar with links for Health Costs, Quality of Care (underlined), A Guide to Health Insurance, Employer Resources, and About. Below the navigation bar is a search interface with the following elements:

- I'm interested in quality of:** A dropdown menu with the selected option "Pain was Always Well Controlled".
- Show results in:** A dropdown menu with the selected option "Entire State". Below this is a note: "Actual driving distance may vary."
- Location Search:** A text input field for "Zip Code" and a dropdown menu for "Within 25 miles of".
- Search Button:** A dark blue button labeled "Search".

- Updating the search functionality. When a user searches for a term only relevant categories and measures should appear, rather than requiring a user to scroll the list of categories and measures to see which are visible and match as search results.
- Replacing red links throughout the website, except for the primary navigation, with the more familiar blue links to clearly indicate action items to users and lessen the sense of intensity on the site.
- Implementing a consumer-friendly framework that integrates the aims for the health care system and their definitions, measure categories, and clearly labeled measure names. Research shows that this structural improvement helps users understand the relevance of quality data and more easily relate to the information.
- Adding call-out boxes within the data display to highlight integration between cost and quality measures on the website and encourage users to explore the website and related measures.



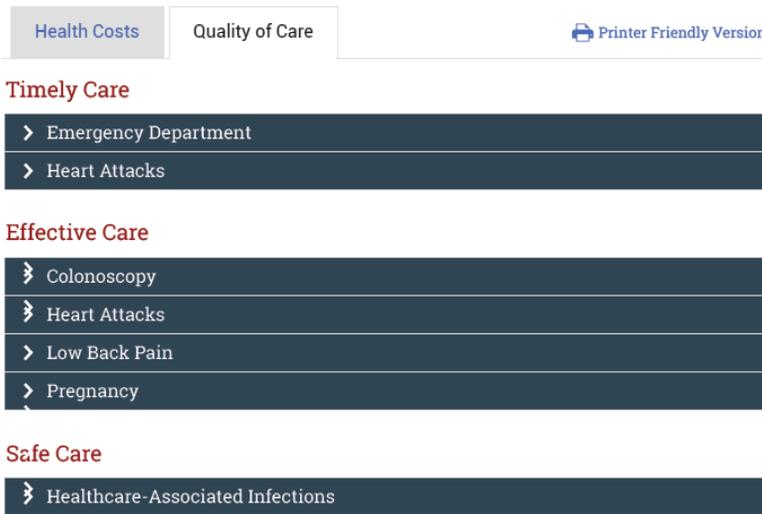
- Fixing the position of the data display header so the header remains visible when a user scrolls the data.



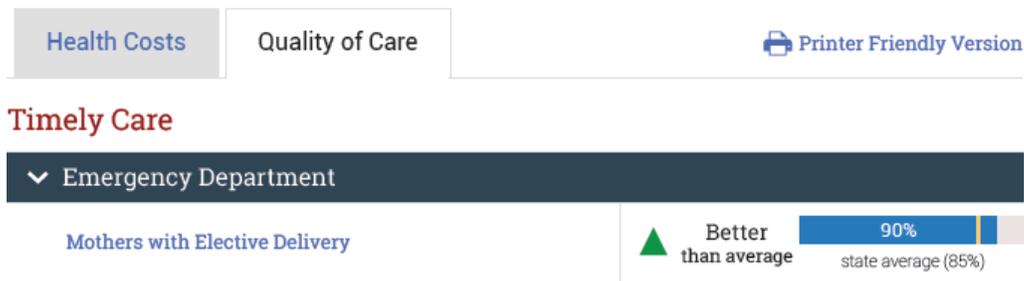
- Modifying the label above the facility names to act as both a header and an action item for selecting providers to compare. The size of the compare checkboxes should also be increased to make them more noticeable and intuitive. Additionally, once a user selects facilities, those being compared can be highlighted to call attention to them.

<input checked="" type="checkbox"/> Select Providers to Compare <input type="checkbox"/> Sort by Facility		Performance ⓘ	National Average: 94%
<input checked="" type="checkbox"/> Exeter Hospital		▼ Below the average	87%
<input checked="" type="checkbox"/> Franklin Regional Hospital		● Near the average	97%
<input checked="" type="checkbox"/> Monadnock Community Hospital		● Near the average	99%
<input type="checkbox"/> Frisbie Memorial Hospital		▲ Better than average	100%
<input type="checkbox"/> Mary Hitchcock Memorial Hospital		● Near the average	94%

- Moving the sort by drop-down into the data display header, so it is more connected to the data.
- Adding a “Performance” heading above the word icons for consistency.
- Implementing show/hide functionality on the facility profile page to display measures in each category. This enhancement is consistent with the measure selection on the initial Quality of Care page and eliminates the drop-down to filter results.



- Linking the measure names on the facility profile page to the respective quality data display, this includes linking the patient experience measures in the left side bar.



- Adding call-out boxes at the bottom of the facility profile page to highlight information about cost and quality data and make a connection with A Guide to Health Insurance.
- Removing the quality indicators text from the Methodology for Health Costs for Consumers and adding a new sub-page under About labeled “Quality of Care Methodology.” A dedicated page adds credibility to the



website, creates the ability for content to be logically organized and helps users access the information more easily.

While this report focused on quality data enhancements, to help ensure a consistent, positive user experience, we also recommend implementing relevant changes into the Health Costs display.

MRI-Back (outpatient)
 Medical Procedures | Procedure Code 72148
 Magnetic resonance imaging of the spinal canal, without contrast material.
 The cost for this procedure includes other health care services that were received at the same time.

 <input checked="" type="checkbox"/> Select Providers to Compare	Sort by Facility	Estimate of Total Cost	What You Will Pay	Typical Patient Complexity
<input checked="" type="checkbox"/> Access Sports Medicine & Orthopedics		\$352	\$352	Medium
<input checked="" type="checkbox"/> Alice Peck Day Memorial Hospital		\$74	\$48	Medium

Integration Recommendations

The integration of cost and quality data on NH HealthCost is critical to enabling consumers to evaluate the value of health care services. The following table links recommended quality measures with existing cost categories and measures on NH HealthCost. These connections can be linked in the data display through the call-out boxes that highlight related measures and link directly to those data displays.

Exhibit 3. Links Between Cost Measures and Recommended Quality Measures

ID	Exists on NH HealthCost	Recommended Quality Measures	Related Cost Category or Measure
N1	No	Patient survey summary star	All Health Cost Measures
N3	No	OP-8 Outpatients with low-back pain who had an MRI without trying recommended treatments (such as physical therapy) first	MRI – Back (outpatient) https://nhhealthcost.nh.gov/costs/medical/result/99?carrier=uninsured
N4	No	OP-29 Percentage of patients receiving appropriate recommendation for follow-up screening colonoscopy	Colonoscopy (outpatient) https://nhhealthcost.nh.gov/costs/medical/result/79?carrier=uninsured

ID	Exists on NH HealthCost	Recommended Quality Measures	Related Cost Category or Measure
N6	No	HAI-5 Methicillin-resistant Staphylococcus Aureus (MRSA) Blood Laboratory-identified Events (Bloodstream infections)	Outpatient Tests and Procedures
N7	No	HAI-6 Clostridium difficile (C.diff.) Laboratory-identified Events (Intestinal infections)	Outpatient Tests and Procedures
E1	Yes	Average time patients spent in the emergency department, after the doctor decided to admit them as an inpatient before leaving the emergency department for their inpatient room	Emergency Visits
E2	Yes	Percentage of patients who came to the emergency department with stroke symptoms who received brain scan results within 45 minutes of arrival	Emergency Visits
E3	Yes	Average time patients spent in the emergency department, before they were admitted to the hospital as an inpatient	Emergency Visits
E4	Yes	Average time patients spent in the emergency department before being sent home	Emergency Visits
E5	Yes	Average time patients spent in the emergency department before they were seen by a healthcare professional	Emergency Visits
E6	Yes	Average time patients who came to the emergency department with broken bones had to wait before receiving pain medication	Emergency Visits
E7	Yes	Heart attack patients given PCI within 90 minutes of arrival (PCI is a procedure considered to be effective for opening blocked blood vessels that cause heart attacks. It is important that this therapy be given quickly after a heart attack is diagnosed.)	Emergency Visits
E8	Yes	Outpatients with chest pain or possible heart attack who got aspirin within 24 hours of arrival	Emergency Visits
E9	Yes	Average number of minutes before outpatients with chest pain or possible heart attack got an ECG	Emergency Visits
E10	Yes	Patients who reported that the area around their room was "Always" quiet at night	Not Applicable
E11	Yes	Patients who reported YES, they would definitely recommend the hospital	Emergency Visits Outpatient Tests and Procedures
E12	Yes	Patients who reported that their doctors "Always" communicated well	Emergency Visits Outpatient Tests and Procedures
E13	Yes	Patients who reported that their nurses "Always" communicated well	Emergency Visits Outpatient Tests and Procedures

ID	Exists on NH HealthCost	Recommended Quality Measures	Related Cost Category or Measure
E14	Yes	Patients who reported that their pain was "Always" well controlled	Emergency Visits Outpatient Tests and Procedures
E15	Yes	Patients who reported that they "Always" received help as soon as they wanted	Not Applicable
E16	Yes	Patients who gave a rating of "9" or "10" (high)	Not Applicable
E17	Yes	Patients who reported that their room and bathroom were "Always" clean	Not Applicable
E18	Yes	Patients who reported that YES, they were given information about what to do during their recovery at home	Outpatient Tests and Procedures
E19	Yes	Percent of newborns whose deliveries were scheduled early (1-3 weeks early), when a scheduled delivery was not medically necessary	Not Applicable

3. Recommended Next Steps

If the NHID agrees with the recommended approach detailed in this report to enhance the quality data on NH HealthCost, we recommend the following actions:

1. Download the most recent data files and analyze according to the documentation provided.
2. Work with WMD to implement data, design, and content updates:
 - a. Add and remove quality measures from the website, as indicated.
 - b. Modify the data displays to align with the mock-ups provided. Elements of the Quality of Care data display can be carried through to the Health Costs section to create a consistent user experience.
 - c. Implement the framework, including adding the domains, and updating the measure categories, names, and descriptions for consistency and understandability.
 - d. Implement roll-over text to provide users with the ability to drill down to get more information if they so desire.
 - e. Create a Quality of Care Methodology page to live in the About section of the website.
3. Work to incorporate the new quality framework and measures into other sections of the website, such as A Guide to Health Insurance, and marketing materials for NH HealthCost.

