Robert Wood Johnson Foundation

Published: January 12, 2012
Program Results Report
Grant ID: EPC

# Advancing Measurement of Equity and Patient-Centered Care to Improve Health Care Quality

An RWJF national program

## SUMMARY

*Advancing Measurement of Equity and Patient-Centered Care to Improve Health Care Quality* aimed to expand understanding of how to make health care both more patient-centered and more equitable across all racial and ethnic groups. The Robert Wood Johnson Foundation (RWJF) awarded 17 grants for research projects in two categories:

- *Patients' Experience With Care and Survey Instruments* (nine grants)
- *Shared Decision-Making and Diverse Populations:* two sub-topics:
  - *Studies of Patients' Decision-Making Processes* (four grants)
  - *Studies of the Use of "Decision Aids" By Patients and Clinicians* (four grants).

### Context

In an inventory of available data about quality improvement, the Robert Wood Johnson Foundation (RWJF) found few evidence-based approaches on two important topics: how to make health care more patient-centered and how to make it more equitable (i.e., with equal access to quality care). RWJF sought to improve understanding of how to measure equity[1] and patient-centered care[2] and the role of both in promoting quality.

### Key Program Results

Projects on *Patient's Experience With Care and Survey Instruments* evaluated the use of specific survey instruments with racially and ethnically diverse populations. Subjects addressed included:

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[1] RWJF defines equity to focus primarily on racial and ethnic health care disparities, although other inequities exist (e.g., income, level of education) and do matter.

[2] RWJF defines patient-centered care as care that is coordinated and focused on the needs of the patient.

- The extent to which the surveys capture aspects of health care encounters that members of different racial/ethnic groups rate as most important to quality
- The applicability of the surveys for use with Native American health care consumers

Projects on *Patients' Decision-Making Processes* investigated patient perceptions of the risks and benefits of different courses of action in different health care conditions. Subjects addressed included:

- The process of choosing a hospital
- Patients' use of information that addresses their personal risk factors (e.g., their personal risk of heart disease or other conditions) in making health care decisions

Projects on the *Use of "Decision Aids" by Patients and Clinicians* focused on the development, use and evaluation of tools that assist patients and their providers in working together to make treatment decisions. Subjects addressed included:

- Use of a video program that presents diabetes treatment options and emphasizes and supports the role of patients' own behavior in the control of diabetes
- Use of interpreted (Spanish to English and English to Spanish) shared decision-making with Latino patients screened for prostate cancer

### Program Management

RWJF staff from the Quality/Equality Team, led by Senior Program Officer Claire B. Gibbons, PhD, MPH, managed *Advancing Measurement of Equity and Patient-Centered Care to Improve Health Care Quality* (called the *Targeted Quality Solicitation on Equity and Patient- Centeredness* internally) at RWJF.

### Funding

The RWJF Board of Trustees authorized the targeted solicitation for up to $3 million over three years, beginning in September 2007.

## CONTEXT

In an inventory of available data about quality improvement, RWJF found few evidence-based approaches on two important topics: how to make health care more patient-centered and how to make it more equitable. The Foundation sought to improve understanding of how to measure equity (i.e., equal access to quality care) and patient-centered care, and the role of both in promoting quality.

## RWJF's Interest in This Area

RWJF, through its Quality/Equality Team, is committed to improving the quality of health care for all Americans. The team's strategy has four major components:

- *Aligning Forces for Quality*, the Foundation's signature effort to improve the overall quality of health care in targeted communities, reduce racial and ethnic disparities, and provide models for national reform. Learn more about the *Aligning Forces for Quality* initiative and its work in 16 communities.
- Measuring progress through research, tracking and evaluation
- Transparency through the sharing of information about what is happening inside the U.S. health care system with everyone who gets, gives or pays for care
- Communications directed at giving stakeholders (such as patients and families) access to timely, accurate information that they can use to make informed choices and implement change

Other key programs and initiatives supported under RWJF's Quality/Equality portfolio include:

- The *Dartmouth Atlas Project*, which offers comprehensive information and analysis about national, regional and local health care markets, as well as individual hospitals and their affiliated physicians, in order to provide a basis for improving health and health systems. Read a Progress Report about the work of the *Dartmouth Atlas Project.*
- *Finding Answers: Disparities Research for Change*, which identifies and evaluates promising health care interventions that reduce racial and ethnic disparities. The program shares lessons learned with the *Aligning Forces for Quality* communities.
- *Medicaid Managed Care*, a program to improve the quality of and access to Medicaid managed care by working with states, health plans and consumer groups. Read about the *Medicaid Managed Care Program* in the 2006 RWJF Anthology.
- *The High-Value Health Care Project*, which provides support to an alliance of health care organizations that works to make consistent, useful health care quality and cost information widely available. Read the Program Results Report.

## THE PROGRAM

*Advancing Measurement of Equity and Patient-Centered Care to Improve Health Care Quality* was a targeted solicitation for proposals that aimed to expand understanding of how to make health care both more patient-centered and more equitable. The solicitation built on RWJF's previous investments to measure and evaluate quality improvement

efforts and support research projects on quality improvement that have relevance to patient-centered care and equity.

When the program began, "we were really focused on solutions versus problems," said Senior Program Officer Debra J. Perez, PhD, MA, MPA, who is also the deputy director of Research and Evaluation. "We knew where the disparities existed and we were trying to focus on more complex questions through solutions-driven research."

The September 2007 call for proposals focused on three topic areas:

- *Topic 1: Performance Measurement*. Quality measures that track how health care is delivered are of value to providers but less useful to patients in making health care decisions. RWJF sought projects that would improve the information produced with existing nationally recognized quality measures so that it was understandable and useful to consumers.

  RWJF received no appropriate proposals related to Topic 1 and decided to use the authorized funds to support projects for Topics 2 and 3.

- *Topic 2: Patients' Experience With Care and Survey Instruments*. Survey instruments can capture patients' perspectives on different components of the health care system, such as the clinician group or the health plan. However, some types of patients systematically give better or worse assessments of their care than other patients. For example:

  — Patients with lower health status, those with higher education and women in general tend to self-report worse care quality scores.

  — Ethnic differences in patient assessments of their care are also evident.

  RWJF sought to evaluate the application of specific instruments to racially and ethnically diverse populations so as to understand the impact of adjusting surveys for population differences. These instruments included:

*"We knew that racial disparities in health care existed. We didn't know if part of the disparities was a function of the measuring—a bias or problem with the measurement that folks were using. This was an attempt to try to understand that a little better."—Claire B. Gibbons, RWJF Senior Program Officer*

— Three surveys from the Consumer Assessment of Healthcare Providers and Systems (CAHPS®)[3]:

  - Health Plan Survey
  - Clinician and Group Survey
  - Hospital Survey

— The Experience of Care and Health Outcomes (ECHO™) Survey[4]

Questions to be addressed were:

— Which patient characteristics correlate with patients' evaluations of care quality?

— To what degree do these evaluations reflect "true" differences in the way subpopulations are treated?

— What underlying cultural issues may cause different subpopulations to rate or report the quality of care they receive in a way that varies from what may be considered an objective or "true" assessment of their care?

— What modifications can be made in the way items are constructed or surveys administered to reduce the variation between "true" and "observed?"

- *Topic 3: Shared Decision-Making and Diverse Populations*. Patients' frames of reference, preferences, experiences, priorities and needs play important roles in their health care decisions. RWJF asked for proposals for projects that would:

  — Study decision-making processes and perceptions of risks and benefits of different courses of action (e.g., choosing among different treatments or deciding not to get treatment at all) under different sets of conditions for patients of various races, ethnicities and ages

  — Assess the use of shared decision-making programs (also known as decision aids) that assist clinicians and patients with clinical decisions involving two or more equally effective alternatives with different risks and benefits. Some programs have resulted in improved patient satisfaction with the decision-making process and in improved quality of care and reduced costs. However, these programs require testing to determine if they are adaptable to different settings and to racially and ethnically diverse populations.

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[3] The CAHPS® program is a public-private initiative that develops and supports the use of a comprehensive and evolving set of standardized surveys of consumer and patient health care experiences. It is funded and administered by the U.S. Agency for Healthcare Research and Quality. See *www.cahps.ahrq.gov* and *www.cahps.ahrq.gov/content/cahpsOverview/OVER_Intro.asp?p=101&s=1*. More information is available at *www.hcp.med.harvard.edu/echo*.

[4] The ECHO™ survey collects consumers' ratings of their behavioral health treatment. It was developed by a group that included behavioral health consumers, clinicians and behavioral health policy experts (including representatives from CAHPS).

## Funded Projects

RWJF awarded 17 grants, which began in February 2008:

- Nine one-year grants of up to $100,000 each for projects on *Topic 2: Patients' Experience With Care and Survey Instruments*
- Four two-year grants of up to $200,000 each for projects on *Topic 3: Shared Decision-Making and Diverse Populations: Studies of Patients' Decision-Making Processes*
- Four two-year grants of up to $300,000 each for projects on *Topic 3: Shared Decision-Making and Diverse Populations: Studies of the Use of "Decision Aids" By Patients and Clinicians*

See the Appendix for a list of grantees, with grant details and contact information.

### *Management*

RWJF staff from the Quality/Equality Team, led by Gibbons, managed the solicitation and its projects.

# PROJECTS ON PATIENTS' EXPERIENCE WITH CARE AND SURVEY INSTRUMENTS

## Key Activities and Findings

Projects in this group addressed the use of the Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys (eight projects) or the Experience of Care and Health Outcomes (ECHO) survey (one project) with racially and ethnically diverse populations.

