

State-of-the-Art of Hospital and Physician/Physician Group Public Reports

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8-10-11

**Commissioned by the Agency for Healthcare Research and Quality (AHRQ) for the
National Summit on Public Reporting for Consumers**

**March 3, 2011
Washington, DC**

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Abstract

Public reporting about hospitals and physicians has now been part of American health care for over 25 years. What began with efforts by federal and state governments, the media, large employers and consumer groups, has evolved into a larger scale effort to bring comparative performance information to the public to assist with decision making and to drive quality improvement. In this paper, we summarize our review of 126 hospital and 27 physician/physician group websites which focused on examining the type of information being made available to the public and the different display formats used to convey the performance information. We find a wide range of process, outcome, structural, patient experience of care and cost or charge information being reported on hospital and physician/physician group public report card websites. We observed a high degree of variation in the presentation formats used by report sponsors, including a wide range of features to help consumers identify better performers. The balance and resulting tension between standardization and variation and innovation in measure use and how results are presented are important issues to consider as public reporting evolves.

INTRODUCTION

Over the past 25 years, there has been a growing effort to measure and publicly report on the performance of health plans, health facilities and health professionals. What began with a few federal and state activities in the early 1980s has evolved into widespread activity by a variety of sponsors to convey a range of information about the performance of healthcare providers. The growth in performance measurement and the emergence of the Internet have accelerated the ability to construct and disseminate report cards to the public in many communities across the United States. The topic of public reporting of provider performance is particularly salient among the American public according to a recent Pew Internet and American Life Project survey that found that 44% of Internet users looked for information about doctors or health professionals and 35% looked for information about hospitals or other medical facilities (Fox, 2011).

While there has been a well-spring of activity to create public report cards for consumers, it is worth pausing to consider what is the current state of public reporting, what should public reporting optimally look like in the future, and what issues need to be addressed to move towards that desired future. To provide background information for the AHRQ National Summit on Public Reporting for Consumers, we were asked to review the current state of public reporting regarding provider performance. The scope of our review was framed around two areas:

1. Understanding the type of information being made available to the public for both the hospital and physician/physician group settings.
2. Examining the different display formats used to convey information to the consumer.

The remainder of this paper is organized around these two topics. At the close of this white paper, we raise a set of questions for discussion at the Summit.

BACKGROUND

Previous reviews of hospital and physician/physician group public websites have looked at the range of public reports available in the United States including Roski and Kim (2009) who found that most of the 40 regional and non-regional public reporting initiatives they surveyed in late 2008 were sponsored by government or non-profit organizations and used measures endorsed by national quality organizations. A study of over 70 public reporting programs done by Mathematica for the National Quality Forum found that over 60% of programs reviewed were state level and over 70% had begun reporting in 2005 or afterward (O'Neill, Schurrer and Simon, 2010). The important role of health plans in providing hospital and physician reports was noted in a review of 263 public reports in 21 geographic areas conducted by Christianson, et al. (2010), with half of hospital reports providing measures available through the CMS Hospital Compare website. After a detailed review of the contents of state health programs in 25 states, Ross, Sheth and Krumholz (2010) suggested that states consider using a single, easily navigable website that included information from each of their public reporting initiatives.

This review amplifies and extends the findings in these public report reviews by looking at a broad range of both public and private hospital and physician/physician group public reports nationwide. It

examines the range of measures across measure type (i.e. structure, process, outcome etc.) while also providing examples of unique activities that are seen in a smaller number of public reports.

ENGAGING CONSUMERS

This report also looked at the different presentation frameworks and techniques used to convey information to the public. Interpreting the information and conclusions from a public report can be difficult cognitive work for consumers—particularly as the number of variables to consider increases (Vaiana and McGlynn, 2002). Given the lack of basic consumer understanding of concepts related to quality, experts have argued for the use of “frameworks” or categorization schemes to help patients better understand quality. Of particular note is the framework utilized in the Institute of Medicine's report: *Crossing the Quality Chasm*: effectiveness, safety, patient-centeredness, timeliness, equity and efficiency (Hibbard, 2004). This review examined the types of frameworks currently being used by websites to organize and convey information to the public.

The review also looked at various techniques used to display information to reduce the cognitive burden needed to interpret performance results including, summarizing information, interpreting and highlighting meaning for users and narrowing options (Hibbard and Sofaer, 2010). While the report looked at performance formats and techniques, it was beyond the scope of the review to evaluate actual consumer use of the sites. Whether the sites were used and understood by consumers, whether it impacted their behavior and how a site sponsor would know are intriguing questions for further study.

METHODOLOGY

This report reviewed the content and other features of 126 hospital performance websites and 27 physician/physician group performance websites. The review occurred between November and December 2010. The public reports were drawn from the database of the Informed Patient Institute (IPI), a non-profit organization dedicated to providing consumer access to credible online information about quality and patient safety. In 2007, IPI staff systematically identified every state and national public report about certain types of health facilities and health professionals—including hospital and physician/physician group public reports. Since that time, the database has been maintained and updated.