4. Methodology

Prior to recommending quality measures for consideration, we first needed to select measures for review. Once measures were selected, we used a set of custom scoring criteria, developed in collaboration with the NHID, and rated each measure against those criteria. Measures with the highest scores are those we recommend for inclusion on NH HealthCost. Details about the measure selection and scoring criteria are included below.

Measure Selection

To decide which new measures to review and include on the scoring matrix, we conducted an environmental scan of data sources to determine whether the sources were reliable, easily accessible, contain recent data, and if the data's unit of analysis is appropriate (facility vs. region vs. state) for NH HealthCost. If the data source met the criteria, we reviewed all the individual measures, adding potential candidates to the quality measure matrix.

Environmental Scan

A total of 483 measures from the following reputable sources were considered for review as part of the environmental scan. In addition to identifying the data source, we captured a description of the source and a link to the source website, along with links to documentation. Detailed information about the data sources are included in [Appendix 1](#).

Data sources reviewed included:

- Agency for Healthcare Research and Quality (AHRQ)
- CMS Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)
- CMS Hospital Compare
- CMS Hospital Compare, Hospital Inpatient Quality Reporting and Outpatient Quality Reporting
- CMS Outpatient Prospective Payment System, Hospital Outpatient Quality Reporting Program
- Healthcare Effectiveness Data and Information Set (HEDIS)
- Leapfrog
- National Healthcare Safety Network (NHSN)
- Physician Compare, Physician Quality Reporting System (PQRS)
- Physician Consortium for Performance Improvement (PCPI)
- The Joint Commission

Four additional data sources were reviewed but the measures were deemed a poor fit for inclusion on NH HealthCost:

- **CMS Claims Data** – Data is only available for Medicare and Medicaid.
- **Healthcare Cost and Utilization Project (HCUP)** – AHRQ QI is part of HCUP and was reviewed separately. Other data sources—including National Inpatient Safety, Kids’ Inpatient Database, Nationwide Emergency Department Sample, and Nationwide Readmissions Database—primarily focus on cost, patient demographics, location of services, ICD and discharge status. The measures available would require significant analysis of data to transform into meaningful quality data, and therefore did not appear useful for the purposes of NH HealthCost.
- **New Hampshire Comprehensive Health Care Information System (NHCHIS)** – Since this is raw claims data, any quality measures stemming from this data source would require significant work to calculate; given the FTE requirements associated with this project, this source is not an appropriate fit.
- **Medicare Provider Analysis and Review (MEDPAR)** – This data source was stated in the original RFP as a source to consider. Upon further investigation, the data is cost data and not applicable for this project.

We initially reviewed the quality measures available from these sources to determine if they were an appropriate fit for NH HealthCost based on unit of analysis, content area, ease of updating, and relevancy to the NH consumer. This resulted in a targeted set of 17 new measures. With these new and existing measures, our intention was to help the NHID identify those measures that best align with the mission of empowering consumers as purchasers of health insurance and health care services. The new and existing measures were then scored against the scoring criteria to determine if they were appropriate for inclusion on NH HealthCost.

Measure Scoring Criteria

Each quality measure was rated against a set of custom scoring criteria. These criteria are based on input from the NHID, our experience conducting a literature review for the Green Mountain Care Board⁷ on the feasibility of administering a health care transparency website, and our experience working with and updating quality data for CompareMaine.org. In addition, we viewed the literature available on

⁷ Consumer Information and Price Transparency Report: In accordance with Act 54 of 2015, Section 21. (October 1, 2015). *In Vermont General Assembly*. Retrieved June 21, 2017, from http://www.leg.state.vt.us/jfo/healthcare/Health%20Reform%20Oversight%20Committee/2015_11_13/Consumer%20Information%20and%20Price%20Transparency%20Report%20-%20GMCB.pdf

other health care quality measures selection efforts, such as the efforts of the National Quality Forum⁸, to inform our categories and criteria of interest and relevance to NH HealthCost.

A total of 15 scoring criteria were organized into the following 5 categories:

1. Usefulness to NH Consumer (4 criteria)
2. Ease of Obtaining Data (1 criteria)
3. Ease of Updating Data (2 criteria)
4. Ease of Implementing Data (3 criteria)
5. Trusted Data Source (5 criteria)

Prior to conducting the review, we performed an inter-rater reliability test to ensure raters scored the measures similarly. To further minimize subjectivity from the raters, we supplied standard definitions for each criterion in the scoring matrix, and most measures could be scored on a simple Yes/No basis; those answered with a “Yes” received one point and those answered with “No” received zero points. The sum of the criterion in each category were calculated, along with a total score, which is the sum of points from all categories.

Another important factor was the number of personnel that would be needed to implement and maintain the additional measures: It is critical that the updates can be maintained and properly implemented by the NHID at no more than five percent (5%) of a full-time equivalent (FTE).

Each measure we reviewed was scored against the elements in the following table to determine its suitability for NH HealthCost. There were 20 points available across the 15 scored criteria. Categories ranged from a total of 2 to 6 points. The relative importance of each category was considered when assigning the points per criteria and category. A few additional elements were included for informational purposes only and were not scored.

⁸ Measure Evaluation Criteria and Guidance for Evaluating Measures for Endorsement. (Effective August 2016). *In National Quality Forum*. Retrieved June 21, 2017, from http://www.qualityforum.org/Measuring_Performance/Endorsed_Performance_Measures_Maintenance.aspx

Exhibit 4. Measure Scoring Criteria

Categories and Elements	Definitions	Scoring
Total Score	Sum of the categories: Usefulness to NH Consumer, Ease of Obtaining Data, Ease of Updating Data, Ease of Implementing Data, and Trusted Data Source.	Maximum of 20 total points.
Usefulness to New Hampshire Consumer (4 points)		
Aligns with a Cost Procedure on NH HealthCost	Is there a procedure on NH HealthCost related to this measure?	Yes = 1, No = 0
Commonly Recognized and Understood	Would a lay person understand what this means and be able to apply it to their life?	Yes = 1, No = 0
Aligns with Providers on NH HealthCost	Is there at least one type of provider on NH HealthCost that reports on this measure?	Yes = 1, No = 0
Data Is Recent	Are the data from within the last two years?	Yes = 1, No = 0
<i>Date of Most Recent Data</i>	<i>Type the date of most recent data in mm/dd/yyyy format.</i>	<i>Informational Purposes Only</i>
Ease of Obtaining Data (2 points)		
Accessibility	How can one obtain the data?	Download = 2, Request = 1, Fee = 0
<i>Cost (if available by fee)</i>	<i>If the data is only available by paying a fee, list the cost.</i>	<i>Informational Purposes Only</i>
Ease of Updating Data (6 points)		
Update Frequency	Indicate how frequently the measure is updated.	Monthly = 5, Quarterly = 4, Semi-annually = 3, Annually = 2, Biennially = 1, Other = 0
Clear Documentation of Update Schedule	Does the data source clearly state how frequently the measure will be updated?	Yes = 1, No = 0
Ease of Implementing Data (3 points)		
Minimal Effort Required to Clean/Transform	Is the raw/underlying data available, or is data provided as percentages?	Yes = 1, No = 0
New Hampshire Average Calculated	Does the measure have the New Hampshire Average calculated?	Yes = 1, No = 0

Categories and Elements	Definitions	Scoring
National Average Calculated	Does the measure have the National Average calculated?	Yes = 1, No = 0
<i>Display Format</i>	<i>Describe how the data are presented (percentage, rate, stars, above/below average symbol, other symbol).</i>	<i>Informational Purposes Only</i>
Trusted Data Source (5 points)		
Reliable Data Source	Is the data steward a recognizable federal, state or nonprofit organization?	Yes = 1, No = 0
Endorsed by the National Quality Forum	Is the measure endorsed by the National Quality Forum (NQF)?	Yes = 1, No = 0
Clear Data Documentation	Is the data documentation easy to find and use?	Yes = 1, No = 0
Variations in Performance	Is there variation in the results across facilities? For example, do almost all facilities with data have the same result? If so, the measure would be rated “No.”	Yes = 1, No = 0
Used by At Least Two Other Consumer Health Care Transparency Websites	Is the measure used by at least two other consumer health care transparency websites?	Yes = 1, No = 0
<i>Type of Measure</i>	<i>What type of measure is it? (Outcome, Intermediate Clinical Outcome, Patient Reported Outcome, Process of Care, Structure of Care, Composite Measure, Cost/Resource, Other)</i>	<i>Informational Purposes Only</i>
<i>Other Websites Reporting Measure</i>	<i>Name the website and provide the URL.</i>	<i>Informational Purposes Only</i>

The following tables present the results, with 17 potential new measures and 32 existing quality measures, ranked from highest to lowest. The top-scoring measures—those we ultimately recommended for inclusion—are highlighted in yellow.

