



PRIMER

Reporting Resource Use Information to Consumers: Findings From Consumer Testing

January 2015

The *Aligning Forces for Quality* (AF4Q) Alliances, funded by the Robert Wood Johnson Foundation, are leading multiple initiatives to improve the quality of care while lowering costs in their communities. As part of this effort, all Alliances produce reports for consumers with comparative information on the quality of care. Some are also reporting variations in the costs of care and in “resource use”—the extent to which providers deliver the appropriate kind and amount of care. Another way of referring to resource use is “health care efficiency.” Alliances are educating consumers about resource use or health care efficiency in two ways: 1) by displaying variations in care delivery in comparative reports, and 2) by providing educational information to help consumers understand what services are (or are not) necessary and how to discuss these issues with providers.

Some Alliances, including the Minnesota Community Measurement, Maine Health Management Coalition, and the Oregon Health Care Quality Corporation, are exploring how to report total cost and total resource use measures to consumers. To support Alliances’ efforts to report resource use information, the American Institutes for Research conducted one-on-one interviews with consumers. The findings from consumer testing support Alliances’ and other multi-stakeholder organizations’ efforts to educate consumers about resource use and present related information effectively.

To learn how to display and describe resource use and efficiency measures that depict providers’ appropriate use of tests and procedures, the following research questions were explored through testing:

- Are consumers interested in this information?
- What labels best enable consumers to understand the concept of resource use?
- What display strategies help consumers understand and use scores for resource use measures?

This report presents our findings as well as recommendations for public reporting of resource use information that is understandable and relevant to consumers. Key findings include:

1. Consumers endorsed resource use measures, particularly when this concept is explained to them in consumer-friendly terms such as:

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. Learn more about RWJF at www.rwjf.org.

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 high-quality health care at a low cost.

For a primary care practice, part of delivering high-quality health care is providing patients with all of the tests, treatments, and procedures (resources) they need—but not more than necessary. Unnecessary tests and procedures may harm patients. They also contribute to the high costs of health care.

2. Consumers perceived that resource use information would allow them to make better decisions for themselves, reflecting a need to promote collecting and reporting summary measures of resource use.
3. Some labels were better at communicating the idea of resource use than others. It is important that the label is positively framed to align with the word icons (e.g., better, average, and below). Consumers understood the concept of resource use best when labeled as:
 - Appropriate use of tests, treatments, and procedures
 - Provides the right care and avoids care that is not needed
 - Provides the right and necessary care
4. Overall, consumers prefer to see measures of resource use displayed as a summary score of individual measures with the option to “drill down” to see consumer-friendly explanations of the individual measures that are included in the summary score as well as the individual measure scores.

For a detailed description of our methodology, please see Appendix A: Methods.

Background

Overuse of some preventive services can expose patients to avoidable harms and contribute to high health care costs.^{1,2} Improving the efficiency of care delivery—for example, by reducing the unnecessary use of screening tests and antibiotics—can lower health care costs, reduce the risk of harm, and improve the quality of patient care.^{3,4} Consumer feedback about resource use found the concept is unfamiliar to most consumers. This is not surprising given that many consumers believe that “more is better” when it comes to health care services and expect their doctor to order tests and prescribe medications as part of a regular doctor’s visit.^{5,6,7,8} This and the complexity of some resource use measures may contribute to difficulty in communicating this important concept to consumers. However, without information on resource use or efficiency of care delivery, consumers may not know that some services are unnecessary for them or could result in net harm. Providing consumers with resource use information can help them choose a doctor who will make efficient use of health care services and avoid unnecessary testing, treatment, and procedures.

Although health care quality is now regularly measured, reported, and sometimes rewarded with incentive payments, resource use measurement and public reporting of resource use lags behind.⁹ There are several different types of resource use measures, including:

- Summary measures (e.g., [Health Partners’ Total Cost and Resource Use](#) measure, [National Committee for Quality Assurance \(NCQA\)’s Relative Resource Use](#) measure).
- Episode of care-based measures (i.e., measures of all services related to a particular medical condition or acute event such as Thomson Medstat’s Medical Episode Groups measure or Cave Consulting Group’s Cave Group measure).
- Individual process of care and outcome measures (e.g., average length of hospital stay, 30-day readmission rate, test ordering rate, rate of prescribing generic drugs, avoidance of antibiotics for common cold).