To be included in this review, the websites had to be freely available, published between 2006 and 2010 and contain some type of comparative information about hospitals or physicians/physician groups such as clinical quality information, patient experience of care, patient safety, cost or charge information or regulatory information such as complaints or enforcement actions. In the case where sites included multiple years of public reports, only the most recent report was reviewed. While the vast majority of sites were designed for consumers, some sites had comparative performance information that was thought to be of interest to consumers, though it was presented in a more technical format not necessarily designed for consumers (such as infection reporting). There are other national for-profit rating sites that feature patient-generated ratings and other background information about hospitals and physicians that were not included in this review given time and resource constraints. Hospital or physician/physician group sites that were sponsored by health plans were also not included in the review.

In consultation with staff at AHRQ, our review was framed to address two areas:

1. Understanding the type of information being made available to the public for both the hospital and physician/physician group settings.
2. Examining the different display formats used to convey the information to the consumer.

Application of these areas to test websites led to further refinements and a final scheme that included the following topic areas: General Information, Measure Type, Presentation Format and Display of Methods used to Score Providers. After testing consistent application of the criteria in two initial waves of 12 sites each, two reviewers independently assessed a portion of the remaining sites using an excel spreadsheet. Analysis focused on whether the website had or did not have a particular feature—with any questions noted, discussed and resolved between the two reviewers. Within many categories, “other” types of information were also captured and analyzed.

OVERVIEW OF HOSPITAL AND PHYSICIAN/PHYSICIAN GROUP PUBLIC REPORTS

About one-half of the 126 reviewed hospital sites (59) were sponsored by government entities, one-half (62) by non-profit organizations and a small number (5) by for-profit companies. Within these sectors, the largest sponsor of sites were state governments who oversaw 44% (56) of the hospital reports reviewed. The next largest category were hospital associations that sponsored 25% (32) of the reviewed sites. Multi-stakeholder collaboratives-comprised of representatives from hospitals, physician groups, employers, insurers and consumers-made up 15% (19) of the site sponsors. The remaining 15% of the sites were sponsored by employer organizations (7), media (4- *Hartford Courant*, Hearst newspapers, *Las Vegas Sun*, and *U.S. News and World Report*), the federal government (2), foundations (2-California HealthCare Foundation, The Commonwealth Fund), an accrediting organization (1-The Joint Commission), a for-profit company (1-HealthGrades), a city agency (1-NY City Hospital and Health Corporation) and a consumer group (1-Consumer Reports).

With reference to the 27 physician/physician group public reports, 74% of the sites (20) were sponsored by non-profit organizations. Sixteen of those sites were collaboratives, while the remaining four were sponsored by an accreditor (NCQA), a physician-related association (Association of State Medical Board Executive Directors), a consumer organization (Consumer Checkbook) and an employer organization (CO Business Group on Health). The seven government-sponsored physician public report sites were sponsored by state governments.

Nineteen of the physician/physician group sites reviewed also published information on hospitals. In addition, 19 (15%) of the hospital sites also included information on nursing homes and 16 (13%) included information on health plans. Other types of information that were available on some sites included reports on ambulatory surgery centers, assisted living facilities, dialysis centers, home health agencies, hospices, prescription drugs and rehabilitation facilities.

Geographic Availability

Some level of information about hospitals and physicians/physician groups is available in every state through one of the seven national hospital reporting efforts and 2 national physician reporting efforts reviewed. These are:

National Hospital Public Reports:

- Center for Medicare and Medicaid Service's (CMS) Hospital Compare (<http://www.hospitalcompare.hhs.gov/>)
- Commonwealth Fund's Why Not the Best? (<http://www.whynotthebest.org/>)
- Department of Veteran's Affairs' VA Hospital Compare (<http://www.hospitalcompare.va.gov/>)
- HealthGrades (<http://www.healthgrades.com/>)
- Joint Commission's Quality Check (<http://www.qualitycheck.org/consumer/searchQCR.aspx>)
- The Leapfrog Group (<http://www.leapfroggroup.org/cp>)
- U.S. News and World Reports Best Hospitals (<http://health.usnews.com/best-hospitals>)

National Physician Public Reports:

- NCQA's Recognized Physician Directory <http://recognition.ncqa.org/>
- Association of State Medical Board Executive Director's DocFinder which links to all state medical licensing information (<http://www.docboard.org/docfinder.html>)

In addition, 44 other states plus the District of Columbia have at least one state or regional hospital public report in their state. The states with the highest number of hospital public reports are California, Minnesota and Oregon with six reports each and New York with five reports. Colorado, Michigan, New Hampshire, Nevada, Ohio, and Tennessee each have four reports. In addition, many of these states are included in sites that report on multiple states. States with no state or region-specific hospital reports found included Alaska, Hawaii, Montana, North Dakota and Wyoming. There were five public reports that provided information in multiple states. **(See Figure 1. Number of state or region-specific hospital and physician/physician group reports available in each state)**

Physician/Physician group information is available in a much smaller number of states outside of the two national reporting sites noted. Eleven states have one physician/physician group public report and the following six states have two physician/physician group websites: California, Massachusetts, Minnesota, Michigan, Ohio, and Pennsylvania. There are also two multi-state public reports. One that provided information in Colorado, Kansas, Missouri, New York and Tennessee and the other in Kansas and Missouri. The vast majority of states have no state or regional physician/physician group public reports. **(See Figure 1.)**

Most of the non-national hospital information is published at the state level—with 101 (80%) of the public reports providing information about all of the hospitals in the state. Eleven (9%) of the hospital public reports provided information at a regional level and two provided city-level information. Finally, five sites provided information in multiple states.