Exhibit 5. Scoring Results: New Quality Measures

ID	Measure	Total Score (20 points)	Usefulness to NH Consumer (4 points)	Ease of Obtaining Data (2 points)	Ease of Updating Data (6 points)	Ease of Implementing Data (3 points)	Trusted Data Source (5 points)
N1	Patient survey summary star	18	3	2	5	3	5
N2	PQRS_GP_112_1 Percentage of women 50-74 years of age who had a mammogram to screen for breast cancer	17	4	2	3	3	5
N3	OP-8 Outpatients with low back pain who had an MRI without trying recommended treatments (such as physical therapy) first	17	4	2	3	3	5
N4	OP-29 Percentage of patients receiving appropriate recommendation for follow-up screening colonoscopy	17	4	2	3	3	5
N5	OP-30 Percentage of patients with history of polyps receiving follow-up colonoscopy in the appropriate timeframe	17	4	2	3	3	5
N6	HAI-5 Methicillin-resistant Staphylococcus Aureus (MRSA) Blood Laboratory-identified Events (Bloodstream infections)	17	3	2	5	3	4
N7	HAI-6 Clostridium difficile (C.diff.) Laboratory-identified Events (Intestinal infections)	17	3	2	5	3	4
N8	READM-30-HOSP-WIDE Rate of readmission after discharge from hospital (hospital-wide)	15	3	2	3	3	4
N9	Preventive care and screening: percentage of patients aged 18 years and older who were screened for tobacco use one or more times within 24 months AND who received cessation counseling intervention if identified as a tobacco user.	13	3	2	3	2	3
N10	PSI 13 Postoperative Sepsis Rate	12	3	2	0	3	4
N11	PSI 21 Retained Surgical Item or Unretrieved Device Fragment Rate	12	3	2	0	3	4
N12	Colorectal Cancer Screening	12	4	0	3	1	4
N13	Use of Imaging Studies for Low Back Pain	12	4	0	3	1	4
N14	Breast Cancer Screening	11	4	0	3	1	3

ID	Measure	Total Score (20 points)	Usefulness to NH Consumer (4 points)	Ease of Obtaining Data (2 points)	Ease of Updating Data (6 points)	Ease of Implementing Data (3 points)	Trusted Data Source (5 points)
N15	Cervical cancer screening: percentage of women 21 to 64 years of age who were screened for cervical cancer.	10	2	0	3	1	4
N16	Controlling high blood pressure: percentage of patients 18 to 85 years of age who had a diagnosis of hypertension (HTN) and whose BP was adequately controlled during the measurement year.	9	2	0	3	1	3
N17	Comprehensive diabetes care: percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who received medical attention for nephropathy.	7	3	0	0	1	3

Exhibit 6. Scoring Results: Existing Quality Measures

ID	Measure	Total Score (20 points)	Usefulness to NH Consumer (4 points)	Ease of Obtaining Data (2 points)	Ease of Updating Data (6 points)	Ease of Implementing Data (3 points)	Trusted Data Source (5 points)
E1	Average time patients spent in the emergency department, after the doctor decided to admit them as an inpatient before leaving the emergency department for their inpatient room	19	4	2	5	3	5
E2	Percentage of patients who came to the emergency department with stroke symptoms who received brain scan results within 45 minutes of arrival	19	4	2	5	3	5
E3	Average time patients spent in the emergency department, before they were admitted to the hospital as an inpatient	19	4	2	5	3	5
E4	Average time patients spent in the emergency department before being sent home	19	4	2	5	3	5
E5	Average time patients spent in the emergency department before they were seen by a healthcare professional	19	4	2	5	3	5
E6	Average time patients who came to the emergency department with broken bones had to wait before receiving pain medication	19	4	2	5	3	5

ID	Measure	Total Score (20 points)	Usefulness to NH Consumer (4 points)	Ease of Obtaining Data (2 points)	Ease of Updating Data (6 points)	Ease of Implementing Data (3 points)	Trusted Data Source (5 points)
E7	Heart attack patients given PCI within 90 minutes of arrival (PCI is a procedure considered to be effective for opening blocked blood vessels that cause heart attacks. It is important that this therapy be given quickly after a heart attack is diagnosed.)	19	4	2	5	3	5
E8	Outpatients with chest pain or possible heart attack who got aspirin within 24 hours of arrival	19	4	2	5	3	5
E9	Average number of minutes before outpatients with chest pain or possible heart attack got an ECG	19	4	2	5	3	5
E10	Patients who reported that the area around their room was "Always" quiet at night	18	3	2	5	3	5
E11	Patients who reported YES, they would definitely recommend the hospital	18	3	2	5	3	5
E12	Patients who reported that their doctors "Always" communicated well	18	3	2	5	3	5
E13	Patients who reported that their nurses "Always" communicated well	18	3	2	5	3	5
E14	Patients who reported that their pain was "Always" well controlled	18	3	2	5	3	5
E15	Patients who reported that they "Always" received help as soon as they wanted	18	3	2	5	3	5
E16	Patients who gave a rating of "9" or "10" (high)	18	3	2	5	3	5
E17	Patients who reported that their room and bathroom were "Always" clean	18	3	2	5	3	5
E18	Patients who reported that YES, they were given information about what to do during their recovery at home	18	3	2	5	3	5
E19	Percent of newborns whose deliveries were scheduled early (1-3 weeks early), when a scheduled delivery was not medically necessary	17	3	2	4	3	5
E20	This measure reports how often ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation (blood thinning) therapy at hospital discharge	16	2	2	4	3	5
E21	This measure reports how often ischemic stroke patients were administered antithrombotic (blood thinning) therapy by the end of hospital day 2.	16	2	2	4	3	5

ID	Measure	Total Score (20 points)	Usefulness to NH Consumer (4 points)	Ease of Obtaining Data (2 points)	Ease of Updating Data (6 points)	Ease of Implementing Data (3 points)	Trusted Data Source (5 points)
E22	This measure reports how often patients 18 years of age and older with ischemic or hemorrhagic stroke were assessed for rehabilitation	16	2	2	4	3	5
E23	This measure reports how often ischemic stroke patients were prescribed antithrombotic (blood thinning) therapy at hospital discharge	16	2	2	4	3	5
E24	This measure reports how often ischemic or hemorrhagic stroke patients or their caregivers were given educational materials	16	2	2	4	3	5
E25	Patients assessed and given influenza vaccination	16	3	2	3	3	5
E26	This measure is used to assess the percentage of ischemic stroke patients with a post-treatment reperfusion grade of thrombolysis in cerebral infarction (the amount of blood flow restored to the brain after the blood clot has been broken down with enzymes)	15	2	2	4	3	4
E27	This measure assesses the number of patients who received VTE (blood clots in the legs) prophylaxis (prevention) or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer)	15	2	2	5	3	3
E28	This measure assesses the number of patients diagnosed with confirmed VTE (blood clots in the legs) who are discharged to home, to home with home health or home hospice on warfarin with written discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring and information about the potential for adverse drug reactions/interactions	15	2	2	5	3	3
E29	This measure assesses the number of patients diagnosed with confirmed VTE (blood clots in the legs) who received an overlap of parenteral (intravenous [IV] or subcutaneous [subcu, under the skin]) anticoagulation and warfarin therapy. For patients who received less than five days of overlap therapy, they must be discharged on both medications	15	2	2	5	3	3
E30	This measure assesses the number of patients who received venous thromboembolism (VTE, blood clots in the legs) prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day	15	2	2	5	3	3

ID	Measure	Total Score (20 points)	Usefulness to NH Consumer (4 points)	Ease of Obtaining Data (2 points)	Ease of Updating Data (6 points)	Ease of Implementing Data (3 points)	Trusted Data Source (5 points)
	after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission						
E31	This measure assesses the number of hospitalized patients at risk for VTE (blood clots in the legs) who have VTE education within 24 hours of admission that includes 1) VTE risk, 2) signs and symptoms, 3) early and frequent mobilization, and 4) clinically appropriate treatment/prophylaxis methods	13	1	2	3	3	4
E32	Pneumonia patients given the most appropriate initial antibiotic(s) ⁹	13	2	2	1	3	5

⁹ We were unable to confirm the update schedule for this measure. Depending on the frequency, this measure could receive a higher score. Because of this, we are not recommending it for inclusion at this time

Appendices

Appendix 1: List of Sources for Quality Data

Measures from 11 reputable data sources were considered for review.

Data Sources	Descriptions	Website URLs
Agency for Healthcare Research and Quality (AHRQ)	As an agency within the U.S. Department of Health and Human Services, AHRQ is the Nation’s lead Federal agency for research on health care quality, costs, outcomes and patient safety. AHRQ Patient Safety Indicators (PSI) provide data on potential complications following surgeries, procedures and childbirth.	https://www.qualityindicators.ahrq.gov/MODULES/psi_resources.aspx
CMS Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)	The Centers for Medicare & Medicaid Services (CMS) is part of the U.S. Department of Health and Human Services. HCAHPS is a standardized survey and data collection method for measuring patients’ perspectives on hospital care. The HCAHPS survey is also known as the CAHPS® Hospital Survey, which is endorsed by the National Quality Forum (NQF).	https://www.cms.gov http://www.hcahponline.org/home.aspx
CMS Hospital Compare	The Centers for Medicare & Medicaid Services (CMS) is part of the U.S. Department of Health and Human Services. Hospital Compare provides quality information on more than 4,000 Medicare-certified hospitals across the country, including over 130 Veterans Administration (VA) medical centers.	https://www.medicare.gov/hospitalcompare/Data/30-day-measures.html
CMS Hospital Compare, Hospital Inpatient Quality Reporting and Outpatient Quality Reporting	Most timely and effective care measures come from data that hospitals get from medical records of eligible patients.	https://www.medicare.gov/hospitalcompare/Data/Measures.html
CMS Outpatient Prospective Payment System, Hospital Outpatient Quality Reporting Program	CMS uses claims data that hospitals and physicians submit for Medicare beneficiaries enrolled in Original Medicare to calculate measures on the efficiency of outpatient medical imaging. The data is only calculated for hospitals paid through the Outpatient Prospective Payment System (OPPS). The measures are part of the Hospital Outpatient Quality Reporting Program (OQR).	https://www.medicare.gov/hospitalcompare/data/outpatient-measures.html
Healthcare Effectiveness Data and Information Set (HEDIS)	The National Committee for Quality Assurance (NCQA) developed HEDIS®, a set of standardized performance measures, to assess the quality of health care and services provided by managed health care plans.	https://archive.ahrq.gov/research/findings/nhqrdr/nhqrdr09/datasources/ncqa.html http://www.ncqa.org/Portals/0/HEDISQM/HEDIS2017/HEDIS%202017%20Volume%202%20List%20of%20Measures.pdf?ver=2016-06-27-135433-350