Consumer feedback from this testing and testing with the Maine Health Management Coalition suggests that providing patients with resource use information through public reporting efforts may improve the quality of consumer decisions. There is very little literature on how best to label, explain, and display resource use measures to consumers. There is, therefore, a need for consumer-friendly language to help patients understand the complex concept of resource use. The Alliances have the opportunity to educate and engage consumers in making informed choices by providing resource use information in a meaningful, compelling way.

Defining Resource Use

Definition of Resource Use Provided to Participants

For a primary care practice, part of delivering high-quality health care is providing patients with all of the tests, treatments, and procedures (resources) they need—but not more than necessary. Unnecessary tests and procedures may harm patients. They also contribute to the high costs of health care.

Most interview participants were unable to define resource use, and, when left to their own, defined it as resources a doctor would provide the patient (e.g., patient portal or website, an information sheet about their diagnosis, or a referral to another doctor or treatment group) or equipment and staff. When presented with a definition, participants understood and genuinely liked it, explaining that it helped them understand that resource use referred to receiving the necessary tests, treatments, and procedures for an illness or ailment. Participants referenced terms and phrases within the definition such

as “necessary/unnecessary” and “tests, treatments, and procedures” to help them explain resource use in their own words.

Recommendation. The definition of resource use above provides a clear understanding of its meaning and helps engage consumers in using resource use information. Defining resource use early on in clear terms may help consumers understand what it is and how to use it to make informed decisions or ask questions about their care.

Summary Measures of Resource use

Labeling A Summary Measure of Resource Use

We tested several phrases to identify the most understandable and meaningful label for a summary measure of resource use. Participants recommended that the label clearly illustrate that resource use refers to receiving the appropriate tests, treatments, and procedures (not too many and not too few) and avoiding unnecessary care. Participants suggested using terms such as “necessary,” “appropriate,” and “tests, treatments, and procedures” in the label. When we tested the word “services” in place of “tests, treatments, and procedures,” we found that “services” had a very broad meaning to the majority of participants and was unclear. Some participants defined the term “services” differently from the services described in the definition of resource use used for testing. These participants preferred the term “services” because they thought it included more elements of the doctor’s visit that were of value to them.

Recommendation. Based on participant understanding of the label, participant preference, and the extent to which the label embodied the description of resource use, we recommend the following three labels instead of the phrase “resource use”:

1. Appropriate use of tests, treatments, and procedures
2. Provides the right care and avoids care that is not needed
3. Provides the right and necessary care

Participants understood and liked options two and three (“Provides the right care and avoids care that is not needed” and “Provides the right and necessary care”), but found the first to be clearer. This may be because the word “care” had different meanings for participants. Most participants thought that “care” meant the treatments, tests, and procedures they provided. However, a few participants understood “care” in a broader way, to include their experience in a doctor’s office, how staff took care of them while they were in the office, and the doctor’s bedside manner.

Aligning Resource Use Labels and Word Icons

Participants reviewed the labels within the context of a Web display of quality and cost for five primary care doctors (see sample display below). The display employed the use of word icons for the ratings (i.e., better, average, below). Importantly, participants’ understanding of a word icon depended on their interpretation of the label. The vast majority of participants were able to identify correctly that a “below” rating would be bad, and a “better” rating would be good. Although participants reported that “below” could indicate providing too much or too little care, most stated that “below” meant not getting enough care. This was particularly true when participants viewed labels that included the terms “necessary” or “right amount of care.” A few participants were also confused about the meaning and directionality

of a “below” or “better” rating when term “overuse” was included. When the term “overuse” was part of the label, some participants interpreted “below” to mean too much care, while a few participants stated “better” meant providing too much care.