A little under one-half (13) of the physician/physician group sites provide information at the state level, 10 (37%) at the regional level, two provided national information and two provided information in multiple states.

Eighteen (67%) of the physician/physician group sites provided information at the physician group level such as the practice, clinic, or office level, while 10 (37%) included information about individual physicians. The sites including information about individual physicians were sponsored by the Colorado Business Group on Health, Consumers Checkbook (consumer experience of care results in Kansas/Missouri, Tennessee, Colorado and New York City), Quality Quest in Illinois, state health agencies in New Jersey, New York and Pennsylvania (all related to cardiac surgery), Rhode Island (health information adoption rates), and Virginia (ob-gyns), NCQA's Recognized Physician Directory and DocFinder (links to state licensing boards). One site (Quality Quest) provided information about both individual physicians and groups. Some sites identified the affiliation between individual physicians and their medical groups such as those sponsored by the Greater Detroit Area Health Council, the Health Improvement Collaborative of Greater Cincinnati and Minnesota Community Measurement.

CATEGORIES OF INFORMATION FOUND ON THE PUBLIC REPORTS

A range of information types was found on the hospital and physician/physician group public reports reviewed. To help organize the information, a classification scheme based on Donabedian's structure/process/outcome model (Donabedian, 1966) was used. In this scheme:

- Structure refers to the infrastructure within the hospital or physician's office that helps the facility or professional deliver high quality care. In this report, structural measures included utilization, regulatory information, staffing, accreditation, use of technology or participation in quality oriented programs.
- Process measures refer to health care that is provided to patients based on scientific evidence of efficacy or effectiveness. These measures look at whether certain actions were taken in a hospital or physician's office that are related to a positive outcome. For example whether medications are given or discontinued at the right time or whether immunizations have been given.
- Outcome measures look at what happens to patients as a result of the care received. These measures include outcomes such as mortality or morbidity or patient-safety related outcomes such as adverse events (i.e. foreign object left in patient after surgery) or infection rates.

In addition, information about patient experience of care measures and cost/charge information was also collected for both hospitals and physicians.

HOSPITAL PUBLIC REPORTS

Of the five categories reviewed, structural measures were the most commonly found type of measure on the reviewed hospital websites, with this type of information found on 77% (97) of the hospital sites reviewed. The next most common type of information was patient outcome information (60% or 75 sites), followed by process measures (47% or 59 sites), cost or charge information (40% or 50 sites)

and patient experience of care information (37% or 46 sites). Many of the sites draw on the outcome, process of care and patient experience of care data from CMS's Hospital Compare website and re-package it for their particular state or area thereby resulting in relatively high degree of standardization regarding measure types used. **(See Figure 2. Number of hospital public reports that use each measure type)**

Hospital Structural Measures

There were a variety of structural measures found on the websites including utilization measures, service description information, regulatory information, staffing, Leapfrog survey results, accreditation and patient safety-related information.

The most frequently seen hospital structural measures were utilization measures. Seventy (72%) of the 97 sites that had structural measures included utilization measures. The largest type of utilization measure seen was information on volume of hospital procedures (available on 61 sites). Information on volume was expressed in different ways—in some cases as the number of patients, the number of discharges, or the number of cases. Seen on fewer sites (38) was information on length-of-stay.

The next most frequently seen structural measure was hospital descriptive information seen on 30% (29) of the sites that included structural measures. Descriptive measures generally included lists of services that are available at a hospital including clinical services such as ob-gyn, mental health or cancer care, emergency room services, imaging services, patient and family-oriented services and other certifications or special services.

Information resulting from the regulatory oversight process was the next most frequently available type of information seen on 14 sites (14%) that included structural measures. These sites generally either had information about enforcement actions taken against the hospital (11 sites) or complaint information (8 sites). Enforcement actions included information on “Statement of Deficiencies” found about a hospital during an inspection process or administrative penalties assessed because of health and safety concerns. Information about complaints indicated the number of complaints about a hospital and sometimes information on the outcome of the complaint. All of the sites providing this type of information were state Departments of Health.

Staffing information was the next most frequently seen structural measure found on 12 of the sites that included structural information. Many of these sites included information on nurse staffing such as nursing hours per patient day, turnover rates or number of patients per day. The other type of information seen on a few sites was information on infection control staff such as the number of infection control professionals.

Information based on the Leapfrog national survey was found on 11 sites. The survey looks at hospital progress towards meeting Leapfrog standards in the areas of patient safety and clinical conditions such as heart attacks, pneumonia or pancreatic resections. In some cases, the information was rolled up into one or several patient safety scores, in other cases scores on the individual “leaps” (such as computerized physician order entry, ICU staffing, or evidence based referrals and safe practices) were presented. Almost all of the sites presenting Leapfrog information were either employer-sponsored or community collaboratives.

Accreditation information was only found on 10 sites. This generally involved the level of Joint Commission accreditation and, in some cases, the time frame for that accreditation.