Data Sources	Descriptions	Website URLs
		http://store.ncqa.org/index.php/performance-measurement.html
Leapfrog	Founded by large employers and other purchasers, The Leapfrog Group is a nonprofit focused on driving change in the quality and safety of American health care. The organization has two primary initiatives: Leapfrog Hospital Survey collects and reports on hospital performance, and The Leapfrog Hospital Safety Grade assigns letter grades to hospitals based on patient safety records.	http://www.leapfroggroup.org/hospitals/search/list/location/Shrewsbury%2C%20MA%2001545%2C%20USA/50
National Healthcare Safety Network (NHSN)	The Centers for Disease Control and Prevention’s (CDC) is responsible for tracking preventing healthcare-associated infections (HAIs). To receive payment from Medicare, hospitals are required to report data about some HAIs to the CDC’s National Healthcare Safety Network (NHSN).	https://www.medicare.gov/hospitalcompare/data/healthcare-associated-infections.html
Physician Compare, Physician Quality Reporting System (PQRS)	CMS created the website, Physician Compare, to allow consumers to search for physicians and other health care professionals who provide Medicare services. The performance scores on Physician Compare come from the PQRS, a quality reporting program that encourages individual eligible professionals and group practices to report information on the quality of care to Medicare.	https://www.medicare.gov/physiciancompare/#about/improvinghealthcarequality https://qpp.cms.gov/mips/quality-measures
Physician Consortium for Performance Improvement (PCPI)	PCPI is a membership organization committed to improving patient health and safety through the advancement of measurement science, quality improvement and clinical registries. Key programs include Measurement Science, the National Quality Registry Network and the Quality Improvement Program.	https://www.thepcpi.org/
The Joint Commission	As an independent, not-for-profit organization, The Joint Commission accredits and certifies health care organizations and programs in the US	https://www.jointcommission.org/

Appendix 2: Total Quality Measures Reviewed

As summarized below, a total of 483 measures were reviewed for inclusion on NH HealthCost.

Data Sources	Number of Measures Reviewed	Number of Measures Included on HSRI Scoring Matrix	Number of Measures That Exist on NH HealthCost	Number of Measures Recommended for Inclusion on NH HealthCost
Agency for Healthcare Research and Quality (AHRQ)	26	2	0	0
CMS Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)	10	10	9	10
CMS Hospital Compare	16	1	0	0
CMS Hospital Compare, Hospital Inpatient Quality Reporting and Outpatient Quality Reporting	31	12	10	10
CMS Hospital Compare Outpatient Prospective Payment System, Hospital Outpatient Quality Reporting Program	6	1	0	1
Healthcare Effectiveness Data and Information Set (HEDIS)	84	6	0	0
Leapfrog	16	0	0	0
National Healthcare Safety Network (NHSN)	7	3	1	2
Physician Compare, Physician Quality Reporting System (PQRS)	251	1	0	0
Physician Consortium for Performance Improvement (PCPI)	24	1	0	0
The Joint Commission	12	12	12	1
Total	483	49	32	24

Please refer to the Excel spreadsheet *Appendix2NHIDTotalQualityMeasures* for details on all measures reviewed.

Appendix 3: NHID Quality Data Scoring Matrix

Please refer to the Excel spreadsheet *Appendix3NHIDQualityDataScoringMatrix* for details on how each measure was scored.

Sources documented in the column “Other Websites Using Measure” include:

Names	Website URLs
American Hospital Directory (AHD)	https://www.ahd.com/
Cal Hospital Compare	http://calhospitalcompare.org/
Care Compare	https://www.carecompare.com/
Centers for Dialysis Care	http://www.cdcare.org/
CheckPoint	https://www.wicheckpoint.org/Home_main.aspx
CompareCareWV	http://comparecarewv.gov/
CompareMaine	http://www.comparemaine.org/
Consumer Reports	https://www.consumerreports.org/cro/index.htm
Dialysis Facility Compare	https://www.medicare.gov/dialysisfacilitycompare/
Florida Health Finder	http://www.floridahealthfinder.gov/
Greater Detroit Area Health Council	http://www.gdahc.org/
Healthcare Compass MA	http://healthcarecompassma.org/
Home Health Compare	https://www.medicare.gov/homehealthcompare/search.html
Hospital Compare	https://www.medicare.gov/hospitalcompare/search.html
Hospital Safety Grade	http://www.hospitalafetygrade.org/
Illinois Hospital Report Card and Consumer Guide to Health Care	http://www.healthcarereportcard.illinois.gov/
Maine Health Data Organization MONAHRQ	https://mhdo.maine.gov/monahrq/#/
MN HealthScores	http://www.mnhealthscores.org/
MONAHRQ	https://www.ahrq.gov/professionals/systems/monahrq/index.html
MyHealthCare in Utah	http://stats.health.utah.gov/
Nevada Compare Care	https://www.nevadacomparecare.net/
Office of Statewide Health Planning and Development (OSHPD)	https://www.oshpd.ca.gov/
Ohio Compare Care	<i>This website has been removed since we reviewed.</i>
Ohio Hospital Compare	<i>This website has been removed since we reviewed.</i>
Oregon Health Care Quality Corporation	http://www.q-corp.org/
UCompareHealthCare	http://www.ucomparehealthcare.com/

Names	Website URLs
UtahHealthScape	http://new.utahhealthscape.org/#/
Virginia Health Information	http://www.vhi.org/
Wisconsin Collaborative for Healthcare Quality (WCHQ)	https://www.wchq.org/
Why Not The Best	http://www.whynotthebest.org/
YourHealthMatters	http://yourhealthmatters.org/

Appendix 4: Summaries from Stakeholder Engagement

Details from each of the stakeholder conversations are summarized below.

Jeanne Ryer with Citizens Health Initiative – October 20, 2017 at 10:00 am

The NH Citizens Health Initiative, a program of the University of New Hampshire’s College of Health and Human Services, is a regional health improvement collaborative. For more than 12 years, this multi-stakeholder convener has been working from the triple aim toward the quadruple aim: Improving health care quality, cost, patient experiences, and the work life of health care providers. These efforts have resulted in the Initiative becoming a learning lab for health system transformation. As part of the CMS Practice Transformation Network, the Initiative participates in peer-based learning networks to share, adapt, and further develop comprehensive quality improvement strategies.

The Initiative looks to all the same sources that other organizations use to guide their work. As part its work, the Initiative collects data on a common set of quality data measures, including clinical process and outcome data from participating practices, and utilize the NH Comprehensive Health Information System (CHIS) for claims-based quality data. A clinical committee, representing a range of disciplines, governs the Initiative’s measurement selection; their focus is on “measures that matter”: Those that are actionable and have patients at the center. Over time, the Initiative has added measures and retired others—even some of those it has collected for a long time—to sharpen its focus.

The Initiative currently collects data for 18 measures from Electronic Health Records that are voluntarily reported by participating practices. Some of the measures for the CMS work are focused on depression screening and tobacco use. Claims-based utilization measures are based on the CHIS and include measures on low back pain, inpatient admissions, and total cost of care.

In Jeanne’s experience, clinicians utilize the data to improve quality, outcomes and cost. As she stated, “Clinicians aren’t the type of people that get out of bed every day to be mediocre—they want to be the best.”

The Initiative [reports on](#) ambulatory care practices; they are not focused on hospital data. Practices struggle with meaningfulness of reporting, extracting data from Electronic Medical Records, and the burden of reporting to multiple payers. Practices are rigorous about measures that are actionable and patient-centered, and only tend to report high quality results that show them in a good light to patients. The Initiative is working with practices to begin collecting measures on social determinants, such as isolation.

While Jeanne understands the constraints, she is unsure if any of the hospital-based measures are understandable to consumers. She mentioned that she watched and admired the work of Partnership for Patients, as they worked to reduce harm and Healthcare-Associated Infections (HAIs). While the final report [Project Evaluation Activity in Support of Partnership for Patients, Interim Evaluation Report](#) supports clinician quality and outcome improvement, it is challenging to make the information useful for consumers. According to Jeanne, a patient's family should be advised to check on MRSA, and while C.diff is important, if one HAI was selected for inclusion, she recommends MRSA.

The Initiative's work with the Practice Transformation Network supports the inclusion of the measure for an MRI for low back pain (OP-8), as it is a significant cost driver, particularly as it relates to the use of opioids. The only issue with the measure is that it is attributed to hospitals but is not directly controlled by hospitals.

Jeanne questioned the colonoscopy measure recommendations (OP-29 and OP-30) and wondered why colonoscopies are highlighted as opposed to other health care services and procedures. While many middle-aged people tend to get colonoscopies, she does not understand the motivation of using one or both measures. More specifically, OP-29 is an accessibility measure and its inclusion could inaccurately portray a lack of access in New Hampshire.

In closing remarks, Jeanne stressed the importance of not including too many measures and instead utilizing fewer measures to create more impact.

Anne Diefendorf, Associate Executive Director/Vice President Quality and Patient Safety, Foundation for Healthy Communities – October 20, 2017 at 9:30 am

As an affiliate organization of the New Hampshire Hospital Association, the Foundation for Healthy Communities engages in innovative partnerships with individuals and organizations to improve health and health care in New Hampshire.

With several proprietary systems and scorecards available, the Foundation recommends reporting on data that is publicly available. The Foundation previously collected data; however, with the significant increase in publicly mandated reporting, the Foundation no longer collects data and instead utilizes publicly available data. The Foundation offers coaching on data collection to hospitals, so they can submit data to national databases. However, upgrading networks and systems has been a statewide challenge, requiring many organizations to rebuild reporting and query systems. It is taking many hospitals longer than expected to accurately use software and generate required data.

A former website, NH Health, allowed users to see data from all hospitals in New Hampshire at the same time. When the Quality Improvement Organization (QIO) closed, the Foundation no longer had access to the data (the QIO had direct access).