Sample display:

Compare Primary Care Doctors					
Doctor's Office	Uses treatments proven to be effective (?)	Uses methods to prevent medical errors (?)	Patient survey results (?)	Resource use (?)	Average cost of office visit paid by patient and insurance (?)
Wellesley Family Medicine	better	better	average	better	\$144
River View Medical Center	better	better	average	average	\$202
Westlake Internal Medicine	below	average	better	average	\$189
Fairview Health Services	below	average	better	below	\$177
Emerson Family Medicine	better	average	Not reported due to less than 100 patients who had this service.	below	\$118

Recommendation. Given these findings, it is important to make sure that resource use labels and reporting displays work together and make sense to consumers. Labels should be clearly worded and positively framed in order to match the word icons. For example, “Appropriate use of tests, treatments, and procedures” is positive and matches “better,” “average,” and “below.” “Overuse” is negative and does not match up with the word icons. This may require additional consumer testing.

Individual Measures of Resource Use

During individual interviews, participants were presented with consumer-friendly labels for individual process and outcome measures of resource use or efficiency for both hospital and ambulatory care. Participants valued seeing the individual resource use measures but struggled to interpret some of them. Individual measures included length of hospital stay, hospital readmissions, avoiding use of antibiotics for specific conditions, ordering generic drugs, and avoiding use of radiology and imaging tests for lower back pain. Appendix A provides a complete list of the measures.

We asked participants to review individual resource use measures one at a time and tell us whether they were positive or negative, how meaningful or important a measure was, and whether they would consider a measure when selecting a doctor. In general, participants valued the individual resource use measures but interpreted them inconsistently because of individual differences in knowledge and experience. All participants believed the hospital-related resource use measures were important and should be considered in selecting a hospital. However, participants had differing opinions about the doctor’s individual measures based on their understanding of the issue or condition and personal experience. Each participant found at least one measure that they said they did not know enough about to decide whether or not it was “good” or “bad.” Participants usually did not know whether certain tests (e.g., CT scan or MRI) or antibiotics were appropriate for the condition discussed. Several participants discussed their experience with generic drugs, low back pain, upper respiratory infections, and children with sore throats. Their experience had a direct impact on whether they perceived the measure to be “good” or “bad.” For example, one participant described an instance when her primary care doctor insisted on additional cancer screening, even though her specialist recommended against it. She believed that the additional screening identified her condition and saved her life. As a result, she did not want a doctor to avoid an EKG or stress test in patients without symptoms. Similar to the primary care doctor who insisted on additional cancer screening, most participants stated they could advocate for themselves and receive the services they needed, even from efficient doctors.

Recommendations For Reporting Resource Use Measures

When asked whether they preferred to see a summary score of resource use (e.g., “appropriate use of testing, treatment, and procedures”) or individual measures, most participants wanted to see a summary score. Without prompting, most participants asked for a display of a summary score first with the option of drilling down to see the individual measures. In this way, participants stated they could see specific resource use measures important to them without getting confused by too much information. Further, participants noted that they would not need to know whether each individual resource use measure was “good” or “bad.”

“As a lay person, I don’t know the ins and outs [of the measures]. I just know enough to be dangerous. You have to put faith in the doctor to be knowledgeable and make these decisions.”

Recommendation. Given the differing interpretations of individual measures and consumer preferences, we recommend showing a summary score or roll-up of individual resource use measures. This can be accomplished by reporting an existing summary measure or developing a roll-up score for individual measures.

- Existing resource use summary scores include the [Health Partners’ Total Cost of Care and Resource Use](#) measures or the [National Committee for Quality Assurance’s Relative Resource Use](#) measure. Since these are complex measures that do not have drill-downs, a clear explanation of the measure should be provided. The explanation should define the measure and explain its purpose or meaning.
- A roll-up of individual measures should provide a definition of the roll-up measure, a listing of all individual measures included in the roll-up, and a path for accessing the results for the individual resource use measures.

Conclusion

There are several ways in which Alliances (and other public reporting organizations) currently providing or collecting data on resource use can communicate resource use information more effectively and help consumers better understand and use this information.