Finally, patient safety-related descriptive information was found on six sites. These included:

- Patient safety excellence awards (Health Grades)
- Whether hospitals do specific things to potentially increase patient safety or transparency such as:
 - Use CDC's Healthcare Safety Network to report data (CO Dept. of Health)
 - Share “never events” policies (CO Business Group on Health)
 - Collect and review OB safety related data (Virginia Health Information)
 - Belong to a patient safety organization (North Carolina Center for Hospital Quality and Patient Safety)
 - Participate in statewide reporting about quality, safe medication activities and resource effectiveness (Georgia Hospital Association)

Hospital Outcome Measures

Seventy five (60%) of the hospital websites included outcome information. Fifty-two of those included mortality information and 30 included re-admission rates. This information was generally either the information presented on the CMS Hospital Compare site (hospital death and readmission rates for heart attack, heart failure and pneumonia patients) or AHRQ's mortality indicators for inpatient conditions not typically associated with mortality such as hip replacement mortality rates. Other types of mortality or re-admission rate information included:

Mortality Information

- ICU mortality rates (CalHospital Compare)
- In Hospital/30 Day observed, expected and risk adjusted mortality rates for cardiac conditions (NY Department of Health)
- Operative risk-adjusted mortality rate for hospitals performing by-pass surgery – including those with infections (NJ Department of Health)
- Overall hospital mortality rate (New York City Health and Hospital Corporation)
- Open heart surgery and angioplasty-number performed and mortality rate (OH Hospital Compare)
- Mortality rates for over 40 conditions (Pennsylvania Health Care Cost Containment Council)
- Diabetes related mortality (Aligning Forces for Quality-S. Central PA)
- Predicted survival (The Leapfrog Group and U.S. News and World Report)

Re-admission Information

- Fifteen day re-admission rates (Florida Health Finder.gov)
- Re-admission rates for over 40 conditions (Pennsylvania Health Care Cost Containment Council)
- Diabetes related re-admission (Aligning Forces for Quality- S. Central PA)

Fifty of the hospital websites (67% of those with outcome measures) had some type of information on patient safety such as infection rates, adverse events and complications. Twenty-nine of the sites had information on infection rates, while 19 had information based on one or more of the AHRQ Patient Safety Indicators. Four of the reports (*Hartford Courant* Adverse Event Search and the Indiana, Minnesota and Washington Departments of Health) only provided information on adverse events.

Other types of patient-safety related measures included:

- Nursing sensitive measures such as pressure ulcer prevalence or patient falls per 1,000 patient days (CO Hospital Association, MA Patient Care Link, ME Health Management Coalition, ME Hospital Quality Snapshots)
- Occurrence of Medicare's "Never Events" in Las Vegas Hospitals (*Las Vegas Sun*)
- Whether National Patient Safety Goals are met (The Joint Commission)

Hospital Process Measures

Fifty-nine of the hospital sites (47%) included process measures. Ninety percent of those sites (53) used one or more of the CMS Hospital Compare process measures related to heart attack, heart failure, pneumonia, surgical care improvement or children's asthma indicating a high degree of standard use of those measures nationwide. Interestingly, 26 of the sites used composites to convey performance in these areas. So for example, multiple measures in areas such as heart attack or diabetes care were rolled up into one score that was labeled using terms such as "quality index", "all care eligible to receive", "overall care", "optimal care", or "all care needed". Combining and presenting these measures as a single score reduces the cognitive burden on consumers to interpret multiple measures.

Hospital Cost or Charge Information

Fifty of the sites (40%) included some type of information on hospital charges, cost or efficiency for selected procedures, conditions or diagnoses. The most common type of information was hospital charges (34 sites) including average charges (on 28 sites) and median charges (on 20 sites). Eight sites included information on Medicare payments or reimbursements such as the median Medicare payment for certain procedures (CMS's Hospital Compare, The Commonwealth Fund's Why Not The Best?, and collaboratives in Northern CA, Kansas City, MO, New York state, and Memphis, TN), total Medicare reimbursements during the last two years of life (Iowa Health Buyers Alliance), and average charges by DRG (MI Health and Hospital Assoc.).

Four sites included a service that allowed users to estimate costs. The Oregon Department of Consumer and Business Services, the Maine Health Data Organization, and the New Hampshire Insurance Department all sponsor sites that allows users to get information about selected procedures based on information supplied by the state's largest health plans and, in some cases, Medicare and Medicaid data. Healthgrades also includes a personalized medical cost report by procedure.

Several of the sites providing cost or charge information (14) were sponsored by state hospital associations and had similar designs, content and often a similar name (PricePoint). They allowed users to search for a hospital, then choose a category of care from 8-15 categories (such as "10 most common types of hospitalizations", "alcohol and drug abuse", or "childbirth and newborns"), then drill

down to a specific procedure such as “vaginal delivery without complications”. The results included the number of discharges, average length of stay, average charge, average charge per day and median charge. On some of the sites, one could filter the results by checking a severity of illness category ranging from 1 (minimal) to 4 (extreme). Some sites also included information on hospital payer mix (Medicare vs. private pay vs. Medicaid) and charity care.