### *Assessing Cultural Perspectives on the Quality of Care*[5]

**Ann D. Bagchi, PhD**, and colleagues at Mathematica Policy Research used focus groups to examine whether measures in the CAPHS surveys capture aspects of health care encounters rated as most important to quality by members of four racial and ethnic groups: African Americans, Latinos, Asian Indians and Whites. Project staff conducted eight focus groups with a total of 84 participants.

The study addressed three primary research questions:

- How do patients define quality with respect to health care encounters with their primary care physicians?

[5] ID# 63841

- Do the CAHPS surveys capture aspects of care that affect the perceptions of health care quality among members of racial and ethnic minority groups?
- How can the CAHPS surveys be adapted to account better for racial and ethnic differences in assessments of health care quality?

## Key Findings

Project staff reported key findings in an Issue Brief entitled *Focus on Quality: Communication in the Health Care Encounter*,[6] published by Mathematica, and in an article entitled "Assessing Cultural Perspectives on Healthcare Quality,"[7] published in the *Journal of Immigrant Minority Health*:

- **When asked to describe what constitutes quality in the context of a visit to their primary care physician, focus group participants most frequently noted issues related to patient-provider communication.** In addition, they mentioned characteristics of the health care setting, such as waiting time or staff efficiency.
- **While all patients considered good communication to be critical to a high quality visit with their physician, two competing views of the physician's role in communicating with patients were evident across all racial/ethnic groups:**
  - It is the physician's responsibility to encourage trust and a patient's willingness to share information by showing empathy and getting to know the patient on a personal level.
  - A personal level of communication could interfere with provision of high-quality care. A physician should be objective and not emotional when treating a patient.

  However, the majority of participants agreed that some familiarity with the patient helped to build trust between physician and patient.
- **Participants pointed out that communication goes both ways.** Some participants said that patients have equal responsibility with the physician in the exchange so that all of a patient's needs and concerns can be addressed.
- **African American, Latino and Asian Indian participants stressed that physicians should show cultural competence[8] when interacting with patients, as well as competence with regard to age and gender issues.**

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[6] *Focus on Quality: Communication in the Health Care Encounter.* Issue Brief No. 5, February 2009. Princeton, NJ: Mathematica Policy Research. Available online.

[7] Bagchi AD, af Ursin R and Leonard A. "Assessing Cultural Perspectives on Healthcare Quality." *Journal of Immigrant Minority Health*, published online October 14, 2010. Abstract available online. Scroll down and click on "Show Summary."

[8] Cultural competence in health care is defined as the ability of health care systems and providers to provide care to patients with diverse values, beliefs and behaviors, tailoring the delivery of care to meet their social,

- **Participants from racial and ethnic minority groups were more likely than White participants to mention cultural competency and a holistic approach to care (i.e., one that addresses a patient's physical, psychological/emotional and social needs as a whole) as important to providing quality health care. Yet the current core CAPHS questionnaire does not address either of these factors.**

### Journal Articles

Bagchi AD, af Ursin R and Leonard A. "Assessing Cultural Perspectives on the Quality of Care." *Journal of Immigrant Minority Health*. Published online October 14, 2010. Abstract available online: scroll down and click on "Show Summary." Full text requires subscription or fee.

### Issue Brief

Bagchi AD, af Ursin R and Leonard A. "*Focus on Quality: Communication in the Health Care Encounter*. Trends in Health Care Quality, Issue Brief No. 5. Princeton, NJ: Mathematica Policy Research, February 2009.

## *Influence of Health Attitudes and Health Status on Ethnic/Racial Disparities in Consumer Assessments of Care*[9]

Researchers from the University of Arkansas for Medical Sciences, College of Public Health, led by **Tyrone F. Borders, PhD**, investigated the association between health-related attitudes and beliefs and consumers' assessments of their care. They looked at whether adjusting for attitudes and beliefs influences ethnic and racial disparities in ratings and reports of care.

Data sources were two files from the 2005 Medical Expenditure Panel Survey from the Agency for Healthcare Research and Quality:

- A household component containing individual demographic, social, economic and health insurance data as well as self-rated overall health
- A self-administered questionnaire that included selected items from the CAHPS and from the SF-12 instrument that measures physical and mental health status. The SF-12[10] offers both physical and mental health component summaries of patient health status, while the CAPHS uses a single overall measure of self-rated health (excellent, very good, good, fair or poor) when comparing findings across groups.

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cultural and language needs. (From: Betancourt JR. *Cultural Competence in Health Care: Emerging Frameworks and Practical Approaches*. New York: Commonwealth Fund, 2002, page v.)

[9] ID# 63834

[10] The SF-12 is a short form of the survey used in the Medical Outcomes Study: Measures of Quality of Life Core Survey, a two-year study of patients with chronic conditions conducted by RAND Corp.

The researchers measured an individual's level of "health confidence" as his/her degree of agreement with the statement "I can overcome illness without help from a medically trained person." The analysis addressed the relationship of an individual's report of their health confidence with each of four variables:

- Overall health care rating
- Getting needed care
- Getting care quickly
- Doctor communication

The goal of the analysis was to determine, for example, whether individuals with high health confidence rated their overall health care higher or lower, or reported getting needed care more or less often than individuals with lower health confidence. Additional analyses determined whether adjusting for health status using the SF-12's physical and mental health component summaries reduces racial or ethnic disparities in consumer assessments versus adjusting only the single CAPHS measure of self-rated health.

### Key Findings

Researchers reported key findings in a 2011 article entitled "Health Confidence and Racial and Ethnic Disparities in Consumers' Assessments of Health Care," published in the *American Journal of Medical Quality*[11] and in a report to RWJF:

- **Health confidence (i.e., confidence in one's own ability to handle an illness) was significantly associated with lower odds of a high overall health care rating and with a high doctor communication rating.** It was also associated (but not significantly) with lower odds of a high getting needed care rating. (*American Journal of Medical Quality* article)
- **After adjusting for health confidence and demographic, social, economic and health status factors:**
  - African Americans had lower odds of a high overall care rating and of a high "getting needed care" rating than Whites.
  - Asians had lower odds of a high overall care rating, "getting needed care" rating, "getting care quickly" rating and doctor communications rating than Whites.
  - There were no Hispanic versus non-Hispanic disparities in the ratings.

  (*American Journal of Medical Quality* article)

[11] Borders TF, Lensing MS and Xu KT. "Health Confidence and Racial and Ethnic Disparities in Consumers' Assessments of Health Care." *American Journal of Medical Quality*, 26(3): 220–228. Abstract available online.

- **Ethnic and racial differences in consumers' assessments of their care changed very little when health status was adjusted using the two scores of the SF-12 (physical and mental health components) versus using the single overall measure of self-rated health.** (Report to RWJF)
- **The researchers reported: "The results of this study indicate that health confidence is significantly associated with several dimensions of consumers' ratings or reports of their health care**. … Although health confidence is associated with consumer assessments, it does not appear to attenuate racial or ethnic disparities in consumer assessments." (Report to RWJF)

### Journal Article

Borders TF, Lensing X and Xu KT. "Health Confidence and Racial and Ethnic Disparities in Consumers' Assessments of Care." *American Journal of Medical Quality*, 26(3): 220–228. Abstract available online. Full text requires subscription or fee.

## *Consumer Assessment of Health Care Providers and Systems: Validation and Cultural Adaptation in the Native American Population With Diabetes Mellitus*[12]

Type II diabetes disproportionately affects Native Americans, who lead the nation in the disease. CAHPS is useful for obtaining reliable information about patient perception of the impact of chronic diseases and their experience with health care providers and systems. Yet, CAHPS has not been investigated well with Native American populations with chronic illnesses, and little information has been available about Native Americans' health care experiences and their interactions with providers and systems.

Researchers at the University of Oklahoma Health Sciences Center, led by **Ann F. Chou, PhD, MPH**, aimed to contribute to the knowledge base on Native Americans' experience of care for chronic illness, specifically type II diabetes. The goals were to:

- Assess the feasibility of data collection and informing the design of a larger study on experience with care systems among Native Americans
- Provide baseline information on diabetes management in the Native American population

To meet these goals, the study team:

- Validated and determined the internal consistency among CAHPS measures
- Investigated adaptations of CAHPS for Native American cultures
- Examined relationships between CAHPS measures and factors related to disease, care and access in the Native American population

[12] ID# 63844

Project staff partnered with two Native American tribal nations in Oklahoma: the Choctaw and the Chickasaw. Staff administered 157 surveys in person to members of the two nations who had a diagnosis of type II diabetes and who had used the tribal health services. The survey included questions from the CAHPS Clinician and Group Survey scales as well as other health- and disease-related scales.

Staff also conducted two focus groups (with 29 total participants), one with individuals in the Choctaw Nation and one with individuals in the Chickasaw Nation.

### Key Findings

Researchers reported key findings to RWJF:

- **All participants reported that the CAHPS survey items were appropriate and addressed well their health care experience.** There was no variation between the two tribes.
- **Both Choctaw and Chickasaw participants agreed that the CAHPS items were culturally sensitive and linguistically appropriate.** They said that the items were clear and described ideal patient-provider interactions that they would like to have with their providers.
- **Findings related to dimensions of patient experience with care (such as respect, communication and access) as described by CAHPS items varied significantly between the two tribes:**
  - One tribe has a clinic for patients with diabetes where care is well-coordinated. Participants from this tribe reported high satisfaction with their care, which enhanced their ability to self-manage their diabetes care.
  - Care for patients with diabetes from the other tribe was fragmented, with minimal continuity of care due to high turnover of providers. These participants reported a lack of respect for the patient as one of many problems. Patients expressed extreme dissatisfaction with their care and indicated that it has negatively impacted their ability to manage their disease and remain healthy.

