



Best Practices in Publically Reporting Quality Information to Consumers

Prepared By:

Ann Lawthers

Paul Kirby

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1. Background

This report provides Vermont with a review of best practices for reporting health quality and cost information to consumers. As stated in the contract between the University of Massachusetts Medical School (UMass) and the state of Vermont, the goal of this task is to:

Research best practices for presenting health care quality information to consumers and present a proposal for displaying QHP ratings on Vermont's Exchange that outlines detailed methodologies for creating summary ratings, describe recommended format(s) for presenting the information, and provide examples of how the information would be displayed on Vermont's Exchange website.

Under the ACA, Exchange websites must provide consumers and employers with two types of quality information: quality relative to other plans (quality ratings) and enrollee satisfaction survey results.ⁱ The goal is to allow consumers to easily compare the QHPs available through the Exchange. Neither the ACA nor the Final Rule related to Exchanges gives details on the actual content of the quality rating system and satisfaction survey. These will be the subject of future rulemaking.

Vermont's Act 48 also includes requirements related to consumer reporting. It directs the Exchange to provide "consumers and health care professionals with satisfaction surveys and other mechanisms for evaluating" QHPs.ⁱⁱ The ACA language on satisfaction surveys has no reference to "health care professionals." A survey of provider satisfaction with insurers has been developed and implemented under Rule 9-03. Survey questions developed under Rule 9-03 will help meet the Act 48 requirement.

The message is clear: consumers need information for decision-making. The details of what and how to report are at the state's discretion until federal guidance is released, probably in 2015.

This document reviews and summarizes the literature for best practices in engaging consumers in making choices about their health care coverage. We will use the consumer choice model to summarize the literature. Based on the literature, we will make recommendations to Vermont regarding consumer reporting in advance of ACA federal guidance. This document does not cover the issues of acquiring the data to include on the Exchange's website; that will be covered in the implementation report.

ⁱ ACA Section 1311(d)(4)(C), later 45 CFR Part 155.205(b).

ⁱⁱ Act 48, Section 1805(13).

2. Consumer Choice Model

The Agency for Healthcare Quality (AHRQ) issued a series of reports in June of 2010 on best practices in public reporting of quality information, authored by Judith Hibbard and Shoshanna Sofaer. Dr. Hibbard is the country's leading researcher on how consumers use quality information. As early as 2002, Dr. Hibbard described a causal pathway for how consumers become aware of, understand, and ultimately use information about quality and cost.¹ Her model has since been widely adopted and used to explain consumer use of quality data.²

For consumers to effectively use publically reported information, four conditions must be met:¹

- Consumers must be aware that the information exists
- Consumers must know how to interpret and use the information
- Consumer must decide that the information is valid and relevant (attitude)
- Consumers must use the information to make choices (behavior)

We use this framework to summarize and discussion best-practices in reporting to consumers.

3. Methodology

To identify potentially relevant evidence-based literature, three databases were searched (PubMed, Medline, and OVID). The reference lists of the articles retrieved were also reviewed for potential inclusion in the literature review. A number of search terms were used to conduct the literature review, for example: “*consumer reporting*,” “*consumer choice*,” “*public reporting*,” “*choosing a health plan*,” “*quality reporting*,” “*choosing a provider*.”

In addition to peer reviewed literature, reports from several national organizations were included. The organizations included AHRQ, Kaiser Family Foundation (KFF), Commonwealth Fund (CWF), Robert Wood Johnson Foundation (RWJ), Mathematica Policy Research (MPR) and the Urban Institute.

Several criteria were used for study selection: 1) relevance to reporting to consumers; 2) free full text available; 3) published in the last 15 years; 4) English language; 5) published in the U.S.; 6) original research with a preference for randomized clinical trials (RCTs), or studies with a comparison group, or meta-analyses; 7) sample size >50.

We explicitly excluded studies that discussed the impact of public reporting on provider behavior. A substantial portion of the literature on public reporting covers the effect of reporting on hospitals, nursing facilities, surgeons and other providers of care. We also

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excluded studies that required payment and/or a subscription to access the complete, full-text article. (We do have access to most existing resources through the University of Massachusetts Medical School library website.)

Potentially eligible studies were retrieved by screening the literature titles and abstracts against inclusion criteria. Each study was assessed for appropriateness of design and the quality of the study.

This literature review has not attempted to be comprehensive. With regard to study selection, the review is limited by the number of published studies that met the criteria and only included those studies that are available free-text, English-only, and published within the last 15 years.

4. Findings

4.1 Awareness of quality reports

Awareness means that consumers must recall the existence of quality information and know where to find the information. If the consumer doesn't know the information exists they obviously cannot use the information.