Other types of cost of care information included:

- The MA My HealthCare Options, HealthGrades and the New Hampshire Hospital Scorecare include cost of care information for conditions and use dollar signs to convey relative cost. For example, the MA My HealthCare Options site includes cost of care information on bone and joint care such back procedures, hip fractures, hip and knee replacements and cardiovascular diseases such as angioplasty and heart valve surgery.
- CalHospitalCompare and the Ohio Hospital Association's Consumer's Guide to Quality Health both include information about pricing. In California – a link is provided to each hospital's fair pricing policy and in Ohio a link to the hospital's price list for a range of services.
- Virginia Health Information publishes a range of efficiency indicators including an overall composite efficiency score and ratings in the areas of charges, costs, productivity/utilization, financial viability and community support. The Wisconsin Collaborative for Healthcare Quality also publishes efficiency measures in the areas of heart attack care, heart failure and pneumonia.
- Leapfrog incorporates cost, along with quality, into their ratings of heart attack, heart bypass surgery, pneumonia and other conditions.

Hospital Patient Experience of Care Measures

Forty six (37%) of the hospital public reports included patient experience of care measures. All of the sites used information from the H-CAHPS® survey indicating a high degree of standardization in this area of performance reporting that is of particular interest to consumers.

Other Types of Hospital Performance Measures

There were several other types of hospital performance measures seen on some of the sites.

- Pediatric care: Use of AHRQ pediatric quality measures (HealthGrades, IL Hospital Report Card, Texas Reports on Hospital Performance)
- Maternity care: A variety of measures related to maternity and newborn care (CalHospital Compare, The Leapfrog Group, Minnesota HealthScores, New York Dept. of Health, Utah Department of Health and Virginia Health Information)
- Rankings and Overall Ratings: The Iowa Health Buyers Alliance created a ranking of hospitals for chronic care based on information from the Dartmouth Atlas and Medicare data. The information ranks hospitals in each of four areas: intensity/utilization (the number of days

patients spent in the hospital and the number of physician visits they received as inpatients), capacity (hospital and hospice bed use), spending (total Medicare reimbursements per enrollee and average physician service co-payments during the last two years of life), and quality (CMS process measures and H-CAHPS®). The Report Card shows large variations in the amount of hospital care for conditions such as cancer, heart and lung disease provided by Iowa hospitals. Overall ratings are also used by *US News and World Reports*, the Colorado Business Group on Health that published a rural hospital rating based on Leapfrog survey results and the Georgia Hospital Association that provided an overall quality score for hospitals.

PHYSICIAN/PHYSICIAN GROUP PUBLIC REPORTS

Overall, clinical process measures were the most commonly found type of measures on the reviewed physician/physician group sites, with this type of information found on 18 sites (67%). The next most common type of measure were clinical outcomes on 15 sites (56%), followed by structural measures on 13 sites (48%). Patient experience of care (9 sites or 33%) and cost or charge information (6 sites or 22%) were much less frequently found. (See **Figure 3. Number of physician/physician group public reports that use each measure type**)

Physician/Physician Group Process Measures

Clinical process measure information was found on 18 of the 27 (67%) physician/physician group sites. Most of the sites appeared to be using HEDIS measures with the most commonly used measures addressing diabetes, breast and cervical cancer screening and some aspect of heart care. Sites varied in how many and which measures were used within any given condition. For example, when reporting information about diabetes, some sites reported information on three diabetes measures, while others reported on eight measures.

There were several non-HEDIS measures used on a few sites. Examples include:

Colonoscopy Measure:

- “Best Care Index for Colonoscopy” - Whether a colonoscopy procedure met each of nine measures (8 process and 1 outcome: no serious complications) associated with high quality colonoscopy care. (Quality Quest- Illinois)

Depression Measure:

- Utilization of the Patient Health Questionnaire, a tool that helps determine whether a patient with depression is getting better. (Minnesota HealthScores)

Orthopedic Measure:

- Use of validated patient functional outcome tool by orthopedic practices for the majority of patients undergoing knee/limb, shoulder or wrist/carpal tunnel procedures (Maine Health Management Coalition)

Physician/Physician Group Outcomes Measures

Fifteen of the physician/physician public reports included outcome information. Again, information was primarily based on HEDIS measures including the following: blood pressure control, cholesterol control, and blood sugar control.

Other non-HEDIS outcome measures included:

Cardiology Measures:

- Risk-adjusted in-hospital and 30 day mortality for heart surgery and other information (NJ and NY Departments of Health, PA Health Care Cost Containment Council)

Depression Measures:

- Remission of depression at six months and at 12 months (Minnesota HealthScores)

In eight of the sites, the report sponsor used a composite measure showing the “best care”, “optimal results”, an “overall score”, or the “percent who meet all care processes” for a clinical condition such as diabetes or vascular disease. In some cases, the composite only included process measures, while in others the composite included both process and outcome measures. In a few cases (the diabetes and vascular disease composites reported by the Minnesota Department of Health), only the composite was reported. In most cases, both the composite and the scores on the individual measures comprising the composite were reported. The California Office of Patient Advocate reported whether medical groups “Met National Standards of Care” which combined the scores in each of several topic areas (such as heart care and diabetes) into a single summary rating for the medical group.

