



## LESSONS LEARNED

# Displays of Trend Data: Findings from the Field

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## Introduction

Many Alliances have been accumulating and publicly reporting quality information for several years. As such, historical or trend data are readily available in many communities, and some Alliances are interested in making these data publicly available to consumers and other audiences. This guidance focuses on data reported from multiple points in time (e.g., data from multiple years).<sup>1</sup> The major findings from our formative research raise important considerations for trend data display practices and appropriate audiences.

Based on the research described below, we concluded that:

- ❖ Trend data are a valuable quality improvement tool for health professionals.
- ❖ Presentations of trend data should target health care professionals rather than consumers.
- ❖ Including trend data in public reports of health professional performance may lead consumers to misinterpret performance data and inappropriately influence their decision-making process.

## Methods

The goal of the formative research was to better understand:

- The reasons for publicly reporting trend data;
- Intended audiences for trend data;
- How, if at all, consumers would use trend data;
- The format in which consumers prefer to see this information; and
- The level at which consumers prefer to see trend data (e.g., provider, across providers, community).

## About Aligning Forces for Quality

*Aligning Forces for Quality* (AF4Q) is the Robert Wood Johnson Foundation's signature effort to lift the overall quality of health care in targeted communities, as well as reduce racial and ethnic disparities and provide real models for national reform. The Foundation's commitment to improve health care in 16 AF4Q communities is the largest effort of its kind ever undertaken by a U.S. philanthropy. AF4Q asks the people who get care, give care and pay for care to work together to improve the quality and value of care delivered locally. The Center for Health Care Quality in the Department of Health Policy at George Washington University School of Public Health and Health Services serves as the national program office. Learn more about AF4Q at [www.forces4quality.org](http://www.forces4quality.org). Learn more about RWJF's efforts to improve quality and equality of care at [www.rwjf.org/qualityequality/af4q/](http://www.rwjf.org/qualityequality/af4q/).

## About the Author

American Institutes for Research (AIR) provides technical assistance for the Robert Wood Johnson Foundation's *Aligning Forces for Quality* initiative. AIR is working with Aligning Forces communities to support consumer engagement efforts to promote higher-quality health care at lower cost and authored this publication.

<sup>1</sup> Statistical analysis of the data to compare data points and make judgments about how the data have evolved (i.e., describes trends in the data) is beyond the scope of this document.

Formative research activities included:

- An environmental scan of existing websites that display trend data (16 unique sites, including some sponsored by AF4Q Alliances);
- Interviews with key contacts for six websites displaying trend data (including several Alliance websites); and
- Four focus groups with 26 consumers.

## Trend Data Are a Valuable Quality Improvement Tool for Health Professionals

Trend data play a valuable role in quality improvement. Results of our formative research showed that communities that publicly report trend data are using it as a quality improvement indicator and tool. While its usefulness to consumers is uncertain at best, trend data can help providers (e.g., hospitals, physician offices) monitor their progress, compare their progress with their peers, and share best practices to facilitate improvement.

Physicians—interviewed as part of related research on displaying cost and resource use information—reported that trends in costs, resource use, and quality measures provide valuable information and insights regarding the results of new initiatives, changes, or reforms at the physician, office, and community levels. For example, trend data can show whether current practices or new initiatives are effective at controlling diabetics’ HbA1c levels. One physician described how trend data serve as better indicators of provider performance because a single patient can skew results when only a single year of data is available.

Just as providers can use trend data to inform quality improvement efforts, other stakeholders can use the data to guide policy and program-level decisions. Website administrators reported health care purchasers use trend data to inform purchasing decisions, payment negotiations, and pay-for-performance programs. Another website administrator shared anecdotal evidence indicating policymakers use trend information for resource planning and other types of decisions.

Given the utility of trend data for these professional audiences, it may make sense to display trend data in an area of the website intended for such audiences, rather than with information targeting consumers.

## Trend Data Should Not Be Used as a Consumer Engagement Tool

Findings from the focus groups indicate consumers are not the most appropriate audience for trend data. Further, website administrators indicated they did not test their displays with consumers because consumers are not the intended audience.

Many of the consumer focus group participants did not think the trend data were helpful for themselves or for other consumers or patients. When asked who the display is for, some participants suggested insurance companies, hospitals, or a medical oversight committee.

Focus group participants often expressed confusion and uncertainty about the trend data. Community-level information showing trends across a region rather than for individual providers was of little or no use to consumers. Instead, consumers found the trend data added an additional layer of complexity to the quality information, making it difficult for them to understand and make decisions based on the information.

“I don’t think this is a good instrument for the public. This is for someone who is trying to make some decisions, global decisions, big picture, not for one individual.”

“I think that the fact we’re struggling so much, it’s a warning sign. This is more of an average as opposed to what people really want.”

“The average person isn’t going to go through all that looking for a doctor.”

—Focus Group Participants

## Displaying Trend Data Prompts Consumer Distrust of Data

Not only do consumers struggle to see how they could use trend data, but the presence of trend data on a public reporting web site may inhibit consumers' overall use of the site. Findings from our focus groups indicate the presence of trend data adds to the cognitive effort required to understand the display and creates barriers to comprehension among consumers.