Consumers tend not to pay attention to quality reports. Several studies testing whether consumers remembered that they had received comparative CAHPS[®] information at the time of health plan enrollment showed low rates of recall. Only 53% of nearly 1,000 employees at a Portland, Oregon company remembered seeing the brochure in 1998.¹ Only about half of Medicaid enrollees in New Jersey who were mailed a CAHPS report in 1999 recalled receiving it (total sample of 757).³ Similar findings about awareness of CAHPS information emerged from an examination of data from eight CAHPS demonstrations where the percentage of consumers who looked at and remembered the CAHPS report varied from 24% to 77%.⁴ (Consumers in these studies were surveyed within, at most, a few months of their having received the CAHPS information.)

More recent data confirm the continued lack of awareness of quality reports. The Kaiser Family Foundation has conducted a survey since 1996 as part of its Health Tracking Poll. One of the questions asks whether consumers have seen quality information comparing doctors, hospitals or health plans. In 2004 35% of Americans surveyed recalled seeing quality data; by 2008, the percentage had fallen to 30%.⁵ (It is unclear what percentage of surveyed consumers actually had access to quality reports; the survey only measured recall.)

Poor access to quality reports, especially web-based reports, may compound the awareness problem. Individuals living in rural or mountainous areas or even in the inner city may experience access issues. However, consumers may be able to retrieve information in other ways, for example, through their cell phones. A 2011 survey of residents of a medically underserved neighborhood in Philadelphia reported that 72% of

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respondents had Internet access and fully one-third of those individuals had access through their cell phones.⁶

4.1.1 Encouraging viewing of reports

Recent research has focused on the importance of first impressions in determining whether a consumer will do more than glance at a report. Hibbard and Sofaer (2010) point out that there are only a few seconds when someone accesses a web page to motivate them to keep looking rather than click away.⁷ They suggest presenting only a few concise messages about why the information in the report is important and relevant.

4.1.2 Marketing quality information to consumers

Making consumers aware of healthcare quality and cost information may require social marketing techniques. Deloitte published an issue brief in 2010 summarizing the lessons learned from other business sectors about social networks and how that could be applied to healthcare.ⁱⁱⁱ They list eight different types of social networks and describe how they can be used: Twitter, Facebook, YouTube, blogs, LinkedIn, wikis, forums and discussion boards and peer-to-peer social networks. Using social media to get the message across already occurs in the prevention and wellness realm. Using social media carries some risk, but if the medium is used solely for messaging content, then issues around data sharing may be avoided.

4.2 Enhancing knowledge

Once a consumer finds quality information in a report or on the web, they must be able to correctly interpret the information contained in a report. This is the knowledge condition. Interpretation and understanding of information depends on both the content and the presentation of quality information.

4.2.1 Best practices in report content

Patient experience measures resonate with consumers. Early lessons from publically reporting information to consumers showed that consumers valued patient experience measures over other types of measures. Consumers typically found more clinically oriented measures hard to understand and thus gave them less weight in making decisions.^{8 9 10} Hibbard and Sofaer suggest that this problem can be overcome by drawing a connection between what a patient cares about to the more difficult to grasp health care quality concepts.⁷

Consumers can also understand summary measures of quality, but these must be carefully presented. Hibbard et al. conducted an experiment with 439 employed adults to test how well they understood quality data when grouped by the IOM quality concepts of “patient-centered,” “effective,” and “safe.”¹¹ Not surprisingly, the group understood patient-centered data the best. The interesting finding is that participants tended to

ⁱⁱⁱ “Social Networks in Health Care: Communication, collaboration and insights.” Deloitte Center for Health Solutions.

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identify the best provider by the number of “better” scores across all three categories rather than implicitly weighting the effectiveness scores more heavily. Thus the selection of measures for a summary category must be carefully undertaken.

4.2.2 Best practices in presentation of report content

Presentation matters. How information is shown influences the ability of a consumer to correctly interpret the information. For example, Hibbard et al. (2002) demonstrated that visual cues, such as stars, increased the consumer’s ability to correctly identify high quality plans.¹² In the same study, rank ordering plans by performance also helped with interpretation, as did the presentation of trend data.

Five years later, Gerteis et al. demonstrated that interpreting information for the consumer reduced interpretation errors.⁹ Seven different templates for reporting nursing home quality data were presented to consumers. Three of the templates including either the words “better,” “average,” and “worse,” or stars (three, two, or one stars) or other symbols, to relieve the consumer of the need to interpret the data. These three interpretive templates produced the fewest errors in understanding among consumers. A standard bar graph generated the most interpretation errors.