Physician/Physician Group Structural Measures

Structural measures were found on 13 (48%) physician/physician group public reports. These included the following types of information:

- Utilization information was found on five sites including five that provided information on procedure volumes and two on length-of-stay.
- Descriptive information such as Board certification, medical training, and continuing medical education was found on five physician/physician group sites. The Maine Health Management Coalition included information on whether cardiologists used accredited or pending accredited nuclear imaging or echocardiography labs and whether the results were reviewed by a Board-certified cardiologist.
- Uptake of technology such as use of electronic medical records was found on four sites.
- Participation in a quality oriented program such as NCQA's Physician Recognition program was found on three sites.

- Information on regulatory actions related to physicians was found on one site that provided links to all medical licensing board information nationwide.

Physician/Physician Group Patient Experience of Care Measures

Nine (33%) physician/physician group public reports included physician experience of care information. Only one of the sites (Consumer Checkbook's "What Patients Say About Their Doctors" in CO, KS/MO, NY and TN) published information about individual physicians and the balance of the sites published information at the group level. Relatively few of the sites indicated what survey instrument they used, so it was difficult to assess the level of standardization in this area.

Physician/Physician Group Cost or Charge Information

Five (19%) physician/physician group websites provided information on cost or charge information. This information included:

- Generic prescription fill rate that helps patient save money (percentage of prescriptions given at medical office that were generic) (Humbolt-Del Norte CA Medical Office Quality Care Reports, Michigan MyCare Compare, IL Quality Quest for Health, and WA Community Check-up)
- How much health plans pay medical groups for a variety of procedures such as office visits and colonoscopies (Minnesota HealthScores)

Given the lack of a nationwide database of physician measurement comparable to that available through CMS's Hospital Compare, there seems to be more variation and therefore less standardization in the types of process and outcome measures being reported about physicians/physician groups. CMS efforts to develop a national Physician Compare website in the years ahead may play the same role as Hospital Compare in terms of offering a ready source of measure results which can be re-packaged for states and communities.

HOW HOSPITAL AND PHYSICIAN/PHYSICIAN GROUP PERFORMANCE INFORMATION IS CONVEYED

Another area of interest in the review was the extent to which hospital and physician/physician group performance information was conveyed to the public in similar or different ways. The analysis looked at several aspects of this question including how standardized are the frameworks used to convey public performance information and how often sites use tools and techniques to better engage consumers.

Standardization of Performance Information Frameworks

Hospital and physician/physician group public report sponsors can help their viewers understand information by grouping it into categories or frameworks that show how pieces of information relate to one another. Sixty-eight hospital websites and 18 physician/physician group websites were reviewed in terms of the categorization formats used. Excluded from this analysis were single topic reports such as those on infections, adverse events or charge and cost information.

The most popular hospital categorization scheme used was by disease category—such as “heart attack care”, “heart conditions” “pneumonia”, or “pregnancy and childbirth”. Some version of this type of categorization was used in 31 hospital public reports. Fifteen of the hospital public reports just presented disease categories, while 16 used a disease categorization plus the category “patient experience of care”. Seven of the physician/physician group public reports used a disease-only categorization scheme.

Nineteen hospital sites and two physician/physician group sites used higher level concepts to frame their measures. On hospital websites, these included category titles such as adverse events, consistency of performance, process of care, mortality, nursing care, outcomes of care, patient hospital experience (or satisfaction), patient safety (or safety), pediatrics, prevention, quality of care, recommended care/process of care, select clinical quality, services, surgical competency, treating disease, utilization, and volume. On the physician/physician group sites, frameworks included: acute care or conditions, chronic care or conditions, and preventive care. Only one site sponsor (WI Collaborative for Healthcare Quality) used the Institute of Medicine's categories of Timeliness, Effectiveness, Efficiency and Patient-Centeredness as one option for viewing measures.

Eighteen hospital sites and nine physician/physician group sites used a mixed framework that included some disease categorization and some other categorizations.

There was little standardization in how hospital and physician/physician group public reports organized their information. While a little under one-half the sites organized their information by disease category, a little over one-half used a non-disease or mixed framework.

Techniques and Tools to Engage Consumers: The Use of Customizable Search and Comparative Presentation

In terms of utilizing tools and techniques that improve the consumer experience of using the website, the review of hospital and physician/physician group public reports were fairly positive. Ninety-nine of the 126 hospital sites (79%) and 22 of the 27 physician/physician group sites (81%) used an interactive database to present performance results. This approach allowed users to customize their search based on location (74 hospital sites, 15 physician/physician group sites), disease or condition (68 hospital sites, 11 physician/physician group sites), hospital or physician/physician group name (67 hospital sites, 12 physician/physician group sites), services offered (13 hospital sites) or overall facility performance (2 hospital sites, 1 physician/physician group site). The other format used to convey results was a “pdf” version of a hardcopy report which was found on 39 hospital sites and seven physician/physician group sites. Some sites used both types of format.

Again, to help consumers better use the data, three-quarters (94) of the hospital sites and 93% (25) of the physician/physician group sites allowed users to compare information in a side-by-side format. Sometimes, the information was automatically provided comparatively—in other cases, users picked those hospitals or physician/physician groups they wanted to compare from a list.