All 26 hospitals in New Hampshire had been participating in a Federal program, Partnership for Patients, a program aimed at improving quality and safety. Last year, after four years of funding from CMS, Partnership for Patients transitioned to the Hospital Innovation and Improvement Network, funded through Medicare Trust. Not only did the focus areas expand (readmissions being a large focus area), but all the information now lives on the [American Hospital Association website](#).

Anne expressed some concerns with the current quality measures on NH HealthCost, noting that the Joint Commission is a data source and only seven hospitals in New Hampshire are accredited by the Joint Commission. In her experience, other hospitals are going to another accrediting body, [DNV GL](#). To report on more hospitals, Anne suggests collecting measures from Hospital Compare rather than the Joint Commission.

In response to preliminary recommendations for NH HealthCost, Anne agrees that patient experience is important. She recommends revisiting stroke care since a small number of hospitals report on the measures and the data comes from the Joint Commission. She also mentioned that due to soil levels, New Hampshire has a higher C.diff rate than the national average, so that measure is important to report on. Anne added that low back pain is a great measure to add, specifically in response to the opioid epidemic, and that colonoscopy is a good preventive measure to include.

As general feedback, Anne suggests selecting measures that would have data for as many hospitals as possible, including critical access hospitals, and steering away from the Joint Commission as a data source. She stressed the importance of using public measures with methodologies that are transparent and not behind proprietary software. The Foundation supports NH HealthCost and considers it a valuable tool that provides a centralized repository of information. The more robust the website can become, the better. NH HealthCost inspires and challenges providers in New Hampshire to learn from one another.

P. Travis Harker, MD, MPH, Chief Medical Officer, Granite Health Network – October 25, 2017 at 4:30 pm

Granite Health Network (Granite Health) is a partnership of six health systems in New Hampshire and is working to reduce cost and tie performance with cost savings and plans. Granite Health is working with payers on shared savings agreements. They are co-owners of claims-based data that focus on three payers: Cigna, Tufts, and Harvard Pilgrim. A population health module and quality component work to track benchmarks in quality that allow Granite Health to look at shared cost savings and total cost of care.

Last year, Granite Health reported on more than 100 measures. After recognizing the work required to report on each measure and acknowledging that providers cannot focus on every measure, the list of measures was paired down to 17.

As a family doctor, Travis sees the limitations of the data. While providers and health systems can look at quality and identify low-performing areas and work to make improvements, many people are accessing more services, so the cost is not necessarily decreasing.

From a benchmarking standpoint, Granite Health often cross-references against other data sources. They look at comparable populations to see how they are stacking against one another. Granite Health holistically reviews data across the health systems but does not drill down into practice-level data. However, practices are encouraged to drill-down into the data, make comparisons with other practices, and learn from each other.

Overall, Travis supported the preliminary NH HealthCost quality measure recommendations; however, he encouraged a focus on measures that are routine, offer opportunity for improvement, and are useful to both consumers and clinicians. For example, he noted that the Department of Health and Human Services reports on hospital infections. Of the measures suggested, he believes that MRSA and C.diff are less important than they were 10 years ago since so many improvements have been made in those areas. He did note that the colonoscopy measures are important as they represent one of the highest value services.

Amy Costello, Director of Health Analytics and Informatics, University of New Hampshire, College of Health and Human Services – November 1, 2017 at 11:00 am

Since some of the work Amy does overlaps with Jeanne Ryer, Amy was asked to differentiate the work from DHHS Medicare quality.

The University of New Hampshire developed a report suite for Accountable Care Organizations (ACOs) and state purchasers on oral health and substance abuse. The report utilizes data from Medicare, Medicaid and commercial health insurers. While quality metrics do not generally make a distinction between data types, some groupers and methodologies are trying to apply those distinctions in the commercial space or the converse. In the analytic world, Amy does not believe a distinction should be made between spaces.

When Amy worked on NH HealthCost, typical quality measure sources were reviewed, and Doris Lotz, former Chief Medical Officer at New Hampshire DHHS, helped review the list and select measures. Amy noted that it was challenging to select quality measures to report on since several measures only have hospital-level data. If the same measures could be conducted in the outpatient setting, it could make for a broader, more complete look at health care in New Hampshire. From a public health perspective, she finds it interesting to see evidence of primary care follow-up as a measure of quality (for example, if cardiovascular disease was identified, did a patient receive a lipid screening?).

Amy stays connected with trade organizations and via the All Payer Claims Database (APCD) Council. Through the [APCD Showcase website](#), Amy collects and utilizes cases on how APCD data is being used and appreciates being able to share methodologies with the network. She is also beginning preliminary work around dental quality measures.

Amy supported the preliminary recommendations and noted the importance of making the data digestible. For example, is the website audience aware that the HAI-5 measure is a good indicator of the experience they will have? If measures are rolled into an index or rating system, it may be easier for users to understand the information at a glance. She also suggested revisiting measure descriptions to make them more understandable. Amy also agreed that drilling down to get more detailed information is important, particularly since legislatures, researchers, and health care providers also use NH HealthCost.

Stakeholder Contact Information

NHID referred HSRI to the stakeholders mentioned above, and HSRI conducted 30-minute conversations with each.

Organization	Contact
Foundation for Healthy Communities	Anne Diefendorf, Associate Executive Director/VP Quality & Patient Safety adiefendorf@healthynh.com 603-415-4271
Granite Health Network	Travis Harker, MD, MPH, Chief Medical Officer tharker@granitehealth.org 603-415-1300
Citizens Health Initiative	Jeanne Ryer, Director Jeanne.Ryer@unh.edu 603-513-5126
Institute for Health Policy and Practice	Amy Costello, Director of Health Analytics and Informatics amy.costello@unh.edu 603-862-1241

Original Email Describing the Project and Inviting Stakeholders to the Conversation

Our team at Human Services Research Institute (HSRI) is currently working with the New Hampshire Insurance Department (NHID) to expand the quality information available on NH HealthCost. We believe integrating meaningful quality data into health care transparency websites is vital to combatting the belief among consumers that higher cost equals higher quality. The additional quality data, links or integrated sources, combined with the existing information, will help empower consumers to make value-based health care decisions.

Based on your knowledge and experience with quality data in New Hampshire, NHID recommended that we reach out to you to share our preliminary work and gather any insights, feedback and suggestions you may have.

We would like to schedule a 30-minute call with you to better understand:

1. What work have you or your organization done on quality?
2. What quality measures do you reference in your work?
3. Challenges and/or successes you have had with identifying sources and reporting on quality measures for non-hospital facilities.
4. If there are any publications on quality that you have done or referenced that we could review.
5. Any feedback on our preliminary work, as outlined below.

Please let us know your availability for the next couple weeks and we will work to get a brief call on the calendar.

To summarize our work to date, our team has reviewed more than 450 measures from 10 data sources, including:

- Agency for Healthcare Research and Quality (AHRQ)
- CMS Hospital Compare
- CMS Hospital and Consumer Assessment of Healthcare Providers and Systems (HCAHPS)
- Healthcare Cost and Utilization Project (HCUP)
- Healthcare Effectiveness Data and Information Set (HEDIS)
- Joint Commission
- Leapfrog
- National Healthcare Safety Network (NHSN)
- New Hampshire Comprehensive Health Care Information System (NHCHIS)
- Medicare Provider Analysis and Review (MEDPAR)

As part of the process, we also scored each measure against 15 criteria in the following categories:

1. Usefulness to New Hampshire Consumer
2. Ease of Obtaining Data
3. Ease of Updating Data
4. Ease of Implementing Data
5. Trusted Data Source

Pending feedback from stakeholders in New Hampshire, five preliminary measures have been recommended for inclusion on NH HealthCost:

Measure	Data Source
HAI-5 Methicillin-resistant Staphylococcus Aureus (MRSA) Blood Laboratory-identified Events (Bloodstream infections)	Hospital Compare (CDC through NHSN)
HAI-6 Clostridium difficile (C.diff.) Laboratory-identified Events (Intestinal infections)	Hospital Compare (CDC through NHSN)
OP-8 Outpatients with low-back pain who had an MRI without trying recommended treatments (such as physical therapy) first	CMS Outpatient Prospective Payment System, Hospital Outpatient Quality Reporting Program
OP-29 Percentage of patients receiving appropriate recommendation for follow-up screening colonoscopy	Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting
OP-30 Percentage of patients with history of polyps receiving follow-up colonoscopy in the appropriate timeframe	Hospital Compare; Hospital Inpatient Quality Reporting and Outpatient Quality Reporting

Again, we would greatly appreciate scheduling a 30-minute call to discuss. If you would, please send us your availability and we will work to get a call on the calendar by October 13.

Appendix 5: Measure Construction

The following tables detail the data documentation for the new measures we evaluated.