1. Explain the concept of resource use in consumer-friendly terms. Interview participants received the following explanation well :

For a primary care practice, part of delivering high-quality health care is providing patients with all of the tests, treatments, and procedures (resources) they need—but not more than necessary. Unnecessary tests and procedures may harm patients. They also contribute to the high costs of health care.
2. Consider using any of the following alternative labels for a summary measure of resource use:
 - Appropriate use of tests, treatments, and procedures
 - Provides the right care and avoids care that is not needed
 - Provides the right and necessary care
3. Be aware that consumers may interpret the word icon “below” (i.e., better, average, below) to mean not enough care, although “below” could mean overuse of resources. This is particularly true when the term for resource use employs the word “necessary” or “appropriate.”
4. Advocate for collecting and reporting summary measures of resource use given their simplicity, but provide access to a clear, consumer-friendly definition of the measure.
5. If reporting individual resource use measures, create a summary score measure for resource use made up of individual process and outcome measures; then, provide a way for users to “drill down” to see the individual process and outcomes measure scores.

Appendix A: Methods

The American Institutes for Research (AIR) conducted 20 one-on-one, 90-minute interviews with health care consumers over two rounds of interviews in Bethesda, MD, and Raleigh, NC. Across both rounds of testing, AIR recruited consumers between 35 and 64 years old and a mix of gender, race/ethnicity, education, household income, and chronic conditions (existence and type). Participants indicated they had one of the following occur in the past year: signed up for a high-deductible health plan (at least \$500 individuals; \$1,200 family); had a recent emergency room visit; had a recent overnight hospital stay; or had an MRI, CT scan, x-ray, PET scan, ultrasound, or similarly costly testing or treatment.

Interviewers followed a semi-structured protocol and presented stimulus materials to elicit reactions from participants. During the creation of the interview protocol and stimulus materials, AIR reviewed existing research, descriptions, and displays of quality, cost, and resource use data, including:

- Peer-reviewed literature on resource use and health care efficiency measures.
- [Research conducted by Judith Hibbard and Shoshanna Sofaer](#) for the Chartered Value Exchanges on how to effectively present health care performance data to consumers.
- [Findings from consumer focus groups](#) conducted by AIR on consumer beliefs and use of information about health care.
- Alliance and other websites displaying cost and resource use measures.

Interviewers asked participants about the types of information on doctor’s offices or hospitals they search for on the Internet, where they get that information, and how important they believe it is that doctor’s offices provide high-quality care at an affordable price. Participants were shown displays that included scores for quality and resource use measures as well as information on the average cost of a doctor’s office visit. They were then asked how they could use the information to select a doctor’s office.

Interviewers asked participants about several different ways of referring to resource use to determine what terms and phrases participants thought best represented the definition of resource use. In addition, interviewers asked participants to sort individual measures of resource use (e.g., avoiding antibiotics for a common cold) into a “good” or “bad” pile based on whether they believed it was good or bad that a doctor avoided a particular test, treatment, or procedure. A sample display of the stimulus materials and complete list of individual measures of resource use are provided below.

Sample display:

Compare Primary Care Doctors					
Doctor's Office	Uses treatments proven to be effective (?)	Uses methods to prevent medical errors (?)	Patient survey results (?)	Resource use (?)	Average cost of office visit paid by patient and insurance (?)
Wellesley Family Medicine	better	better	average	better	\$144
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Individual measures of resource use tested with consumers

- Fewer patients returning to the hospital for any unplanned reason within 30 days after being discharged
- Lower average length of hospital stay
- Avoiding use of EKGs or exercise stress test to detect heart problems in people without any symptoms
- Ordering generic prescriptions for antacid medications
- Ordering generic prescriptions for antidepressant medications
- Ordering generic prescriptions for cholesterol-lowering medications
- Ordering generic prescriptions for high blood pressure medications
- Ordering generic prescriptions for ADHD medications
- Avoiding CT scan for low back pain
- Avoiding MRI for patients with low back pain
- Avoiding x-ray for patients with low back pain
- Avoiding antibiotics for people with upper respiratory infection
- Avoiding antibiotics for adults with acute bronchitis
- Avoiding antibiotics for children with sore throats
- Avoiding antibiotics for common cold

Appendix B: Which Labels Worked and Which Did Not

The two tables below list the labels for resource use that were tested and participants’ reaction and understanding, from best label to worst label.