Many participants stated the information was not a good measure of doctors' quality and were concerned about the quality of the data and its trustworthiness. One participant asked, "Is it looking at the quality of the doctor, or the patient who follows the best treatment plan?" Another participant said, "Each page doesn't provide information to me to make a decision...the page

needs to have more specific information...on the demographics, number of responses..." Thus, participants wanted more information to assure them the data collection and analysis were accurate and fair for comparative purposes.

Focus group participants raised concerns about the trustworthiness of reporting data both before and after seeing displays inclusive of trend data. However, the addition of trend data elicited further concerns for focus group participants. For example, if the changes in scores from year to year are not explained, participants tended to seek an explanation, questioning the source or analysis of the data. Several participants expressed worry that the displays were not making apples-to-apples comparisons because patient mix or patient load varied by provider. One participant said, "Plus, each doctor has different patients, so you can't understand exactly who did best."

## Displaying Trend Data May Change a Consumer's Decision-Making Process, Possibly for the Worse

Trend displays are complex and raise serious issues for how consumers process and use this information. During the focus groups, participants experienced information overload. Although many issues can affect a user's understanding of quality displays, the presence of the trend data appeared to exacerbate the cognitive difficulty of interpreting and using the data. Focus group participants were not sure how to interpret all of the information

across multiple providers and multiple years. Further, the sites we reviewed do not provide an explanation of how to use trend data, perhaps because consumers often are not the intended audience.

Consumers were not sure how to interpret variations across years. Although participants tended to hone in on the top performers when presented with only the most recent year's data, adding trend data to the display altered that tendency. Faced with trend data, some participants indicated they valued consistency in provider performance across years more than they did top-performing scores. One participant said, "What's better: someone average-average-average [year after year] or below-average-better? I want consistent." Additionally, several participants made inferences about the data that were not shown within the displays. A few participants believed consistency—even at a lower quality score—was an indication the doctor saw fewer patients, which was viewed as a positive characteristic for doctors' offices.

The inclusion of trend data led participants to seek reasons for changes in performance scores across years. Some participants wondered if an initiative was taken to improve the measure across the community or within a provider's practice. Other participants made presumptions about providers' age, efficiency, and drinking and drug problems.

### Key Findings

Concern about the quality of the data rose when participants were unable to find information about:

- The source of the data
- Clearly stated measure definition
- How changes in measures were handled across years
- Response rates
- How case-mix adjustments were made to the data
- How patient volume adjustments were made to the data

### Key Finding

Consumers are not sure how to interpret all of the information across multiple providers and multiple years. Sites do not provide an explanation of why past data are being presented and how they should be used in decision-making.

## Reporting Trend Data Introduces Multiple Benchmarks, Potentially Inhibiting Consumers from Focusing on Important Distinctions

Displays of quality data at one point in time (e.g., a single year, or an aggregate of multiple years) typically provide a single benchmark or comparator to help consumers make decisions. For example, providers are compared to an average and thereby characterized as average, below average, or better than average. Conversely, displays of trend data often simultaneously provide up to three additional benchmarks for consumers to use in their decision-making process: (1) comparing the provider to itself over time, (2) comparing the provider's history to other providers' histories, and (3) comparing the provider's history to the regional/national average history. The additional data, along with multiple benchmarks for interpreting them, make it difficult for consumers to decide what to focus on to make a decision.

- *Comparing the provider to itself across points in time.* While previous years of data can show how a provider is performing over time, consumers may be confused if the provider gets better in some areas but worse in others.
- *Comparing the provider's history to other providers' histories.* Focus group participants had difficulty identifying the best providers when a display included trend data for multiple providers. This difficulty was particularly evident when each provider's performance varied over time. Some focus group participants looked at the most current rating, some searched for consistency, and others tried to "average" the trend data and find the provider with the highest perceived "average."
- *Average benchmark.* Participants struggled to determine which comparisons were being made and which of those were most important. One participant asked, "'Better' than what? Average? What's it mean?" Another participant said, "I don't think it's very clear here. If the average changed, then we aren't seeing how he did relative to his past, just to the regional average."

### Key Findings

Users lack guidance on what comparisons to focus on.

- Should they compare a provider to itself?
- Should they compare providers within the current year?
- Once they have found a few providers they are interested in, should they compare their previous data?

Presenting word icons for each year side by side may confuse consumers.

- Participants had trouble identifying whether the words refer to how a provider performed in a given year or to how they performed between years.

## Conclusion

Initial findings suggest that trend data provide utility for providers, purchasers, and policy-makers to inform quality improvement efforts, monitor progress, and design payment/incentive programs. However, reporting trend data to consumers can be overwhelming and raise questions about the quality of the data and its trustworthiness. Additionally, the multiple benchmarks that exist within reports of trend data can make it difficult for consumers to identify and focus on important distinctions. Consumers may be better empowered to make decisions when presented with a single set of performance data with a clear benchmark. Given the disparate effects of these data on these audiences, communities should be deliberate in decisions about where and how to display and promote trend data.