Patient survey summary star rating	
Framework Domain	Patient-Centered Care
Category	Patient Experience
Consumer-Friendly Measure Name	Overall Patient Experience
Consumer-Friendly Description	A summary rating on the hospital's overall performance for patient experience based on patient survey responses.
Data Source	CMS HCAHPS
Data Source Website	https://data.medicare.gov/data/archives/hospital-compare
Documentation	http://www.hcahpsonline.org/globalassets/hcahps/star-ratings/tech-notes/2017-10_star-ratings_tech-notes.pdf
Data Type	Hospital
Rating	<p>The HCAHPS Summary Star Rating is constructed from the following components:</p> <ol style="list-style-type: none"> 1. The Star Ratings from each of the 7 HCAHPS Composite Measures: Communication with Nurses, Communication with Doctors, Responsiveness of Hospital Staff, Pain Management, Communication about Medicines, Discharge Information, and Care Transition. 2. A Single Star Rating for the HCAHPS Individual Items: The average of the Star Ratings assigned to Cleanliness of Hospital Environment and Quietness of Hospital Environment. 3. A Single Star Rating for the HCAHPS Global Items: The average of the Star Ratings assigned to Hospital Rating and Recommend the Hospital. <p>The 9 Star Ratings (7 Composite Measure Star Ratings + Star Rating for Individual Items + Star Rating for Global Items) are combined as a simple average to form the HCAHPS Summary Star Rating. Normal rounding rules are applied to the 9-measure average to arrive at the HCAHPS Summary Star Rating (1, 2, 3, 4, or 5 stars).</p>
# NH Providers with Data	23
Risk Adjusted	Yes, clinical risk only
Facility Type	Hospital
Date of Most Recent Data	1/1/2016-12/31/2016
Update Frequency	Quarterly
Date of Next Update	4/1/2018

Display Format	Stars
Measure Coding	More stars are better
NH Score	35% with 3 stars; 57% with 4 stars; 9% with 5 stars
National Score	2% with 1 star; 15% with 2 stars; 40% with 3 stars; 38% with 4 stars; 5% with 5 stars

OP-8 Outpatients with low-back pain who had an MRI without trying recommended treatments (such as physical therapy) first

Framework Domain	Effective Care
Category	Low Back Pain
Consumer-Friendly Measure Name	Patients with Low Back Pain Who Received MRI Before Recommended Treatments
Consumer-Friendly Description	Outpatients with low back pain who had Magnetic Resonance Imaging (MRI) before trying recommended treatments, such as physical therapy.
Data Source	CMS Outpatient Prospective Payment System, Hospital Outpatient Quality Reporting Program
Data Source Website	https://data.medicare.gov/data/archives/hospital-compare
Documentation	OP08MeasureInformationForm
Data Type	Medicare claims for hospitals paid through Outpatient Prospective Payment System (OPPS)
Numerator	Medicare beneficiaries without pre-existing claim for non-MRI low back pain treatment who receive an outpatient low back MRI in hospitals reimbursed through OPPS.
Denominator	Medicare beneficiaries with a CPT code for lumbar-spine MRI and low back pain ICD code during a one-year time window of claims data.
# NH Providers with Data	10
Risk Adjusted	No
Facility Type	Hospital
Date of Most Recent Data	7/1/2015-6/30/2016
Update Frequency	Annually in July
Date of Next Update	7/1/2018
Display Format	Percentages
Measure Coding	Lower percentages are better
NH Score	34.9%
National Score	39.8%

OP-29 Percentage of patients receiving appropriate recommendation for follow-up screening colonoscopy

Framework Domain	Effective Care
Category	Colonoscopy
Consumer-Friendly Measure Name	Patients with Normal Colonoscopy Who Received Appropriate Recommendation for Follow-Up
Consumer-Friendly Description	Patients ages 50-75 with a normal colonoscopy, without biopsy or polypectomy, who received a recommendation for a follow-up colonoscopy in at least 10 years.
Data Source	CMS Outpatient Prospective Payment System, Hospital Outpatient Quality Reporting Program
Data Source Website	https://data.medicare.gov/data/archives/hospital-compare
Documentation	OP29MeasureInformationForm
Data Type	Hospital
Numerator	Patients who had a recommended follow-up interval of at least 10 years for repeat colonoscopy documented in their colonoscopy report.
Denominator	All patients aged 50 to 75 years of age receiving screening colonoscopy without biopsy or polypectomy.
Data Submitters	Hospital
# NH Providers with Data	14
Risk Adjusted	No
Facility Type	Hospital
Date of Most Recent Data	1/1/2015-12/31/2015
Update Frequency	Annually in December
Date of Next Update	12/1/2018
Display Format	Percentages
Measure Coding	Higher percentages are better
NH Score	88%
National Score	81%

HAI-5 Methicillin-resistant Staphylococcus Aureus (MRSA) Blood Laboratory-identified Events (Bloodstream infections)

Framework Domain	Safe Care
Category	Healthcare-Associated Infections
Consumer-Friendly Measure Name	Patients Infected with MRSA While at Hospital
Consumer-Friendly Description	The ratio of inpatients who contracted the blood stream infection Methicillin Resistant Staphylococcus Aureus (MRSA) during their hospital stay to the expected rate of infection. The national score is 1 and the lower the ratio the better.
Data Source	CMS Hospital Inpatient Quality Reporting (IQR)
Data Source Website	https://data.medicare.gov/data/archives/hospital-compare
Documentation	http://www.hospitalsafetygrade.org/media/file/measure_sheet_MRSA.pdf
Data Type	Hospital
Numerator	Total number of observed hospital-onset unique blood source MRSA LabID events among all inpatients in the facility.
Denominator	Total number of expected hospital-onset unique blood source MRSA LabID events, calculated by multiplying the number of inpatient days for the facility by the hospital-onset MRSA LabID event rate for the same types of facilities (obtained from the standard population). Data from patients who are not assigned to an inpatient bed are excluded from the denominator counts. These include outpatient clinic and emergency department visits.
# NH Providers with Data	7
Risk Adjusted	Yes
Facility Type	Hospital
Date of Most Recent Data	1/1/2016-12/31/2016
Update Frequency	Quarterly
Date of Next Update	4/1/2018
Display Format	Ratios
Measure Coding	Lower ratios are better
NH Score	0.726
National Score	1

HAI-6 Clostridium difficile (C.diff.) Laboratory-identified Events (Intestinal infections)

Framework Domain	Safe Care
Category	Healthcare-Associated Infections
Consumer-Friendly Measure Name	Patients Infected with C.diff While at Hospital
Consumer-Friendly Description	The ratio of inpatients who were infected with Clostridium difficile (C.diff), a bacteria that causes intestinal infections, during their hospital stay to the expected rate of infection. The national score is 1 and the lower the ratio the better.
Data Source	CMS Hospital Inpatient Quality Reporting (IQR)
Data Source Website	https://data.medicare.gov/data/archives/hospital-compare
Documentation	http://www.hospitalsafetygrade.org/media/file/measure_sheet_Cdiff.pdf
Data Type	Hospital
Numerator	Total number of observed hospital-onset CDI LabID events among all inpatients in the facility, excluding well baby-nurseries and NICUs
Denominator	Total number of expected hospital-onset CDI LabID events, calculated using the facility's number of inpatient days, bed size, affiliation with medical school, microbiological test used to identify C. difficile, and community-onset CDI admission prevalence rate.
# NH Providers with Data	22
Risk Adjusted	Yes
Facility Type	Hospital
Date of Most Recent Data	1/1/2016-12/31/2016
Update Frequency	Quarterly
Date of Next Update	4/1/2018
Display Format	Ratios
Measure Coding	Lower ratios are better
NH Score	1.195
National Score	1

Appendix 6: Design Details

A high-resolution PDF, *NHHealthCost_QualityDisplayRecommendations*, is also available in the final materials.



Quality care is getting the care you need when you need it.
Are health care providers in New Hampshire providing high quality care? [View data on patient experience and health care services and procedures to see how your provider compares to others.](#)

Patient-Centered Care
Meeting a patient's wants and needs.

Timely Care
Reducing waits and harmful delays for those who give and receive care.

Effective Care
Providing services proven to get results.

Safe Care
Protecting patients from medical errors and does not cause harm.

I'm interested in quality of:

Patient-Centered Care

▼ Patient Experience
Area Around Room was Always Quiet at Night
Hospital Recommended by Patients
Doctors Always Communicated Well
Nurses Always Communicated Well
Pain was Always Controlled Well
Help Was Always Received
Best Hospital Experience
Room was Always Clean
Hospital Staff Provided Discharge Information

Timely Care

> Emergency Department
> Heart Attacks

Effective Care

> Colonoscopy
> Heart Attacks
> Low Back Pain
> Pregnancy

Safe Care

> Healthcare-Associated Infections



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Patient-Centered Care
Meeting a patient's wants and needs.


Timely Care
Reducing waits and harmful delays for those who give and receive care.


Effective Care
Providing services proven to get results.


Safe Care
Protecting patients from medical errors and does not cause harm.

I'm interested in quality of:

Patient-Centered Care

-  Patient Experience
 - Pain was Always Well Controlled



I'm interested in quality of:

Pain was Always Well Controlled

Show results in:

Zip Code Entire State

Within 25 miles of

Actual driving distance may vary.

Search

Pain was Always Well Controlled

Patients who reported that hospital staff "always" asked about their pain and how to treat it.

Avoid a surprise.
Know how much procedures cost before you receive care.

Compare Costs at Facilities Near You

<input checked="" type="checkbox"/> Select Providers to Compare Sort by Facility		Performance	National Average: 94%
<input checked="" type="checkbox"/>	Exeter Hospital	Below the average	87%
<input checked="" type="checkbox"/>	Franklin Regional Hospital	Near the average	97%
<input type="checkbox"/>	Frisbie Memorial Hospital	Better than average	100%
<input type="checkbox"/>	Mary Hitchcock Memorial Hospital	Near the average	94%
<input checked="" type="checkbox"/>	Monadnock Community Hospital	Near the average	99%

Source: [Centers for Medicare & Medicaid Services](#)

Measure Period: This data is based on actual patient experiences from April 2014 to March 2015. Results are from patient surveys that were collected from the National Hospital Consumer Assessment of Healthcare Providers and Systems.

[Learn more about the methodology](#)



I'm interested in quality of:

Pain was Always Well Controlled

Show results in:

Zip Code

Entire State

Actual driving distance may vary.

Within 25 miles of

Search

Pain was Always Well Controlled

Patients who reported that hospital staff "always" asked about their pain and how to treat it.

Avoid a surprise.
Know how much procedures cost before you receive care.

Performance
The facility's rating for this measure in comparison to the National Average (rating of all hospitals in the United States who report this measure).

<input checked="" type="checkbox"/> Select Providers to Compare Sort by Facility		Performance	National Average: 94%
<input checked="" type="checkbox"/>	Exeter Hospital	Below the average	87%
<input checked="" type="checkbox"/>	Franklin Regional Hospital	Near the average	97%
<input type="checkbox"/>	Frisbie Memorial Hospital	Better than average	100%
<input type="checkbox"/>	Mary Hitchcock Memorial Hospital	Near the average	94%
<input checked="" type="checkbox"/>	Monadnock Community Hospital	Near the average	99%

Source: [Centers for Medicare & Medicaid Services](#)

Measure Period: This data is based on actual patient experiences from April 2014 to March 2015. Results are from patient surveys that were collected from the National Hospital Consumer Assessment of Healthcare Providers and Systems.