Labels for Resource Use That Worked Best

	Label	Participant Reaction(s)
Best	Appropriate Use of Tests, Treatments, and Procedures	<ul style="list-style-type: none"> • Most participants reacted positively to this label. • Participants understood “appropriate use” to mean that doctors did not use too many tests, treatments, or procedures, but rather used the appropriate kind at the appropriate time. • Participants correctly identified tests as primarily relating to screening and disease/illness and identified treatments as a step toward resolving a medical issue.
	Appropriate Use of Services and Treatments	<ul style="list-style-type: none"> • Most participants thought “appropriate use” indicated that the doctor was providing the correct tests without using unnecessary or unnecessarily expensive options. • Participants thought that “services” was a broad term and could extend beyond the doctor’s care (e.g., staff, equipment).
	Provides the Right and Necessary Care	<ul style="list-style-type: none"> • The term “necessary” appealed to most participants. • Participants described this label as informative, strong, positive, and comforting. • A few participants noted that all doctors should provide the “right” care and that this word should not be in the measure. • When used with word icons for ratings (i.e., better, average, and below), consumers may interpret “below” as not getting enough care. • Consumers may understand the word “care” in the label to imply care in a broad sense (e.g., bedside manner, polite office staff) rather than tests, treatment, and procedures).

Ineffective Labels for Resource Use

	Label	Participant Reaction(s)
Ineffective	Provides the Right Care and Avoids Care That is Not Needed	<ul style="list-style-type: none"> Participants described this label as simple, clear, and direct. A few participants pointed out that the word “avoids” was negative while all of the other labels were positive. Some participants thought this label to be unnecessarily long.
	Appropriate Use of Treatments	<ul style="list-style-type: none"> Several participants noted that “treatments” was not inclusive of tests and differed from procedures as described in the definition. Most participants preferred “treatments” to “services.” They explained that “treatments” was more specific and easier to understand. Most participants understood that appropriate use of treatments meant that they would get the right treatment for their condition.
	Provides the Right Amount of Care	<ul style="list-style-type: none"> Participants often associated this label with how the staff treats them, bedside manner, and attitudes. This label was too vague and subjective to some participants and left them with the following questions: What is the right amount of care? Who defines the right amount of care?
	Spends Health Care Dollars Wisely	<ul style="list-style-type: none"> Participants were unsure whose health care dollars this label was referring to. Several participants associated “spending health care dollars wisely” with doctors’ spending money on having the most up-to-date equipment and highly trained staff.
	Appropriate Use of Services	<ul style="list-style-type: none"> Most participants understood that a “better” rating for “appropriate use of services” implied that a doctor’s office provided the right services. Many participants were unclear about what exactly fell under the category of “services”; several participants thought that “services” meant everything relating to a doctor visit, from the behavior of the reception staff to the office environment. A small minority of participants preferred “services” to “treatments,” although these participants defined services more broadly than treatments.
	Overuse of Services	<ul style="list-style-type: none"> To participants, “overuse” implied the concept of waste, cost, and unnecessary care but did not lead participants to think of getting the most appropriate care. Most participants with whom we tested “overuse of services” thought it meant that the doctor or practice was using too many services that were wasteful, expensive, or dangerous. Almost all of the participants equated “overuse” with “unnecessary.” Two participants thought that if a doctor overuses services, he is doing it to “make sure all their bases are covered.”
	Resource Use	<ul style="list-style-type: none"> Nearly all participants were perplexed by this term when viewed with other quality measures in a display. Without the definition, only a few participants correctly identified the meaning of resource use as defined in this testing. Some participants said they would have no idea what this term meant without the definition. Participants defined resource use as information or materials that the doctor would provide to a patient (e.g., patient portal or website, an information sheet about their diagnosis or a referral to another doctor or treatment group), staff, or equipment.

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