## *Cultural Variability in Patient Responding to Survey Measures*[13]

According to **Timothy Patrick Johnson, PhD**, and his team of researchers at the University of Illinois at Chicago, College of Urban Planning and Public Affairs, "The physician-patient interaction can be characterized by disparities in perceived power and status. Racial/ethnic variables also can produce social distance between patients and providers and hence introduce power differences … it is important to investigate how

[13] ID# 63842

cultural processes that vary by race/ethnicity may influence health care assessments in interpersonal contexts in which power may be salient."

The researchers note cultural differences in the nature and importance of hierarchy in interpersonal relations. Cultures with a "vertical" orientation associate power with status-enhancing concerns and may perceive power holders to be self-centered individuals who rise to the top through pursuit of their self-interests. The researchers offer White American culture as a possible example of a vertical orientation.

Cultures with a "horizontal" orientation associate power with concern for the welfare of others and may view those in power as benefactors who seek to protect helpless individuals. Hispanic and African-American cultures may be examples of a high horizontal orientation to power, the researchers said.

Johnson and his investigative team evaluated the degree to which variability in quality of care ratings across racial/ethnic patient groups may be a function of cultural differences in norms, motivations and expectations about power.

Some 522 adult African American, Hispanic (Mexican) and non-Hispanic White patients of internal medicine outpatient clinics at the University of Illinois at Chicago completed survey questionnaires that assessed interpersonal expectations of physicians. The surveys, conducted in two waves of data collection, used questions from the CAHPS set of questionnaires, along with others used directly or adapted from other sources.

- In Wave 1, half of the participants completed questionnaires that included a "prime"—a task designed to cause them to have ideas related to power in mind (e.g., filling in the missing letters of words relevant to power, such as "boss"). The other half completed questionnaires with a neutral prime (filling in missing letters for ordinary words such as "table").
- In Wave 2, half of the participants received a prime for personal power (asked to write about an event when they impressed someone or made someone admire and notice them) and half received a prime for socialized power (asked to write about an event when they gave advice, help or support to someone). Researchers expected completion of these tasks to cause either personal or socialized power to be salient for the participant as a result, depending upon the prime received (i.e., the task completed).

Versions of questionnaires were randomly assigned to participants.

## Key Findings

Researchers reported key findings in an unpublished report from the Survey Research Laboratory at the University of Illinois at Chicago:

- **In the first wave of data collection, when ideas of power were included, the importance of a physician's level of caring in predicting overall health care satisfaction went up for Hispanic participants and down for White participants.**
  - In line with researchers' expectations, power salience appeared to increase the importance of a physician's level of caring for Hispanics, but decrease it for Whites, suggesting differences between these groups in the degree to which power is linked to expectations of a powerful person being caring.
  - For Whites, the extent to which a physician provided a degree of time and attention perceived to be fair (i.e., getting what they perceived to be their "fair share" of the physician's time) was a stronger predictor of overall health care satisfaction than it was for Hispanics, regardless of power salience.
- **In the second wave of data collection, additional variability was evident as a function of the cultural orientations or values of the patients and the type of power (e.g., self-centered versus socially focused) that was salient.** The importance of a physician's level of caring in predicting overall health care satisfaction depended completely on the interplay between these additional culturally relevant variables.

### Book Chapter

Johnson T, Shavitt S and Holbrook A. "Culture and Response Styles in Survey Research." In *Cross-Cultural Research Methods in Psychology*, Matsumoto D and van de Vijver F (eds). Oxford, UK: Oxford University Press, 2010.

### Report

Johnson T, Shavitt S, Torelli C, Holbrook A, Chavez N, Weiner S, Marzano K and Retzer K. *Cultural Variability in Patient Processing of Survey Measures.* Chicago: University of Illinois at Chicago Survey Research Laboratory, 2010.

### Presentation

Torelli C, Shavitt, S, Johnson, T, Holbrook A, Cho Y, Chavez N, Weinter S and Beebe T. "Culture, Concepts of Power and Attitudes Toward Powerholders: Consequences for Consumer Satisfaction in Ongoing Service Interactions." Paper presented at the 36th annual meeting of the Midwest Association for Public Opinion Research. Chicago, November 18–19, 2011. Abstract accessible from final conference program; search for presentation title.

### *Effects of Perceived Cultural Responsiveness and Technical Quality of Care on Perceived Overall Quality of Care*[14]

Researchers at the Human Services Research Institute in Cambridge, Mass., led by **Hugh Stephen Leff, PhD**, addressed two questions:

- What factors (including technical quality, perceived cultural responsiveness and clinical variables) are associated with perceived overall quality of care in diverse populations?
- What underlying issues may cause different subpopulations to perceive the cultural responsiveness of their care differently?

First, the researchers obtained information about how measures of quality—and specifically those in the Experiences of Care and Health Outcome (ECHO) survey—can be made more relevant for diverse racial and ethnic groups.

Using the ECHO questionnaire, researchers surveyed 117 Latino, Portuguese-speaking, Haitian and African American people with depression at the Cambridge Health Alliance, a safety-net provider in Cambridge, Mass. They sought to measure:

- Perceived overall quality of care
- Perceived cultural responsiveness
- Consumer satisfaction with care

The researchers also measured technical quality of care through review of patient charts for the presence or absence of specific practices related to the patient's diagnosis that experts agree are indicators of quality of care.

The researchers then obtained actionable information about cultural elements judged important to care. The goal was to improve training in cultural competency, enhance quality of care, identify additional items related to cultural elements of care for the ECHO survey and guide further research.

To explore these issues, researchers conducted separate focus groups for people from each of the four cultural groups, in the first language of the participants.

#### Key Findings

Researchers reported these key findings to RWJF:

- **Very few participants indicated that their care was not culturally responsive.**

[14] ID# 63832

- **Different patterns of associations between perceived quality of care and responses on ECHO measures and on technical quality measures emerged for different cultural groups, suggesting that cultural elements might affect ECHO responses.**
- **Patterns of associations among the variables studied for the different cultural groups suggest that perceived quality of care is determined by different aspects of the care experience for different cultural groups.**
- **African Americans, who showed the greatest associations between perceived quality of care and responses on ECHO measures and on technical quality measures, were least likely to prefer cultural elements of care.** Portuguese-speaking and Latino participants, who showed fewer associations, were more likely to prefer cultural elements of care (e.g., giving attention to religion, cultural traditions or family involvement; addressing culture in written materials or in the clinic setting; discussing discrimination; having a cultural match between clinician and patient).

  Investigators propose a "culture first" explanation for these findings: groups that prefer cultural elements of care are less attuned to other aspects of their care, while those with less preference for cultural elements are more aware of other aspects of their care.
- **Overall, most participants preferred to not have family involvement in their care.** This was a surprising finding, according to researchers, given that the importance of family involvement is often stressed in discussions of culturally competent care.

### *Development and Use of Hospital Care Scenarios to Investigate Differences in Responses to CAHPS Items by Hispanic Ethnicity and Language*[15]

Researchers at the American Institutes for Research, led by **Roger Levine, PhD**, and **Margarita Hurtado, PhD, MHS,**[16] employed cognitive interviewing techniques to develop scenarios of hospital experiences of care and used these scenarios in conjunction with the CAHPS Hospital Survey, to:

- Examine differences in patients' ratings and reports of standardized experiences of hospital care by language (i.e., English versus Spanish) and Hispanic or Latino ethnicity
- Determine the extent to which differences by Hispanic or Latino ethnicity and by language in overall ratings (based on a 0 to 10 scale), and reports on specific aspects of care (based on a never to always frequency scale) may reflect actual treatment differences

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[15] ID# 63835

[16] Shannon Madsen, MA, junior researcher, was also on the research team.

Working with six Latino individuals whose main or only language was Spanish and who had been hospitalized in the previous six months, project staff conducted cognitive interviews and used the results of these interviews to create four sets of scenarios of hospital experiences of care. Each set of scenarios described aspects of hospital care derived from patients' responses to the corresponding 10 CAHPS items.

After translation into Spanish and editing the scenarios for equivalency in both Spanish and English, project staff administered a survey to 276 individuals that included the scenarios and a series of associated CAHPS Hospital Survey questions. Among survey respondents: 97 were Latino Spanish speakers, 84 were Latino English speakers and 95 were non-Latino English speakers.

### Key Findings

Researchers reported these key findings to RWJF:

- **Latino Spanish speakers and Latino English speakers rated all four sets of hospital care scenarios more highly than did the non-Latino English speakers.** Latino Spanish speakers gave significantly higher ratings for two of the four sets of scenarios and Latino English speakers gave significantly higher ratings for three of the four sets of scenarios.
- **Higher scenario ratings were positively associated with lower levels of education.**[17]
- **Differences in ratings were associated with the overall quality of the hospital experience depicted in the scenarios.** The poorer the care shown, the greater the discrepancy between the ratings of Spanish-speaking Latino respondents and the ratings of English-speaking non-Latino respondents. Spanish-speaking Latino respondents rated the quality of care significantly higher on average than the English-speaking non-Latino respondents.
- **For the scenarios with the *lowest* overall ratings, Spanish-speaking Latino respondents gave more *positive* experiences than English-speaking non-Latino respondents.**
- **In contrast, for the scenarios with the *highest* overall ratings, responses to the CAHPS questions from Spanish-speaking Latinos were more *negative* than English-speaking non-Latino respondents.** English-speaking Latinos gave intermediate responses.

In summary, researchers noted that when care is poor, Spanish-speaking Latino respondents rate the care more highly than English-speaking respondents. When care is good, however, differences in ratings decrease substantially and English-speaking

[17] The lowest education level was associated with the Spanish-speaking group, the next level with the English-speaking Latinos and the highest level with the non-Latinos.

respondents often give significantly more positive responses. Thus, the researchers posited that Spanish-speaking Latino respondents may be more tolerant of poor care.