[Learn more about the methodology](#)



I'm interested in quality of:

Pain was Always Well Controlled

Show results in:

Zip Code Entire State

Within 25 miles of

Actual driving distance may vary

Search

Pain was Always Well Controlled

Patients who reported that hospital staff "always" asked about their pain and how to treat it.

Avoid a surprise.
Know how much procedures cost before you receive care.

Compare Costs at Facilities Near You

<input checked="" type="checkbox"/> Select Providers to Compare Sort by Facility		Performance	National Average: 94%
<input checked="" type="checkbox"/>	Exeter Hospital	Below the average	87%
<input checked="" type="checkbox"/>	Franklin Regional Hospital	Near the average	97%
<input checked="" type="checkbox"/>	Monadnock Community Hospital	Near the average	99%
<input type="checkbox"/>	Frisbie Memorial Hospital	Better than average	100%
<input type="checkbox"/>	Mary Hitchcock Memorial Hospital	Near the average	94%

Source: [Centers for Medicare & Medicaid Services](#)

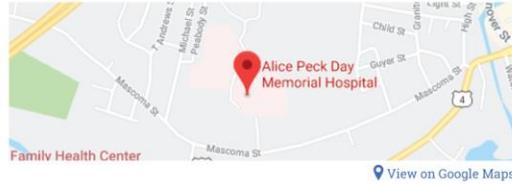
Measure Period: This data is based on actual patient experiences from April 2014 to March 2015. Results are from patient surveys that were collected from the National Hospital Consumer Assessment of Healthcare Providers and Systems.

[Learn more about the methodology](#)



Alice Peck Day Memorial Hospital

10 Alice Peck Day Drive Lebanon, NH 03766
http://www.alicepeckday.org/
603.488.3121



View on Google Maps

Patient-Centered Care

Overall Patient Experience



8 out of 10

Patients recommend the hospital (83%)



Best Hospital Experience	78%
Area Around Room Was Always Quiet at night	79%
Nurses Always Communicated Well	94%
Doctors Always Communicated Well	75%
Pain Was Always Controlled Well	97%
Room Was Always Clean	58%
Help Was Always Received	92%
Hospital Staff Provided Discharge Information	93%

Health Costs

Quality of Care

Printer Friendly Version

Timely Care

- > Emergency Department
- > Heart Attacks

Effective Care

- > Colonoscopy
- > Heart Attacks
- > Low Back Pain
- > Pregnancy

Safe Care

- > Healthcare-Associated Infections

Quality care is getting the care you need when you need it.

Find answers to commonly asked questions:

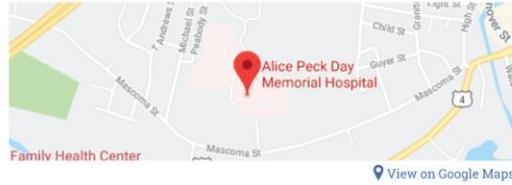
I received an Explanation of Benefits (EOB) in the mail from my insurance company. Is this a bill?

Learn more



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View on Google Maps

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Quality care
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when you need it.

Find answers to commonly asked questions:

I received an Explanation of Benefits (EOB) in the mail from my insurance company. Is this a bill?

Learn more

Health Costs

Quality of Care

Printer Friendly Version

Timely Care

Emergency Department		
Mothers with Elective Delivery	Better than average	90% state average (85%)
Received Influenza (Flu) Shot	Near the average	87% state average (84%)
Time Spent in Emergency Department Before Seeing Healthcare Provider	Near the average	87% state average (83%)
Time Spent in Emergency Department Before Being Admitted	Better than average	95% state average (86%)
Time Spent in Emergency Department After Admitted Before Getting to Room	Near the average	86% state average (82%)
Time Spent in Emergency Department Before Being Discharged	Near the average	86% state average (85%)
Time Spent Before Receiving Pain Treatment for Long Bone Fracture	Better than average	90% state average (83%)
Time Spent Before Receiving Electrocardiography (ECG)	Near the average	88% state average (86%)
Patients with Chest Pain or Possible Heart Attack Received Aspirin at Arrival	Better than average	92% state average (85%)
Patients Given PO (to Open Blocked Vessels) Within 90 Minutes of Arrival	Near the average	90% state average (84%)
Patients with Stroke Symptoms Who Received Head CT Scan at Arrival	Near the average	90% state average (87%)
Pneumonia Patients Received Initial Antibiotic Selection for Community Acquired Pneumonia	Better than average	93% state average (85%)

Heart Attacks

Effective Care

- Colonoscopy
- Heart Attacks
- Low Back Pain
- Pregnancy

Safe Care

- Healthcare-Associated Infections



I'm interested in the cost of:

Compare Health Costs for:

Medical Procedures
 Dental Procedures

[Search](#)

Filter by Insurance Carrier + ⓘ

Show Costs by Plan Type + ⓘ

Individual (self-purchased) Medical Plans
 Group (employer) Medical Plans

[Search](#)

MRI-Back (outpatient)

Medical Procedures | Procedure Code 72148

Magnetic resonance imaging of the spinal canal, without contrast material.

The cost for this procedure includes other health care services that were received at the same time.

Does your provider perform

▲ Better than average

for a related procedure?

[View Quality Ratings](#)

<input checked="" type="checkbox"/> Select Providers to Compare Sort by Facility	Estimate of Total Cost ⓘ	What You Will Pay ⓘ	Typical Patient Complexity ⓘ
<input checked="" type="checkbox"/> Access Sports Medicine & Orthopedics	\$352	\$352	● Medium
<input checked="" type="checkbox"/> Alice Peck Day Memorial Hospital	\$74	\$48	● Medium
<input type="checkbox"/> All Care Medical Associates	\$110	\$110	● Medium
<input type="checkbox"/> Ammonoosuc Community Health Services	\$76	\$76	● Medium
<input checked="" type="checkbox"/> Androscoggin Valley Hospital	\$198	\$129	● Medium

Appendix 7: Supporting Content

Recommended New Measures: Framework, Categories, Measure Names and Descriptions

Framework Structure

NAME	DEFINITION
<i>Patient-Centered Care</i>	Meeting a patient’s wants and needs.
<i>Timely Care</i>	Reducing waits and harmful delays for those who give and receive care.
<i>Effective Care</i>	Providing services proven to get results.
<i>Safe Care</i>	Protect patients from harmful medical errors and does not cause harm.

Measure Hierarchy

Patient-Centered Care

PATIENT EXPERIENCE

- *Overall Patient Experience*

A summary rating on the hospital’s overall performance for patient experience based on patient survey responses.

Effective Care

LOW BACK PAIN

- *Patients with Low Back Pain Who Received MRI Before Recommended Treatments*
Outpatients with low back pain who had Magnetic Resonance Imaging (MRI) before trying recommended treatments, such as physical therapy.

COLONOSCOPY

- *Patients with Normal Colonoscopy Who Received Appropriate Recommendation for Follow-Up*
Patients ages 50-75 with a normal colonoscopy, without biopsy or polypectomy, who received a recommendation for a follow-up colonoscopy in at least 10 years.

Safe Care

- *Patients Infected with MRSA While at Hospital*

The ratio of inpatients who contracted the blood stream infection Methicillin Resistant Staphylococcus Aureus (MRSA) during their hospital stay to the expected rate of infection. The national score is 1 and the lower the ratio the better.

- *Patients Infected with C.diff While at Hospital*

The ratio of inpatients who were infected with Clostridium difficile (C.diff), a bacteria that causes intestinal infections, during their hospital stay to the expected rate of infection. The national score is 1 and the lower the ratio the better.

Roll-Over Text

Performance

The facility's rating for this measure in comparison to the National Average (rating of all hospitals in the United States who report this measure).

Existing Measures: Categories, Measure Names and Descriptions

The content below was provided as an interim deliverable to NH HealthCost in December 2017. The content enhancements provide consistent, user-friendly category names, procedure names and descriptions across all existing measures, and the order of the procedures were also reorganized and informed by Google Analytics data. Please refer to [Exhibit 2](#), Recommended Existing Quality Measures, for details on how to organize measures in the framework going forward.

Patient Experience

HOSPITAL RECOMMENDED

Patients who reported that they would "definitely" recommend the hospital.

BEST HOSPITAL EXPERIENCE

Patients who reported a "9" or "10" on a scale of 0 to 10, with 0 being the "worst hospital possible" and 10 being the "best hospital possible."

AREA AROUND ROOM WAS ALWAYS QUIET AT NIGHT

Patients who reported that the area around their room was "always" quiet at night.

NURSES ALWAYS COMMUNICATED WELL

Patients who reported that their nurses "always" explained things in a way they could understand, treated them with courtesy and respect, and listened carefully.

DOCTORS ALWAYS COMMUNICATED WELL

Patients who reported that their doctors “always” treated them with courtesy and respect and listened carefully.

PAIN WAS ALWAYS WELL CONTROLLED

Patients who reported that hospital staff “always” asked about their pain and how to treat it.

ROOM WAS ALWAYS CLEAN

Patients who reported that their hospital room and bathroom were “always” kept clean.

HELP WAS ALWAYS RECEIVED

Patients who reported that they “always” received help as soon as they wanted.

HOSPITAL STAFF PROVIDED DISCHARGE INFORMATION

Patients who reported that “yes,” hospital staff asked about any help needed after leaving the hospital and gave information about what to do during recovery at home.

Timely and Effective Care

MOTHERS WITH ELECTIVE DELIVERY

Newborns whose deliveries were scheduled 1-3 weeks early, when a scheduled delivery was not medically necessary.

RECEIVED INFLUENZA (FLU) SHOT

Patients who were assessed and given an influenza (flu) vaccination.

TIME SPENT IN THE EMERGENCY DEPARTMENT BEFORE SEEING HEALTHCARE PROVIDER

The average time patients spent in the Emergency Department before they were seen by a healthcare provider.

TIME SPENT IN THE EMERGENCY DEPARTMENT BEFORE BEING ADMITTED

The average time patients spent in the Emergency Department before they were admitted to the hospital as an inpatient.