How Performance Information is Conveyed

In contrast to the techniques used to help customize and compare information on public reports, the results regarding the way in which performance information was conveyed often did not utilize best

practice. A large majority (97 sites or 77%) of the hospital reports used charts with numbers or percentages to convey hospital performance information. The next most common presentation format on hospital sites was the use of bar graphs (44 sites or 35% of sites). Twenty one sites (17%) used other types of presentation formats including pie graphs or scatterplot diagrams.

With reference to the physician/physician group sites, 12 (44%) sites used bar graphs to convey information, while 10 (37%) used charts or tables with percentages and numbers and four (15%) used other types of presentation charts.

Other features used to help users discern better performers included

- The ability to sort information from high performing to lower performing: 25 hospital sites (20%) and 14 physician/physician group sites (52%)
- The use of color or shading to convey higher performance, with green often used to convey better performance: 21 hospital sites (17%) and eight physician/physician group sites (30%)
- Rank order presentation of information with best performing appearing first: 17 hospital sites (13%) and 11 physician/physician group sites (41 %)
- The use of various types of filled circles (similar to those used in Consumer Reports): 13 hospital sites (10%) and two physician/physician group sites (7%)
- The use of stars: Four hospital sites (3%) and five physician/physician group sites (19%)
(See Figure 4. Frequency of presentation format types used)

Other approaches used to convey relative performance included:

Arrows (up and down)

Asterisks (*)

Blue or green ribbons

Diamonds

Escalating bars

Honor rolls/Watch lists

Pie charts

Symbols such as hearts, baby rattles or traffic lights

Triangles

Words such as “superior”, “above average”, “best”, “better”, “average” “worse” “below average”, “poor”

Many sites used multiple format types giving viewers a choice of how to view the information.

Eighteen of the 126 hospital sites (14%) and six of the physician/physician group sites (22%) used confidence intervals or some other approach to convey the range of possible performance—a strategy that is difficult for consumers to interpret.

Benchmarks

Eighty-one percent (102) of the hospital sites and 82 % (22) of the physician/physician group sites used some type of benchmark in their hospital public report. The most common type of hospital benchmark was a state average (63 sites), followed by the national average (46 sites) and a regional average (20 sites). Higher bar standards were seen in a smaller number of hospital sites, with a national top 10% benchmark found in 19 sites, and a state top 10% in seven sites. Thirty one (25%) of the hospital sites included information from previous years or some other type of trend indication. Many sites used more than one benchmark.

Of the 22 sites that used benchmarks in physician/physician group public reports, the most common benchmark used was a regional or community average in 11 sites (50%). The next most commonly used were state averages (7 sites) followed by national averages (6 sites). Other benchmarks included the national median, “95th”, “90th”, “75th” and “50th” percentiles, top 20% and “high performers”.

Decision Support

Many of the sites did include some level of information describing the measures and how to use them. About 1/3 of the hospital sites (33% or 41 sites) included more detailed information about “How To Choose a Hospital” and eight of the physician/physician group sites (30%) included information about “How to Choose a Physician”.

Glossaries or sections titled “Definitions of terms” were used in about one-third of the hospital sites (33% or 42 sites) and 15% (4) of the physician/physician group sites.

While many of the hospital and physician/physician group sites included some level of patient oriented information about the diseases and conditions measured, only a few provided more detailed information about a particular condition. These included:

- A Brochure about Open Heart Surgery sponsored by the Economic Alliance of Michigan
- Maternity care information by the New York State Department of Health and Virginia Health Information
- Diabetes Care – Cincinnati OH Your Health Matters
- Diabetes, Heart Failure and High Blood Pressure Care– Better Health Greater Cleveland

DISCUSSION

Our review of 126 hospital and 27 physician/physician group public reports revealed a wide range of activity and variation in the content and format of the public reporting activities underway in states and communities nationwide. Our review also highlighted a number of issues and questions that should be considered in the evolution of public reporting of provider performance:

- (1) To what extent should public reports be standardized moving forward and what is the rationale for doing so? If standardization is desirable, what aspects should be standardized?**

Various aspects that might be standardized include:

- The health topics addressed
- The measure types (i.e. outcome, process, etc.) and specific measures used to evaluate those topics
- The measure specifications/construction
- How data used to construct the measures is collected and verified
- How results are reported

Our review found some amount of standardization, particularly for the use of hospital process of care measures derived from Hospital Compare, as well as hospital patient experience of care based on the H-CAHPS® instrument. The use of HEDIS measures for physician/physician group measurement has also led to some degree of measure standardization across reporting efforts. In both cases, some sites are creating composites that look at the presence of all measures in one overall “best care” score. This development may both set a higher bar for performance and be easier for consumers to understand, though the methods used to construct the composites may vary leading to different results based on different composites.

In terms of outcome measures, a greater degree of variation was seen. While there are many hospital sites that have re-published information from the Hospital Compare website or used the AHRQ inpatient mortality indicators, there are other approaches to reporting mortality and other outcome information. And in the patient safety area, reporting about infections and adverse events is available, though still early and sometimes reported using statistical and more technical presentations that are not consumer-friendly.