### *Experience of Care and Patient-Physician Value Fit in Hispanic, African American and Caucasian Populations*[18]

**Alan Schwartz, PhD**, and colleagues at the University of Illinois at Chicago College of Medicine investigated the extent to which the responses of different populations of patients to survey questions about the quality of their health care represent actual differences in the underlying care provided or, instead, different reporting of similar experiences.

With a group of 881 patients (one-third White, one-third African American, and one-third Hispanic) receiving care from a common group of providers, researchers administered two surveys per participant in one session:

- CAHPS Clinician & Group Adult Primary Care Survey, which asked patients about their recent experiences with clinicians and their staff
- Patient Clinical Value Congruence Survey, which measures the degree of fit between a patient and his/her provider on six dimensions of care values that are likely to vary both by culture and across individuals within the same culture

Researchers examined the association of participants' responses on the CAHPS survey with those on the Clinical Value Congruence scale.

#### Key Findings

Researchers reported initial findings to RWJF:

- **Hispanic patients provide higher ratings of experience of care than African American or White patients, despite worse health status.** These differences persist even when controlling for both health status and patient-physician fit.
- **Being a Hispanic patient who speaks only Spanish is more strongly associated with reporting a very positive care experience than any other combination of factors.** Researchers concluded that a substantial portion of the ethnic variation in CAHPS responses reflects differences in responses to the questions, rather than to the actual care experience. This is especially the case for Hispanic patients who speak only Spanish.
- **Compared with either bicultural Hispanic (i.e., speaking both Spanish and English) and White patients, Hispanic patients who speak only Spanish had:**
  - Lower physical health

[18] ID# 63821

- Lower preferences for having their physician attend to their care expectations
- Lower preferences for having their physician consider their religious beliefs
- Higher preferences for physicians providing information

- **Differences in CAHPS responses among African American patients vanish when health status and patient-physician fit are controlled.**

The researchers planned to make a translation of the Patient Clinical Value Congruence Survey available to researchers for future use through the principal investigator's online research data repository and through the National Quality Measures Clearinghouse. They also expected to submit their data set to the Inter-University Consortium for Political and Social Research repository at the University of Michigan (in addition to the investigator's own online repository).

### *Care Experience Survey Instruments*[19]

Researchers at Dartmouth Medical School, led by **John H. Wasson, MD**, examined the use of two different measures of patient experience:

- The CAHPS. This is a Type 1 instrument, which measures what has happened. Summary results of such instruments ("report cards") are relayed to clinical staff retrospectively with the intention of rewarding or penalizing past care and improving future care. This instrument is focused on performance.
- HowsYourHealth. This is a Type 2 instrument that provides an assessment of an individual patient to his or her clinician in anticipation of care. Type 2 instruments encourage the use of collaborative care. A summary of results for multiple patients can also be used to guide future clinician performance. This instrument is focused on action.

The team hoped to explore potential synergies between the two instruments by melding them into one instrument and testing it. Patients completed the melded survey online.

#### Key Findings

Project staff reported key findings to RWJF. Some of the findings include:

- **Public health officials can characterize the well-being of populations from use of the HowsYourHealth survey.** Using categories from a model of well-being (Evans and Stoddart Determinants of Well-Being), researchers found, for example:
  - Respondents of low financial status were less likely to report being confident to use self-care (29%) than respondents with adequate financial status (53%).

[19] ID# 63831

— Low financial status respondents were also less likely to report that their general health care was "perfect" (24%) than adequate financial status respondents (41%).

- **A comparison of patient responses to survey questions with notations of actual test results in their medical records found that patient recall of mammogram, bowel cancer screen, blood pressure and blood sugar results was greater than 90 percent.** Recall of specific lipid levels was low (50%). The findings did not vary consistently by education level or financial status.

- **A cross-tabulation of measures from the melded survey with a general measure of care quality (level of agreement with the statement: "I receive exactly the care I want and need exactly when and how I want and need it") found that similar categories of measures showed the same general trends for both CAHPS items and HowsYourHealth items.** For example:

  — Of respondents who "strongly agreed" with the care quality statement, 80 percent agreed that it was "easy to get medical care when needed" and 83 percent said they had "adequate time with doctor."

  — Of respondents who "disagreed" with the care quality statement, only 16 percent agreed that it was "easy to get medical care when needed" and only 24 percent said they had "adequate time with doctor."

- **Financial status has a substantial impact on most indicators of well-being.** After adjusting for financial status, African American race alone had little impact on patient perception of health care quality for the African American respondents in this study.

The combined HowsYourHealth and CAHPS measures are part of an online continuing medical education program for transforming practices that is available online free of charge.

### Journal Article

Wasson JH, Benjamin R, Johnson D, Moore LG and Mackenzie T. "Patients Use the Internet to Enter the Medical Home." *Journal of Ambulatory Care Management*, 34(1): 8–46, 2011.

Wasson JH and Moore LG. "Primary Care and Community Participatory Strategies." *Journal of Ambulatory Care Management*, 32(4): 299–302, 2009. Full article is available online by subscription or fee only.

### *Understanding Racial/Ethnic Differences in CAHPS Ratings: The Role of Perceptions, Reporting and Attributions*[20]

While research evidence indicates that patients from different racial and ethnic groups report differing experiences with the health care system, it is unclear the extent to which rating differences in the CAHPS represent true differences in care—rather than perceived, reported or attributed differences.

**Robin M. Weinick, PhD**, and colleagues at the Institute for Health Policy at Massachusetts General Hospital conducted a pilot study to:

- Develop a methodology to study whether ratings differences reflect true differences in the health care experience or differences in perception, reporting or attribution
- Assess the feasibility of using the methodology to understand differences in rating by Whites, African Americans, and Latinos
- Explore the extent to which experimental manipulation of the emotional response of study subjects can demonstrate that differences in trust (for African Americans) or anxiety (for Latinos) can account for racial and ethnic differences in CAHPS ratings.

  Researchers manipulated subjects' emotional response by asking the participants to imagine a scenario that elicits the desired emotional response (trust or anxiety) and write a brief description of their emotional reaction. For example, to prime increased anxiety, the participants imagined a doctor telling them that they have a disturbing, but not immediately life-threatening, condition such as diabetes.

#### Key Results

Investigators reported the following results to RWJF:

- **Researchers developed a new set of methods for assessing racial/ethnic differences in CAHPS responses.** These included a video of a typical encounter between a primary care physician and a patient with diabetes. (Diabetes is a frustrating condition for both patient and clinician and its management requires good communication between them, the researchers said.)
  - Researchers tested the new methods on an Internet-based panel of respondents and found the methods to be feasible to administer.
  - Experimental manipulation of emotional response had no impact. Researchers were unclear as to the reason.

[20] ID# 63843

### Journal Article

Weinick RM, Elliott MN, Volandes AE, Lopez L, Burkhart Q and Schlesinger M. "Using Standardized Encounters to Understand Reported Racial/Ethnic Disparities in Patient Experiences with Care." *Health Services Research*, 46(2): 491–509, 2011.

## Lessons From Studies of Patients' Experience with Care and Survey Instruments

1. **Take time to build relationships with community partners and to involve them meaningfully in the work.** The University of Oklahoma project reported that it was important to engage community partners early in the planning process and communicate frequently as the project proceeded.

   The team also invited partners to review and provide input at each stage of the project. "We are interested in continuous collaboration with these communities and their buy-in of the project is critical," the team reported. (Project Director Ann F. Chou, University of Oklahoma Health Sciences Center College of Public Health, ID# 63844)

2. **Identify and work with one or more organizations and individuals that are already familiar to the community.** A community outreach coordinator from the Center for American Indian Diabetes Health Disparities and a community liaison physically located in the Chickasaw Nation helped the University of Oklahoma research project smoothed communication with community stakeholders, participants and community health representatives. These two individuals were "instrumental in facilitating the data collection process," Chou, the project director, reported.

3. **Obtain the commitment of leaders at key partner organizations (e.g., a clinic where data will be collected) in writing at the beginning of project planning and negotiate specific operational plans early.** The University of Illinois team reported that nailing down the details early might have prevented them from having to make changes later in procedures at some data collection sites. (Project Director Alan Schwartz, University of Illinois at Chicago College of Medicine, ID# 63821)

4. **In order to recruit an adequate number of participants with the desired demographic characteristics, work with a variety of community organizations, rather than a single organization.** Community health fairs and programs run by county health departments also are good places to recruit study participants. (Project Director Roger Levine, American Institutes for Research, ID# 63835)

5. **Consider using Craigslist, the online network of classified advertisements, to recruit participants for research studies.** Posting is free and, for Mathematica, generated the largest number of interested callers. One drawback is that participants recruited through Craigslist may be more likely to be under age 45. Recruiting older participants through the site may not be as successful. (Project Director Ann Bagchi, Mathematica, ID# 63841)

6. **Informal settings are cost-effective alternatives to facilities that are specially designed for focus groups.** Mathematica rented a meeting room at a university student center for significantly less than prices quoted by research firms and hotel conference centers. The location was also easily accessible by bus and train. (Project Director Bagchi)

7. **Offer an incentive that is attractive to a particular group of study participants.** For example, the subject population in the study by the University of Illinois at Chicago College of Medicine highly valued the $15 grocery card provided. Project staff found the cards to be easier to manage than cash and equally anonymous. (Project Director Schwartz, University of Illinois at Chicago College of Medicine)

8. **Use interviewers to administer surveys in those cases where respondents are having difficulty answering self-administered surveys.** Having an interviewer available to explain the question can help maximize data quality. (Project Director Schwartz)

9. **Ensure that certain populations (such as elderly, illiterate or non-English speaking participants) have assistance, if needed, from friends or family members when using Internet-based surveys and programs.** (Project Director Wasson, Dartmouth Medical School, ID# 63831)

## PROJECTS ON SHARED DECISION-MAKING AND DIVERSE POPULATIONS: STUDIES OF PATIENTS' DECISION-MAKING PROCESSES

### Key Activities and Findings

#### *Hospital Quality Data: Understanding Decision-Making in Vulnerable Populations*[21]

Patients increasingly must make decisions about their health care, including the choice of a hospital. To help them become more informed decision-makers, insurers, governments and health systems are providing patients with information on measures of quality. Yet, very little is known about how patients respond to this information. The information may be complicated, technical or in a format that is difficult to understand, and it may not meet patients' needs. Data about how patients choose a hospital are especially limited, particularly for vulnerable populations.