TIME SPENT IN EMERGENCY DEPARTMENT AFTER BEING ADMITTED BEFORE GETTING TO ROOM

The average time patients spent in the Emergency Department, after the doctor decided to admit them as an inpatient, before leaving the Emergency Department for their hospital room.

TIME SPENT IN THE EMERGENCY DEPARTMENT BEFORE BEING DISCHARGED

The average time patients spent in the Emergency Department before being sent home.

TIME SPENT BEFORE RECEIVING PAIN TREATMENT FOR LONG BONE FRACTURE

The average time patients who came to the Emergency Department with broken bones had to wait before receiving pain medication.

TIME SPENT BEFORE RECEIVING ELECTROCARDIOGRAPHY (ECG)

The average time before outpatients with chest pain or possible heart attack received an ECG to record the electrical activity of their heart at rest to determine if they are having a heart attack.

PATIENTS WITH CHEST PAIN OR POSSIBLE HEART ATTACK RECEIVED ASPIRIN AT ARRIVAL

Outpatients with chest pain or possible heart attack who received aspirin within 24 hours of arrival.

PATIENTS GIVEN PCI (TO OPEN BLOCKED VESSELS) WITHIN 90 MINUTES OF ARRIVAL

Heart attack patients who were given Percutaneous Coronary Intervention (PCI) within 90 minutes of arrival. PCI is a non-surgical procedure for opening blocked blood vessels that cause heart attacks.

PATIENTS WITH STROKE SYMPTOMS WHO RECEIVED HEAD CT SCAN AT ARRIVAL

Patients with stroke symptoms who went to the Emergency Department and received a brain scan within 45 minutes of arrival.

PNEUMONIA PATIENTS RECEIVED INITIAL ANTIBIOTIC SELECTION FOR COMMUNITY ACQUIRED PNEUMONIA

Pneumonia patients who were given the most appropriate initial antibiotic(s) within 24 hours of arrival.

Stroke Care

DISCHARGED ON ANTICOAGULATION (BLOOD THINNING) THERAPY FOR ATRIAL FIBRILLATION/FLUTTER

How often ischemic stroke patients (stroke resulting from an obstructed blood vessel in the brain) with a quivering or irregular heartbeat were prescribed anticoagulation (blood thinning) therapy at hospital discharge.

GIVEN ANTITHROMBOTIC (BLOOD THINNING) THERAPY BY THE SECOND DAY IN THE HOSPITAL

How often ischemic stroke patients (stroke resulting from an obstructed blood vessel in the brain) were administered antithrombotic (blood thinning) therapy by the end of their second day in the hospital.

ASSESSED FOR REHABILITATION

How often ischemic or hemorrhagic stroke patients (stroke resulting from an obstructed or ruptured blood vessel in the brain) were assessed for rehabilitation.

DISCHARGED ON ANTITHROMBOTIC THERAPY

How often ischemic stroke patients (stroke resulting from an obstructed blood vessel in the brain) were prescribed antithrombotic (blood thinning) therapy at hospital discharge.

DISCHARGED ON STATIN MEDICATION (TO LOWER CHOLESTEROL)

How often ischemic stroke patients (stroke resulting from an obstructed blood vessel in the brain) were prescribed statin medication (to lower cholesterol) at hospital discharge.

RECEIVED STROKE EDUCATION MATERIALS

How often ischemic or hemorrhagic stroke patients (stroke resulting from an obstructed or ruptured blood vessel in the brain) or their caregivers were given stroke educational materials.

ASSESSED WITH THROMBOLYTIC THERAPY (TO BREAK DOWN BLOOD CLOTS)

Ischemic stroke patients (stroke resulting from an obstructed blood vessel in the brain) whose brain blood flow was measured after they were treated with reperfusion grade of thrombolysis to break down clots.

ASSESSED FOR PREVENTION OF LEG BLOOD CLOTS (VENOUS THROMBOEMBOLISM - VTE - PROPHYLAXIS)

The number of hospitalized patients at risk for VTE (blood clots in the legs) who had education on the following within 24 hours of being admitted: 1) Risk of VTE, 2) Signs and Symptoms, 3) Early and Frequent Mobilization, and 4) Clinically Appropriate Treatment/Prophylaxis Methods.

Leg Blood Clot Treatments (Venous Thromboembolism – VTE)

VTE PREVENTION (PROPHYLAXIS) IN THE INTENSIVE CARE UNIT

The number of patients who received prevention for leg blood clots or have documentation why prevention was given either: 1) The day of or the day after admission or transfer to the Intensive Care Unit (ICU), or 2) After the surgery end date for surgeries that start the day of or the day after ICU admission or transfer.

PATIENTS WITH VTE GIVEN DISCHARGE INSTRUCTIONS

The number of patients diagnosed with leg blood clots who are discharged to home, to home with home health, or to home hospice on warfarin with written discharge instructions that address all four criteria: 1) Compliance Issues, 2) Dietary Advice, 3) Follow-Up monitoring, and 4) Information About the Potential for Adverse Drug Reactions/Interactions.

VTE PATIENTS WHO RECEIVED OVERLAP THERAPY

The number of patients diagnosed with leg blood clots who received an overlap of parenteral anticoagulation therapy (blood thinning) and warfarin therapy (blood clot prevention). Patients who received less than five days of overlap therapy must be discharged on both medications.

VTE PREVENTION (PROPHYLAXIS)

The number of patients who received prevention for leg blood clots or have documentation why no prevention was given either: 1) The day of or the day after hospital admission, or 2.) Surgery end date for surgeries that start the day of or the day after hospital admission.

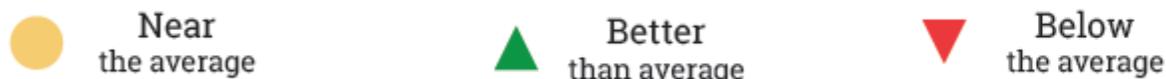
Methodology for Quality of Care

A section on the existing Methodology for Health Costs for Consumers is dedicated to Quality Indicators. We recommend removing this section and adding an additional sub-page specific to “Methodology for Quality of Care.” The content could read as follows:

Overview

NH HealthCost uses quality data from three secondary data sources: The Centers for Medicare & Medicaid Services, the National Healthcare Safety Network and the Joint Commission.

Word icons—Better than Average, Near the Average, and Below the Average—are used to indicate how a hospital’s performance in comparison to the national average. When a hospital performs within 5% of the national average, they are considered Near the Average. When a hospital performs greater than 5% in either direction of the national average, they are ranked Better than Average or Below the Average.



The Centers for Medicare & Medicaid Services

The Centers for Medicare & Medicaid Services (CMS) collects a variety of quality information through the [Hospital Quality Initiative](#). This Initiative makes use of a variety of data sources to provide a more complete picture of hospital quality including inpatient and outpatient data, Medicare payment data, and consumer surveys. The intent is to help improve hospitals' quality of care by distributing objective, easy to understand data on hospital performance, and quality information from consumer perspectives.

On NH HealthCost, we report on CMS measures from the following categories and data sources:

FRAMEWORK DOMAIN	CATEGORY	DATA SOURCE	PERFORMANCE
<i>Patient-Centered Care</i>	<i>Patient Experience</i>	CMS HCAHPS	The more stars, or higher the percentage, the better.
<i>Timely Care</i>	<i>Emergency Department</i>	CMS Hospital Inpatient and Hospital Outpatient Quality Reporting Program	The lower the wait time, in minutes, or higher the percentage, the better.
<i>Timely Care</i>	<i>Heart Attacks</i>	CMS Hospital Inpatient and Hospital Outpatient Quality Reporting Program	The higher the percentage, the better.
<i>Effective Care</i>	<i>Colonoscopy</i>	CMS Hospital Inpatient and Hospital Outpatient Quality Reporting Program	The higher the percentage, the better.
<i>Effective Care</i>	<i>Low Back Pain</i>	CMS Outpatient Prospective Payment System, CMS Hospital Outpatient Quality Reporting Program	The lower the percentage, the better.

[Learn more about the methodology used by CMS.](#)

The National Healthcare Safety Network

The National Healthcare Safety Network (NHSN) is a data tool operated by the Centers for Disease Control and Prevention (CDC) used to track Healthcare-Associated Infections (HAIs), including C.diff and MRSA, at over 17,000 medical facilities. It is used to measure progress with the goal of eliminating HAIs. Data are made available to medical facilities on the CDC website and to consumers on CMS's Hospital Compare website.

The HAI quality ratings use a Standardized Infection Ratio (SIR) which accounts for the differences between hospitals and patients. The lower the ratio, the better the facility is at preventing infections. The SIR can be interpreted as follows:

- A ratio less than 1 – fewer infections than predicted.
- A ratio equal to 1 – as many infections as predicted.
- A ratio greater than 1 – more infections than predicted.

FRAMEWORK DOMAIN	CATEGORY	DATA SOURCE	PERFORMANCE
<i>Safe Care</i>	<i>Healthcare-Associated Infections</i>	<i>NHSN</i>	<i>The lower the ratio, the better.</i>

[Learn more about the methodology used by the NHSN.](#)

The Joint Commission

The Joint Commission is an organization with a long-proven ability to identify, test, and specify standardized performance measures. The Joint Commission's National Quality Improvement Goals (NQIGs) data collection initiative obtains data on quality of care indicators in up to five treatment areas: Heart attack, heart failure, community acquired pneumonia, pregnancy and related conditions, and surgical infection prevention. These conditions are the most common reasons that patients go to the hospital and they affect hundreds of thousands of patients each year. Patients who are treated according to the guidelines stated in the NQIGs are more likely to improve or and have good outcomes of care.

On NH HealthCost, we report on one measure for pregnancy care from the Joint Commission.

FRAMEWORK			
DOMAIN	CATEGORY	DATA SOURCE	PERFORMANCE
<i>Effective Care</i>	<i>Pregnancy Care</i>	The Joint Commission	The lower the percentage, the better.

[Learn more about the methodology used by the Joint Commission.](#)