With the exception of early efforts in some states to look at cardiac surgeon mortality and outcome oriented HEDIS measures, there are fewer physician/physician group outcome measures available and thus less standardization, though national efforts are now underway in a variety of physician-oriented organizations. In addition, innovation on physician/physician group measurement may well develop through community collaboratives over the next several years, as well as through the development of CMS's Physician Compare.

The low number of hospital and physician/physician group sites that report easily understood information like complaints is noted in the review. While not often part of conversations about health care quality, this type of information is probably more understandable to consumers—particularly as they become more aware of quality differences and their rights as patients. The availability of hospital and physician volume information for a variety of procedures and conditions is promising if the link between volume and outcome holds true. And in the cost area, with the exception of hospital association sites, efforts to convey meaningful information are still relatively rare—particularly in the context of combining cost and quality.

While there may be growing standardization in at least some areas of hospital and physician/physician group performance reporting, it must also be noted that standardization of measures does not necessarily mean that those in current use are particularly salient or useful for patients and families. In many cases, these measures were used because data about them could more easily be obtained from hospitals and physicians or physician groups. And certainly the breadth of current measures is limited.

While patients with heart trouble or diabetes might find useful information on public reports today, those with many other conditions will find very little.

(2) To what extent should the presentation of the results be standardized moving forward and what is the rationale for doing so? If standardization is desirable, what aspects should be standardized?

Standardization on the presentation of publicly reported information is much more varied. The majority of hospital sites are still using charts with numbers and percentages which are difficult for many patients and families to use. There are promising signs that sites understand the need to better engage users by utilizing techniques that allow a quick assessment of hospital or physician/physician group performance such as side-by-side comparisons, rank ordering, the ability to sort, or the use of benchmarks and symbols to indicate higher performers. There is no consistency, however, in the approaches used by different sites.

It is also an open question regarding which aspects of public reporting should be standardized and the rationale for doing so. Some degree of variation and innovation in measurement and reporting may offer the public the ability to “compare and contrast” hospital and physician performance in the marketplace of online health information and spur better measures and better reporting. However, whether it is a good use of resources to have multiple sites in a state or region providing similar, though slightly different information to consumers vs. a collaborative effort amongst stakeholders to sponsor one site - is a question that may need to be addressed. The balance and resulting tension between standardization, variation, and innovation will be key issues as public reporting proceeds.

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Figure 1. Number of state or region-specific hospital and physician/physician group public reports available in each state

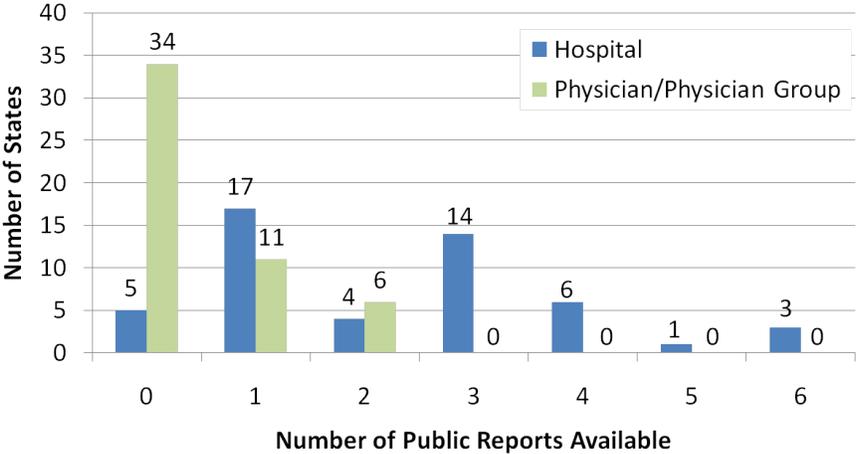


Figure 2. Number of hospital public reports that use each measure type

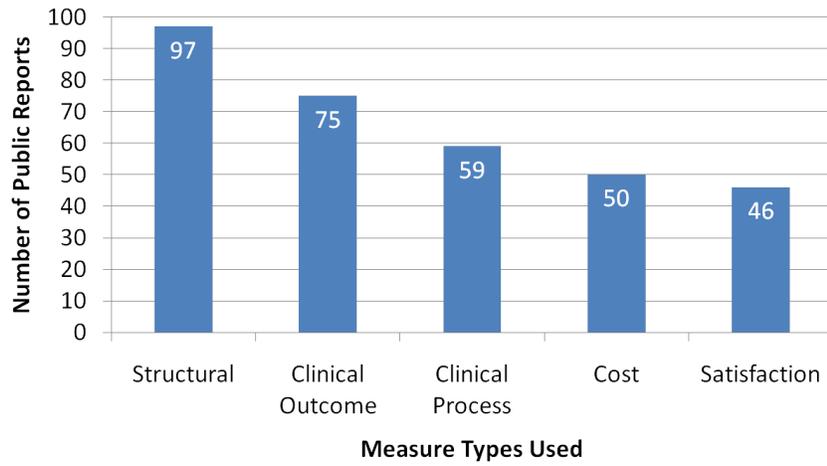


Figure 3. Number of physician/physician group public reports that use each measure type