Researchers at New York University School of Medicine, led by **Brian D. Elbel, PhD, MPH**, had three overarching goals for this project:

- To begin to understand the decision-making processes of vulnerable patients as they choose a hospital

[21] ID# 63829

- To examine how patients use or could use quality information in making a decision
- To determine how health care institutions can better utilize and present this and other information.

Researchers surveyed 103 patients from Bellevue Hospital in New York and conducted six focus groups that included a total of 24 participants.

Based on themes identified in these initial activities and a review of the literature, researchers developed a hypothetical choice experiment that included charts and graphs, as well as simple written summaries that identified key tradeoffs among choices. More than 1,000 Bellevue patients were randomly assigned to a health condition, asked to choose a health center using the information provided and then asked questions about:

- Their choice
- The choice process
- Satisfaction with their choice
- Their use and understanding of the information presented

### Key Findings

Researchers reported these findings from the focus groups to RWJF:

- **Vulnerable patients perceive that they have active choice about which hospital to go to.**
- **No patients were previously aware of hospital quality data, but, when made aware of it, were interested in it and found it valuable.**
- **Patients value both clinical care data (such as mortality rates) as well as interpersonal interactions with physicians and staff.**
- **Patients were more likely to trust data if consistent with their personal experience and/or with the reputation of the hospital.**

Analysis of the hypothetical choice experiment showed:

- **The way in which information is presented (e.g., graphs versus summaries) changes patients' choice of health center.**
- **Information provided by other consumers potentially influences consumer choice.**

A complete summary of the project and its findings will be available for download, free of charge, via The Joint Commission's website in February 2012.

### *Development and Testing of a Framework for Reporting Quality Data to Consumers*[22]

Researchers at the University of Oregon, Department of Planning, Public Policy and Management, led by **Judith H. Hibbard, DrPH**, investigated whether giving consumers a framework for understanding quality of care, would increase comprehension, use and valuing of comparative quality information.

Much research has focused on identifying ways to make quality measures contained in comparative reports more understandable to consumers, but little research has looked at ways to make the overall concept of health care quality more understandable.

A framework for communicating about quality gives consumers a short list of factors to consider when they choose a hospital, physician or health plan, and gives employers, payers and insurers a common language to use to convey a consistent message about quality to consumers. A meaningful concept of quality may also encourage consumer interest in health care quality reports and lead to increased efforts to improve quality.

The study included three components:

- Researchers conducted seven focus groups with a total of 55 nonfaculty employees of the University of Oregon and of a manufacturing company. Most (80%) were female, half were college educated and most (64%) were in excellent or very good health. The purpose of the focus groups was to refine a quality framework (an abbreviated version of one developed by the Institute of Medicine).

  Participants discussed the three key elements of the framework—effective, safe and patient-centered—by reviewing and revising a list of descriptions for each.

- In individual interviews, eight focus group participants viewed mock quality reports and answered comprehension questions developed from the focus group findings. These mock reports were then used for the third, experimental phase of the study.

- In the experimental phase, researchers randomly assigned 439 employed adults (ages 18 to 64) to view one of three performance reports:

  — Plain language with a framework

  — Plain language without a framework

  — Technical language without a framework

  Researchers surveyed participants about their comprehension of the report, their understanding of quality of care concepts and the perceived value of the information in the reports.

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[22] ID# 63840

## Key Findings

Hibbard and colleagues reported key findings in a 2010 article published in *Medical Care Research and Review*.[23]

- Focus group findings:
  - **Focus group participants did not come to a consensus on what defines an effective doctor.** Of 10 options, the description that most resonated was: a doctor who "uses treatments proven to get results."
  - **Participants also had varied ideas about the meaning of "safe" medicine.** Of eight options, most participants selected: "Having safeguards to protect patients from medical errors."
  - **The concept of patient-centered care was clear to almost all participants**. After discussion participants agreed that "patient-focused" was a more appropriate term and almost all endorsed the description of a patient-focused doctor as one who is "responsive to patients' needs and preferences."
- Experimental findings:
  - **Participants in all three experimental groups understood patient-centered care the best.**
  - **The largest differences in comprehension related to patient safety and effectiveness.** Participants who viewed the report with plain language and a framework correctly answered comprehension questions significantly more often than did those who viewed the report with technical language and no framework.
  - **The highest comprehension levels resulted from use of plain language and a framework.** In turn, participants who viewed reports with plain language but without a framework demonstrated greater comprehension than participants who viewed reports with technical language and no framework.
  - **The effect of plain language and the framework on comprehension was independent of education level, health status, income, age and patient activation.**[24]
  - **Participants who viewed the quality chart with plain language and the framework were more likely to understand definitions of the three quality areas: effective, safe and patient-centered.** The difference between these participants and those who viewed the chart with technical language and no

[23] Hibbard JH, Greene J and Daniel D. "What is Quality Anyway? Performance Reports That Clearly Communicate to Consumers the Meaning of Quality of Care." *Medical Care Research and Review*, 67(3): 275–293. Abstract available online.

[24] "Patient activation" is the degree to which patients have the knowledge, skills and confidence to manage their condition.

framework was statistically significant. Participants in the technical language group were also least likely to find the report to be helpful.

Hibbard and colleagues summed up the research this way: "[M]aking information more comprehensible, by providing a framework and using plain language to describe quality indicators, helped consumers to both understand the information in the report more and to see greater value in the information, as compared to participants who saw a report that had neither of these attributes."

### Journal Articles

Hibbard JH, Greene J and Daniel D. "What Is Quality Anyway? Performance Reports That Clearly Communicate to Consumers the Meaning of Quality of Care." *Medical Care Research and Review*, 67(3):275–293. Abstract available online. Full text requires subscription or fee.

## *Exploring Consumer Understanding and Use of Electronic Hospital Quality Information*[25]

Researchers at The Joint Commission, led by **Nancy Kupka, PhD, MPH, RN**, investigated how accurately consumers were able to interpret presentations of nationally available comparative hospital data and whether they would be inclined to use this information to make health care decisions. In particular, they assessed the effectiveness of the presentation of trend and target data displays and summary charts.

Staff conducted two rounds of focus groups with 57 participants from the Chicago metropolitan area between the ages of 30 and 75 who regularly conduct Internet searches and who recently had searched for health care quality information. An advisory panel of experts in consumer use of quality information, adult learning, health literacy and health media provided guidance to the project.

The study incorporated national guidelines for consumer-focused public reporting of hospital quality care endorsed by the National Quality Forum.

The focus groups explored how consumers understand and interpret various prototypes of trend and target data and summary charts. Participants also recommended new reporting formats that would improve data presentation and enhance consumer use.

Participants viewed sample prototypes derived from the Hospital Compare® website of the Centers for Medicare & Medicaid Service (CMS) and The Joint Commission's Quality Check® website. In the first round:

[25] ID# 63838

- With a focus on report elements (such as symbols, graphs and descriptive text) designed to make the information easier to understand, staff presented increasingly complex data and asked participants about their level of comprehension, the relevance of the information, and how the data may or may not have affected their overall interpretation of hospital performance.
- Staff then tested new symbols and trend graphs that conveyed performance of several hospitals over time. They measured participants' comprehension, view of display relevance and likelihood of using the trend data to inform a hospital decision.

The second round of focus groups centered on new "target" displays that offered examples of performance targets.

- Staff showed several prototypes that presented a range of hospitals that met, did not meet or exceeded their targets. Participants discussed their understanding of the information and its effect on their interpretation of hospital performance.
- Participants also viewed two summary chart prototypes that presented national performance data and patient perception data. In this case, staff wanted to learn whether the summary chart offered enough information for a hospital choice without the need for more detailed data.

### Key Findings

Researchers reported key findings to RWJF:

- **Participants understood and accurately interpreted the trend and target displays and summary chart prototypes.**
- **Participants accurately verbalized the purpose of trend and target displays and summary charts and assessed the value of them relative to their ability to use the information to aid in the decision-making process.**
- **Participants felt the trend and target displays and summary charts were not entirely relevant to their specific health care needs and, by themselves, did not provide sufficient information to make a health care decision.**
- **It was not clear exactly how much information consumers actually want and need in order to make meaningful decisions.** Consumers varied in the level of detailed information they desired.
- **The participants reported an inclination to refer to trend and target displays and summary charts for future health care decisions.**
- **Consumer feedback received during this project supported existing National Quality Forum guidelines.** It also endorsed the development of additional reporting guidelines and specifications for improving the display of comparative quality information as it relates to trend and target data displays and summary charts.

### *Patient Decision-Making and Personalized, Multifactorial Risk Information*[26]

Researchers at the University of Massachusetts Medical School, led by **Barry G. Saver, MD, MPH**, sought to help patients and providers deal with the multiple relationships among risk factors, health risks, and options for reducing health risks in order to achieve more informed and effective risk-reduction efforts. The project goals were to:

- Describe the baseline understanding of patients with diabetes of their risk factors for cardiovascular disease and their treatment preferences
- Explore patients' preferences for receiving personalized risk information and describe differences associated with race/ethnicity and with health literacy
- Investigate how the understanding of patients is affected by personalized risk factor and risk-reduction information
- Explore if and how patients would prioritize their risk-reduction efforts based on receiving personalized risk information
- Develop a refined personalized risk intervention and evaluate patient responses to it.