The directionality of the quality information presented also affects comprehension. For example, in an experiment by Peters et al., consumers consistently misinterpreted information when presented in a “lower is better” format. The authors conclude that since most quality information is presented as “higher is better” that switching direction confuses readers.¹³

Different market segments will likely benefit from slightly different presentation styles. For example, Uhrig (2006) demonstrated that older consumers found shorter and less textually dense materials easier to comprehend.¹⁴

Presentation makes a substantial difference when reporting cost data. Recently Hibbard et al published data from an experiment that added cost information to the usual presentations of quality data.¹⁵ The authors concluded that without quality information, consumers are more likely to select high-cost providers. Following Gerteis’ lead, the experiment included labels that interpreted the data among the data display options. They found labels project a strong quality signal, which led consumers to select high value choices. For cost data, the most effective cost display was a star rating system corresponding to the text label “careful with your health care dollars.” One star corresponded to less careful with your health care dollars while 3 stars meant very careful with your health care dollars. Interestingly, the experiment discovered that, in the absence of a corresponding quality signal, a “\$” sign display led consumers to choose the highest cost provider.

Reducing the amount of information in a report may also help comprehension of information. Peters et al. found that reducing the number of indicators displayed helped consumers understand the data they were looking at. This “less is more” effect was

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especially strong for consumers in the study sample who had lower numeracy scores (i.e., less ability to understand numeric information).¹³

Because of copyright restrictions, this report cannot reprint visual examples of effective presentation styles, but examples are available in some of the references cited here. The article by Hibbard et al., in the March 2012 issue of *Health Affairs*, shows a particularly good example of a format that sends a “strong quality signal” to consumers.^{iv}

4.3 Building positive attitudes towards reports

Assuming a consumer finds, reads, and understands quality information, the consumer must next assess the relevance of the information to his or her own situation. Building a positive attitude towards quality information hinges on the credibility of the information and the applicability of the information to the consumer’s future choices.

4.3.1 Credibility of information/source

At the turn of the twenty-first century, several studies showed that most consumers trusted physicians, family, and friends as the best sources of information about quality.¹⁶ Ten years later (2011) the finding remained true. Alexander et al. used data from 8,140 individuals to identify sources of information that consumers trust as well as to describe differing levels of trust by market segment (e.g. urban/rural, young/older).¹⁷ Alexander et al. found that provider sources (physicians, hospitals) were trusted far more than institutional sources (employers, insurers, government agencies). In addition, there were differences by market segment. Individuals with multiple chronic conditions were less likely to trust institutional sources than those with fewer chronic conditions. Higher levels of education were associated with an increased willingness to trust institutional sources (including governmental). Age, interestingly, was unrelated to trust.

The findings from the Alexander study suggest that an Exchange may have difficulty as an institutional source with convincing consumers to use their quality ratings. The authors suggest that forming multi-stakeholder reporting collaboratives that include hospitals and physician groups may enhance consumer willingness to access and use quality ratings.

4.3.2 Relevance of information to consumer

First and foremost, consumers want information about their own providers; health plan level information is seen as less relevant.¹⁸ As another article noted:

...they do not understand why their health plan should be held responsible for the care that physicians and hospitals deliver.¹⁶ (Schauffler, 2001; p. 84)

A comparison of decision-making processes of consumers covered by all types of insurance found that different market segments cared about different aspects of a plan’s

^{iv} See Exhibit 3 on page 563. Article is available at: <http://content.healthaffairs.org/content/31/3/560.full.pdf+html>

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benefit packages.⁴ Medicaid recipients cared most about access while privately insured consumers tended to focus on providers and costs.

4.4 What actually influences consumer behavior?

All three of the three preceding conditions, awareness, knowledge and positive attitude, can influence a consumer to act upon the quality information and make decisions about selecting (or switching to) a health plan or healthcare provider.

For example, health plan performance information can influence plan choices, but only if the individual making the decision remembers seeing the information in the first place. Farley's evaluation of the impact of CAHPS survey on Medicaid beneficiary plan choice in New Jersey in 1998 and Iowa in 2000 showed that mailing CAHPS results to beneficiaries at the time of enrollment did not influence selection of plan overall.^{19 3} However, for those individuals who recalled seeing and reading the CAHPS information, the data appear to have influenced their switching away from the default plan to which they were assigned, if the plan received low ratings.

Multiple experiments and studies conducted by Hibbard and others highlight the importance of being able to understand reported information before using it to make decisions (see above discussion on page 6). Yet, in spite of advances in understanding how consumers comprehend information, use of quality information for decision-making remains low. The Kaiser Family Foundation survey from 2008 showed that only about 11% to 18% of consumers use quality information to make decisions about health plans.⁵ A few years later, Abraham et al found that information about quality influenced only about 25% of 467 consumers surveyed.²⁰ Consumers weighed the reputation of the plan and of the provider as far more important factors, influencing about 90% of consumers' decisions.