Researchers conducted a study with patients from a community clinic that included English-speaking Hispanic, Spanish-speaking Hispanic and English-speaking non-Hispanic patients, and also middle class, English-speaking patients from an academic family medicine practice.

#### Key Findings

Initial interviews indicated that participants ignored the personalized risk information; a follow-up study to validate participant understanding of the information showed that only a minority were able to accurately comprehend the information and its meaning for them personally.

Researchers reported key findings to RWJF:

- **Most participants substantially underestimated their risk of death versus other outcomes.** Although death was the most likely predicted outcome for about 90 percent of participants:
  - More than 70 percent ranked it as the least likely of six outcomes (death, heart attack, stroke, blindness, kidney failure and amputation).
  - More than 90 percent ranked it in the lower half of likelihood.

[26] ID# 63824

- **Many participants did understand that they were at high risk of heart disease.** About half predicted heart disease as one of their two highest risks.
- **Participants had varying concepts of health risk:**
  - A number of participants subscribed to a "warning shot" concept of risk. They believed that they would receive a "warning"—such as chest pain or a heart attack—that would give them an opportunity to change behavior and avert or postpone a more serious outcome.
  - Some believed that, although they could modify some risks, they could not affect their risk of death.
  - Some expressed the view that projected increases in life expectancy from better risk-factor control, even from smoking cessation, were not large enough to be worth making the changes.
- **Participants receive information from many sources, especially from providers, but no information about relative or absolute magnitude of risks.**
- **Anecdotal information often strongly affected participants' perceptions of diabetes-related risks.**
- **While the majority of participants reported that they found the personalized risk information to be interesting, only a minority said they had made any substantial change in their personal risk perceptions.**
- **No evidence emerged to support the hypothesis that presenting individualized risk projections to patients who have diabetes and other cardiovascular risk factors is likely to result in improved self-care, either through activities expected to yield health benefits or through increased motivation to achieve goals.**

### Journal Article

Saver BG, Hargraves JL and Mazor KM. "Are Population-Based Diabetes Models Useful for Individual Risk Estimation?" *Journal of the American Board of Family Medicine,* 24(4): 399–406, 2011.

## Lessons From Studies of Patients' Decision-Making Processes

1. **Use an online survey provider to collect data from an employer setting unobtrusively and for very low cost.** Researchers at the University of Oregon Department of Planning, Public Policy and Management used SurveyMonkey to collect data quickly from a wide sample of employees. They were able randomize participants to respond to different versions of the same performance report. (Project Director Hibbard, University of Oregon, ID# 63840)

2. **In quality reports that include trend and target data displays, provide contextual background information that explains why these data are important and how the information can be used by consumers to inform health care decisions.**

   Researchers at The Joint Commission found that consumers value clear definitions of terms and measures, along with instructions on how to use the data to draw meaningful conclusions. This information should be placed at the beginning of the report, along with high level summary charts. More detailed information can be available, for those interested, near the end of the report. (Project Director Kupka, The Joint Commission, ID# 63844)

3. **Obtain consumer input on new data displays to ensure that the displays will serve as valuable tools to aid decision-making.** (Project Director Kupka)

4. **Use individual questionnaires with focus group participants to determine their private views.** What participants say in a group and what they will disclose in private may differ. (Project Director Kupka)

## PROJECTS ON SHARED DECISION-MAKING AND DIVERSE POPULATIONS: STUDIES OF THE USE OF "DECISION AIDS" BY PATIENTS AND CLINICIANS

Patients' decision support is a theory-based, patient-centered intervention to help patients make an informed choice in this type of medical situation. Patients' decisions aids are evidence-based tools—such as booklets, DVDs or computer programs—used during patients' decision support. According to researchers, good quality decision aids:

- Improve comprehension of information
- Foster realistic expectations
- Decrease decisional conflict
- Improve patient satisfaction

### Key Activities and Findings

#### *eHealth Tools for Knee Arthritis Patients: Treatment Choice, Outcome Assessment, and Answers: How Will I Benefit From Total Knee Replacement Surgery?*[27]

**Patricia D. Franklin, MD, MBA, MPH**, led a team at the University of Massachusetts Medical School in developing tools to predict post-surgical outcomes for patients considering total knee replacement surgery to alleviate arthritis pain and disability. Existing quality measures for total knee replacement have focused on surgical volume

[27] ID# 63839

and infection rates by hospital and are not useful for patients asking: “How will I benefit from total knee replacement?”

The researchers identified four priority, patient-centered, 12-month outcomes:

- Satisfaction with surgery
- Knee pain while walking
- Knee pain at rest
- Distance of walking

An initial model to predict satisfaction versus dissatisfaction found that 95 percent of patients were satisfied with the surgical outcome.

The team developed a computer-based outcome calculator for each of the other three outcomes. The three models incorporated four patient attributes that the literature associates with variation in post-total knee replacement function. Different combinations of the attributes are predictive of each of the three outcomes:

- Demography (gender and age)
- Current physical and knee conditions (body mass index, knee pain while walking, knee pain at rest and use of a walking aid)
- General health
- Emotional status

Researchers tested the outcome calculator with patients in two rounds, making changes before the second round based upon feedback from patient interviews.

## Key Results

Researchers reported key results to RWJF:

- **The majority (63%) of the evaluation participants, aged 47 to 78, felt comfortable using the computer calculator independently.** Researchers decided not to print a paper version of the calculator.
- **Patient evaluation of the calculator yielded lessons about the use of computer surveys with aging and low-literacy populations:**
  - Use as few words as possible to express an idea.
  - Use large “buttons” for a patient to click on.
  - Bold the most important words, making sure the bolder words represent a complete thought.

- When questions are similar, make sure each slide looks different from the previous slide.
- It is a challenge to find pictures to represent ideas that are appealing and acceptable to multiple racial and ethnic groups.
- To present outcome likelihoods, formats with stick figures or in simple text were preferred by patients over bar graphs and word clouds (relevant words in font sizes that represent percentages).

Franklin and her team planned to continue to test the calculator with patients and to investigate the impact of the calculator on patient surgical decisions. When the design of the computer-based total knee replacement outcome calculator adheres to the lessons learned, the vast majority of total knee replacement patients entered their data and viewed the results with ease regardless of age or educational status. The patients who experienced difficulty using the outcome calculator were those who do not use a computer at home or work. All test patients, regardless of use of computer, found the information valuable and recommend the refined tool be adopted in practice.

After the close of the grant, the researchers indicated they were submitting a Patient-Centered Outcomes Research Institute (PCORI) application using the RWJF study data to support feasibility, importance, patient acceptance and use. They are proposing to validate the total knee replacement model, develop models for hip replacement surgery as well, and make both available via the Web for patient use.

### Journal Articles

Ayers DC, Li W, Karbassi JA, Yang W and Franklin PD. "Patient Reported Outcomes After Primary Total Knee Replacement: Pain Relief and Functional Gain in a U.S. Cohort, 2000–2005." Unpublished, 2010.

Franklin PD, Li W, Karbassi JA, Li X, Yang W and Ayers DC. "Optimizing Patients' Satisfaction After Total Knee Arthroplasty." Unpublished, 2010.

Franklin PD, Li W, Karbassi JA, Yang W and Ayers DC. "Predictors of Pain-Free Walking at One Year After Total Knee Replacement." Unpublished, 2010.

## *Improving Diabetes Care With Patient Decision Aids—A Randomized Controlled Trial in Community-Based Primary Care*[28]

Many medical problems have multiple treatment options, with no clear "best" approach. When patients are making "preference sensitive" medical decisions in such situations, their individual values play a critical role.

[28] ID# 63828

**Dominick L. Frosch, PhD**,[29] and colleagues in the David Geffen School of Medicine at the University of California, Los Angeles, had studied the use of patient decision aids in community-based primary care and their acceptability for racial and ethnic minority patients. They found that use of the decision aids helped the patients recognize the need for a medical decision and prepared them to talk to their physicians about what mattered most to them. Yet the use of such aids is low and more compelling evidence of their effectiveness is needed to make the case for their expanded use.

In this project the investigators led by Frosch evaluated use of a video behavior support intervention (a video program, developed by the Foundation for Informed Medical Decision Making, that presents treatment options and emphasizes and supports the role of patients' own behavior in the control of diabetes), in combination with telephone coaching, to improve diabetes management among patients with poorly controlled type 2 diabetes.

Some 201 patients participated; 80 percent were non-White and 70 percent had annual incomes below $15,000. Patients were randomly assigned to the experimental group using the video program or to a control group that received a standard diabetes education brochure.

At baseline, one month later and six months later, investigators measured patients' blood sugar (hemoglobin A1c), low-density lipids (LDL), blood pressure, body mass index (BMI) and diabetes knowledge. They also collected patients' reports of their self-care.

The investigators also conducted in-depth interviews with a randomly selected subset of 20 participants.

### Key Findings

Researchers reported these findings to RWJF:

- **Mean blood glucose levels declined significantly for all participants from baseline (9.6) to six months (9.1).** However, differences between the experimental group and the control group were not significant.
- **The experimental and control groups did not differ significantly at six months in LDL, blood pressure or BMI levels.** There was also no overall improvement in these measures for the study population in total.
- **While there was a modest (non-significant) increase in diabetes knowledge overall, there was no difference between the experimental and control groups.**
- **Self-care did not differ between the experimental and control groups, except for a slight improvement in physical activity in the control group at six months.**

[29] A Grantee Profile of Frosch's work as an RWJF Health & Society Scholar is available online.

- **Clinical process measures (such as blood sugar testing, eye exams, foot exams and vaccinations) did not differ between the groups.**
- **The effects of the intervention did not vary by ethnic group.**

Researchers concluded that "the intervention we tested … was insufficient to make a significant difference in improving diabetes control among patients with poorly managed diabetes. … Although this finding is not what we hoped to demonstrate, we believe this finding is important in light of the considerable interest in these types of interventions among health care practitioners and policy makers."

The interviews with 20 selected patients yielded rich information about the struggles with food insecurity that these low-income patients regularly faced, with an adverse impact on their diabetes management. Four related themes emerged:

- ***Cycles of Food Scarcity and Abundance*, which force patients to employ different management strategies at different times**
- ***Competing Priorities* for economic resources (rent, food, etc.) that place constraints on the type and amount of food purchased**
- ***Eating Less, Not Eating Healthier*—consuming less expensive calorie-dense foods rather than more expensive healthier foods**
- ***Structural Constraints* that include environmental factors and the time needed for food preparation in competition with time needed to work.**

### Journal Articles

Frosch DL, Uy V, Ochoa S and Mangione CM. "Evaluation of a Behavior Support Intervention for Patients With Poorly Controlled Diabetes." *Archives of Internal Medicine*, doi:10.1001/archinternmed.2011.497 (epub ahead of print), 2011.

Rendle KAS, May SG, Uy V, Tietbohl C, Mangione CM and Frosch DL "Competing Priorities: Managing Diabetes in Times of Food Insecurity and Economic Hardship." Unpublished.

## *Testing a Design Strategy for Studying Shared Decision-Making in Diverse Orthopedic Patient Populations*[30]

Researchers at the Dartmouth Institute for Health Policy and Clinical Practice, led by **Hilary Ann Llewellyn-Thomas, PhD**, addressed a gap in understanding about the use of "decision aids" as tools in the provision of decision support for patients facing a preference-sensitive treatment decision.

[30] ID# 63833

Preference-sensitive treatment decisions are clinical situations in which there are two or more medically appropriate treatment options but no clear medical consensus that the potential benefits of one option clearly outweigh the other, given potential negative effects. Selection of one option over the other depends upon recognizing and acting upon the patient's informed preferences related to the trade-offs between risks and benefits. The Ottawa Decision Support Framework used by the Dartmouth team identifies a sequential, four-step process of decision support:

1. *Information Comprehension*: understanding the relevant clinical information
2. *Values Clarification*: considering positive and negative attributes of options
3. *Social Resources*: considering the influences of others who may affect the choice
4. *Forming an Action Plan*: integrating comprehension, values and resources into a strategy for selecting an option, communicating the choice and ensuring it is enacted

According to the Dartmouth researchers, many decision aids stop part-way through Step 1 or 2 and most do not address Steps 3 or 4 at all. The Dartmouth team investigated the comparative effectiveness of decision aids designed to engage patients in the entire four-step process.

Llewellyn-Thomas and her team used a Web-based program to assist patients in making a decision regarding treatment for knee osteoarthritis, a condition for which both surgical and non-surgical treatments are available. A total of 120 patients viewed one of two versions of the program (i.e., 60 patients for each version):

- Information Only, in which, after viewing clinical information, the patient received standard suggestions about how to deliberate about their choice (e.g., consider personal preferences or talk over the decision with family and provider)
- Information + Deliberation, in which, after viewing clinical information, the patient is provided an interactive task to work through each step of the decision process

The site collected data on a Preparation for Decision-Making Scale and a Decision Self-Efficacy Scale as well as the post-program level of decisional conflict.

## Key Findings

The Dartmouth Team reported these key findings to RWJF:

- **Scores on Preparation for Decision-Making and Decision Self-Efficacy Scales were high for both version-groups.** There were no across-version differences.
- **The changes in scores for decisional conflict before and after viewing the program were comparable for both version groups.**

- **The Information + Deliberation group showed significantly higher information comprehension (78%) compared with the Information Only group (71%).**
- **Levels of decisional conflict were lower after viewing either version.**
- **The majority (57%) of patients in the Information + Deliberation group skipped all optional interactive tasks and 21 percent worked with just one.** Only 2 percent worked with all four tasks.

Experience with this project has guided the development of four related projects, researchers said. Three assess the role of interactive strategies in decision support for patients with mental illness. The fourth project adapts this study's research platform to assist in decision support on a national long-term-care planning website, *www.longtermcare.gov*. However, the new decision tool won't be available on the site until summer 2012.

### Journal Articles

Adam JA, Khaw F-M, Thomson RG, Gregg PJ and Llewellyn-Thomas HA. "Patient Decision Aids in Joint Replacement Surgery: A Literature Review and an Opinion Survey of Consultant Orthopaedic Surgeons." *Annals of the Royal College of Surgeons of England*, 90(3): 198–207. Article available online.

O'Connor AM, Bennett CL, Stacey D, Barry M, Col NF, Eden KB, Entwistle VA, Fiset V, Holmes-Rovner M, Khangura S, Llewellyn-Thomas H and Rovner D. "Decision Aids for People Facing Health Treatment or Screening Decisions." *Cochrane Database Systematic Reviews*, (3): CD001431. Abstract available online. Full text requires membership or fee.

### Chapters

Llewellyn-Thomas HA. "Values Clarification." In *Shared Decision-Making in Health Care: Achieving Evidence Based Patient Choice*, 2nd ed., Elwyn G, Edwards A (eds). Oxford: Oxford University Press, 2009.

Llewellyn-Thomas HA. "The Decision 'Lab." In *Shared Decision-Making in Health Care: Achieving Evidence Based Patient Choice*, 2nd ed., Elwyn G and Edwards A (eds). Oxford: Oxford University Press, 2009.

Rose A and Llewellyn-Thomas HA. "Shared Decision-Making." In *Encyclopedia of Medical Decision-Making*, Kattan MW (ed). Thousand Oaks, California: Sage Publications, 2009.

### *Shared Decision-Making When an Interpreter Is Needed: A Case Study with Latino Men at Risk for Prostate Cancer Screening*[31]

**Stergios Roussos, PhD, MPH**, and colleagues at San Diego State University, Graduate School of Public Health explored the use of interpreted shared decision-making with Latino patients with limited English proficiency who were being screened for prostate cancer.

According to the researchers, prostate cancer is the most common cancer among males over the age of 50 in the United States and the second leading cause of cancer death among men. Latinos have close to a 40 percent greater risk for presenting with advanced-state prostate cancer than non-Latino white men. Also, Latino men between the ages of 50 and 64 are less likely to be screened for prostate cancer with the PSA (prostate-specific antigen) test than non-Latino whites.

The decision to receive a PSA test and the decisions regarding treatment if diagnosed with prostate cancer require extensive participation from the patient. Use of an interpreter for patients with limited English proficiency may aid the shared decision-making process.

The overall goal of this project was to establish an interdisciplinary team that would initiate a novel line of research critical to addressing health care disparities due to language barriers. Project goals were to:

- Adapt current quality measures for medical interpreting and shared decision-making to create measures of interpreted shared decision-making for Latinos with limited English proficiency
- Develop and pilot test (using the PSA test for prostate cancer as a case study) a tool to improve shared decision-making for use by health care providers, interpreters and patients with limited English proficiency
- Identify the programmatic and research elements for a controlled experimental study of an intervention to improve shared decision-making for prostate cancer screening for Latino patients who require an interpreter

To accomplish these goals, project staff:

- Conducted four focus groups with patients with limited English proficiency, interpreters, and providers to understand the conditions under which shared decision-making may occur or be deterred during medical visits that include an interpreter.
- Based on focus group findings, adapted the Shared Decision-Making Model,[32] created in 1997 by Cathy Charles, PhD,[33] and colleagues, as the basis for the development of

[31] ID# 63830

the pilot study intervention. The model includes four sets of "interactional activities" in which providers and patients participate equally: information transmission, deliberation, selection from among options and commitment to a course of action.

- Trained providers and interpreters in three sessions over six months and assessed the contributions of patients, providers and interpreters to the four activities of the model.
- Showed patients an evidence-based video on PSA testing that discussed the importance of shared decision-making for this preventive service.
- Developed two measurement tools for use in this study and in subsequent research:
  - *The Post-Visit Patient Interview* assesses the perspectives, experiences and satisfaction of patients with limited English proficiency with the shared decision-making process. Researchers conducted 28 post-visit interviews.
  - *The Audio-Recording Data Abstraction Form* collects the same data as the interview but does this through direct observation of the four model activities. The form includes a scale to rate the contribution of provider, patient, and interpreter—in each of the four aspects of shared decision-making—to the final decision. Researchers audio-recorded 48 visits.

## Key Conclusions

Researchers offered three key conclusions from this project in a report to RWJF:

- **Medical interpreters can and do alter the meaning of what is said between a patient with limited English proficiency and a provider and, thus, facilitate or impede shared decision-making.** For such patients and their providers, the interpreter is a critical link to shared decision-making.
- **Cultural practices of both patients and providers interfere with shared decision-making.** Latino men often preferred that the provider make the PSA testing decision for them, and the providers often were more comfortable making the final decision without discussion with their Latino patients. Interpreters were not prepared to help the patients and providers overcome cultural barriers to shared decision-making.
- **The complexity of the shared decision-making topic influences the degree of dialogue and exchange between provider and patient through the interpreter.** The PSA test required discussion of clinical complications and the limited evidence for the effectiveness of treatment. The topic may have been too difficult to use as the context for a short pilot intervention to change long-held clinical and cultural practices as needed for shared decision-making.

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[32] Charles C, Gafni A and Whelan T. "Shared-Decision-Making in the Medical Encounter: What Does It Mean? (Or It Takes at Least Two to Tango)." *Social Science & Medicine*, 44(5): 681–692, 1997. Abstract available online.