Finally, a consumer's demographic profile and expected health status (or the health status of his or her dependents) heavily influences choice of a health plan, independent of any information about quality. Individuals with multiple chronic conditions tend to select high premium plans with generous coverage.²¹

5. Discussion/Recommendations

Awareness. This review shows that the first challenge for an Exchange is making consumers aware of the data available on the Exchange's website. The Exchange is required to post comparative ratings of health plans as well as other data about quality, wellness and cost.

In making consumers aware of the posted information, the Exchange may wish to consider social marketing strategies. Social marketing refers to the adaptation of commercial marketing techniques to influence behavior in the social arena, in this case health-related behavior. Hallmarks of social marketing include targeting messages to particular audience segments, branding, and repetition of messages.^{22 23} Social

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marketing as a strategy may be implemented in part through use of social *media* (Twitter, etc.) as a medium.

Attention. The next problem is getting consumers to look at the information. As Hibbard and Sofaer note, the first page must catch the attention of the consumer. The recommendations of Hibbard and Sofaer⁷ provide relevant guidance. The first page consumers view should have short, concise statements about why the consumer should look at the report and what information is available in the report. Hibbard and Sofaer also recommend giving consumers a list of what they should think about when they make a decision about a health benefit package.⁷ (Part 2, p. 13)

Once the consumer is engaged with a page, the presentation of plan choices becomes critically important. A recent report by Kleinman Communications and Consumers Union note:

The default choice set radically affects consumers' shopping experiences because once they see the default, they use it as an anchor or baseline for the rest of their selection process.²⁴ (page 3)

The decisions the Exchange makes about “consumer choice architecture” (that is, web architecture to support the decision-making process) can, therefore, affect consumer behavior by providing the context for decision-making and influencing consumers through the Exchange’s ordering and placement of plan choices.

Understanding. To ensure that consumers correctly interpret the information in the report, the report’s content should include a mix of patient experience, access and clinical measures. Following principles developed over the past 15 years, the presentation of material should:

Group

1. Group data into larger categories, e.g. “patient experience,” “effectiveness,” and “safety.” If a large number of measures are to be presented, additional groupings such as “Staying Healthy,” “Getting Better,” and “Living with Illness” resonate with consumers.
2. Where possible rank order from best to worst.

Use Visual Cues

3. Use visual “best value” cues, such as a checkmark, to help consumers sort through data from multiple domains.
4. Avoid the use of bar graphs unless interpreted for consumers or presented as supplemental information.
5. Embrace a principle of visual simplicity and “unclutteredness”; consider including plenty of white space to make the presentation less dense for viewing.
6. Avoid the use of dollar signs for the summary of cost data, as consumers can easily misunderstand these signs.

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Interpret

7. Interpret the numeric data, especially clinical process measures, with symbols (e.g. stars) or words (best, average, worst).
8. Explain in plain language what goes into a score and offer a technical appendix for consumers who wish to dig deeper.

Content

9. Include provider specific data (e.g., for hospitals) from currently available sources (such as DFR's hospital report cards), since consumers want information about their own providers.
10. Provide a glossary of terms.

While Vermont policymakers must wait for release of federal guidance on reporting formats before developing a detailed template, there is ample time to think in broader terms about how best to implement Vermont's quality strategies through public data reporting. As discussed in the other UMass reports, the emphasis on state flexibility in the ACA assures that Vermont will have the discretion to tailor its Exchange website's public reporting functions to meet the state's needs and goals.

Moreover, Vermont already has a solid reporting template to build upon: the annual Health Plan Report Cards put about by DFR (formerly BISHCA).^v The current format follows many of the principles listed above. The strongest areas of the current format are:

- Grouping of data into broad categories that are meaningful to consumers;
- Visual simplicity – the design is not overly cluttered or “busy”; and
- Explanation of terms (symbol key) and linkage of symbols to “better”, “similar”, and “worse” comparison words.

There are also opportunities to improve the current format, such as:

- Using more obvious visual cues as symbols linked to better/similar/worse comparisons – one, two, or three dots or stars instead of the current symbols;
- Simplifying the comparison charts somewhat by eliminating the national average comparison, using instead only the New England average comparison (a more rigorous comparison, since New England averages are generally higher); and
- Simplifying the language used in measure item descriptions in some cases.

^v <http://www.bishca.state.vt.us/sites/default/files/2011%20Annual%20HP%20Results.pdf>

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