[33] Charles is a professor in the Department of Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, Ontario, Canada. Her colleagues were also at McMaster in different departments.

Researchers also offered the following conclusion about issues of gender in medical interpretation in a 2010 article entitled "Some Considerations Regarding Gender When a Healthcare Interpreter is Helping Providers and Their Limited English Proficient Patients," published in *Research in the Sociology of Health Care.*[34]

- "The gender of the interpreter during a medical visit with a patient who does not speak English may influence the interactions between the provider and the patient in important ways. … The gender of the interpreter may not need to interfere with impartiality, cultural awareness, respect, and other aspects of professionalism with the interpreting encounter. However, patients, providers, and interpreters are likely to react differently because of the visibility of gender. Interpreting training should attend to these differences."

Building upon the experience of this pilot study, the project team proposed to the National Institutes of Health/National Cancer Institute a five-year experimental study to test the effects of medical interpreting on shared decision-making about HPV vaccination among Latino youth and their parents with limited English proficiency. The team expected a decision on funding in the summer of 2011.

### Journal Articles

Hill L, Mueller MR, Roussos S, Hovell M and Fontanesi J. "Opportunities for Shared Decision-Making In Primary Care." *Family Medicine*, 41: 248–253, 2009. Available online.

Roussos S, Mueller MR, Hill L, Salas N, Hovell M and Villarreal V. "Some Considerations Regarding Gender When a Healthcare Interpreter Is Helping Providers and Their Limited English Proficient Patients." *Research in the Sociology of Health Care*, 28: 217–229, 2010. Abstract available online. Full text requires subscription or fee.

## Lessons Learned From Studies of the Use of "Decision Aids" by Patients and Clinicians

1. **Recruit skilled website and computer programming teams to create and maintain Web-based research platforms for studying patients' decision-making in preference-sensitive areas.**[35] The interactive and tracking capabilities of such platforms can yield scientific benefits at lower cost than developing an interactive DVD. Benefits may include rapid revisions, rapid comparisons of different versions,

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[34] Roussos S, Mueller MR, Hill L, Salas N, Hovell M and Villarreal V. "Some Considerations Regarding Gender When a Healthcare Interpreter Is Helping Providers and Their Limited English Proficient Patients." *Research in the Sociology of Health Care*, 28:217–229. Abstract available online.

[35] Preference-sensitive care comprises treatments for conditions where legitimate treatment options exist—options involving significant tradeoffs among different possible outcomes of each treatment (Dartmouth Atlas of Health Care).

data collection from large populations and so on. (Project Director Llewellyn-Thomas, Dartmouth Institute for Health Policy and Clinical Practice, ID# 63833)

2. **When using a Web-based research strategy, closely monitor computer programming teams to ensure full internal consistency in Web-based data collection, database management, statistical analysis and report generation.** (Project Director Llewellyn-Thomas)

3. **Draft a mock website linking study objectives to website content, data collection items and results table.** This strategy quickly identifies any issues with the website's design and saves time in its development. (Project Director Llewellyn-Thomas)

4. **Conduct a small, rigorous feasibility test before launching a large investigative study.** This approach not only establishes feasibility but also reveals any problems with data collection, management or analysis in advance of the launch. (Project Director Llewellyn-Thomas)

5. **Divide research into phases so that the research team will have adequate time to learn from each phase of the project.** Frequent, regular meetings will enable the team to problem-solve as needed and will help build trust and understanding. (Project Director Roussos, ID# 63830)

## AFTERWARD

Projects conducted through *Advancing Measurement of Equity and Patient-CenteredCare to Improve Health Care Quality* ended at the completion of the individual grants. Grantees continued with additional data analyses, prepared manuscripts to submit for publication, presented at conferences and submitted proposals to other funders to replicate or expand the work begun under these grants.

**Prepared by: Mary B. Geisz**
Reviewed by: Kelsey Menehan and Molly McKaughan
Program Officers: Debra Perez and Claire B. Gibbons
Program area: Quality/Equality

# APPENDIX

## List of Funded Projects

### *Projects Addressing Patients' Experience With Care and Survey Instruments*

**Ann D. Bagchi, PhD, Mathematica Policy Research (Princeton, NJ)**

Assessing Cultural Perspectives on the Quality of Care

ID# 63841 (February 2008–March 2009): $83,264

**Contact Information**

Ann D. Bagchi, PhD

609-716-4554

abagchi@mathematica-mpr.com

**Tyrone F. Borders, PhD, MS, MA, University of Arkansas for Medical Sciences College of Public Health (Little Rock, AR)**

Influence of Health Attitudes and Health Status on Ethnic/Racial Disparities in Consumer Assessments of Care

ID# 63834 (February 2008–August 2009): $62,263

**Contact Information**

Tyrone F. Borders, PhD, MS, MA

(501) 526-6641

tfborders@uams.edu

**Ann F. Chou, PhD, MPH, MA, University of Oklahoma Health Sciences Center College of Public Health (Oklahoma City, OK)**

Consumer Assessment of Healthcare Providers and Systems: Validation and Cultural Adaptation in the Native American Population With Diabetes Mellitus

ID# 63844 (February 2008–October 2009): $82,049

**Contact Information**

Ann F. Chou, PhD, MPH, MA

(405) 271-8001 x3708

ann-chou@ouhsc.edu

**Timothy Patrick Johnson, PhD, University of Illinois at Chicago College of Urban Planning and Public Affairs (Chicago)**

Cultural Variability in Patient Responding to Survey Measures

ID# 63842 (February 2008–September 2009): $99,880

**Contact Information**

Timothy Patrick Johnson, PhD

(312) 996-5310

awards@uic.edu

**Hugh Stephen Leff, PhD, Human Services Research Institute (Cambridge, MA)**

Effects of Perceived Cultural Responsiveness and Technical Quality of Care on Perceived Overall Quality of Care

ID# 63832 (February 2008–August 2009): $100,000

**Contact Information**

Hugh Stephen Leff, PhD

(617) 844-2516

sleff@hsri.org

**Roger Levine, PhD, American Institutes for Research in the Behavioral Sciences (Palo Alto, CA)**

Development and Use of Scenarios to Investigate Differences in Responses to CAHPS Items by Hispanic Ethnicity and Language

ID# 63835 (February 2008–August 2009): $99,545

**Contact Information**

Roger Levine, PhD

(650) 843-8160

rlevine@air.org

**Alan Schwartz, PhD, University of Illinois at Chicago College of Medicine (Chicago)**

Experience of Care and Patient-Physician Value Fit in Hispanic, African-American and Caucasian Populations

ID# 63821 (February 2008–February 2010): $98,022

**Contact Information**

Alan Schwartz, PhD

(312) 996-207

alansz@uic.edu

**John H. Wasson, MD, Dartmouth Medical School (Hanover, NH)**

Care Experience Survey Instrument

ID# 63831 (February 2008–June 2009): $99,916

**Contact Information**

John H. Wasson, MD

(603) 650-182

John.H.Wasson@Dartmouth.edu

**Robin M. Weinick, PhD, General Hospital Corporation–Massachusetts General Hospital (Boston)**

Understanding Racial/Ethnic Differences in CAHPS Ratings: The Role of Perceptions, Reporting and Attributions

ID# 63843 (February 2008–July 2009): $99,587

**Contact Information**

Robin M. Weinick, PhD

(703) 413-1100 x5151

rweinick@rand.org

### *Projects Addressing Shared Decision-Making and Diverse Populations: Studies of Patients' Decision-Making Processes*

**Brian D. Elbel, PhD, MPH, New York University School of Medicine (New York)**

Hospital Quality Data: Understanding Decision-making in Vulnerable Populations

ID# 63829 (February 2008–August 2010): $149,022

**Contact Information**

Brian D. Elbel, PhD, MPH

(212) 263-4283

brian.elbel@med.nyu.edu

**Judith H. Hibbard, DrPH, University of Oregon Department of Planning, Public Policy and Management (Eugene, OR)**

Development and Testing of a Framework for Reporting Quality Data to Consumers

ID# 63840 (February 2008–November 2009): $199,966

**Contact Information**

Judith H. Hibbard, DrPH

(541) 346-3363

jhibbard@uoregon.edu

**Nancy Kupka, PhD, MPH, RN, The Joint Commission (Oakbrook Terrace, IL)**

Exploring Consumer Understanding and Use of Electronic Hospital Quality Information

ID# 63838 (February 2008–November 2009): $199,193

**Contact Information**

Nancy Kupka, PhD, MPH, RN

(630) 792-5947

nkupka@jointcommission.org

**Barry G. Saver, MD, MPH, University of Massachusetts Medical School (Worcester, MA)**

Patient Decision-Making and Personalized, Multifactorial Risk Information

ID# 63824 (February 2008–August 2010): $148,557

**Contact Information**

Barry G. Saver, MD, MPH

(508) 856-3458

barry.saver@umassmed.edu

### *Projects Addressing Shared Decision-Making and Diverse Populations: Studies of the Use of "Decision Aids" By Patients and Clinicians*

**Patricia D. Franklin, MD, MBA, MPH, University of Massachusetts Medical School (Worcester, MA)**

eHealth Tools for Knee Arthritis Patients: Treatment Choice, Outcome Assessment, and Answers: How Will I Benefit From Total Knee Replacement Surgery?

ID# 63839 (February 2008–July 2010): $198,683

**Contact Information**

Patricia D. Franklin, MD, MBA, MPH

(508) 856-5748

Patricia.Franklin@umassmed.edu

**Dominick L. Frosch, PhD, University of California, Los Angeles, David Geffen School of Medicine (Los Angeles)**

Improving Diabetes Care with Patient Decision Aids—A Randomized Controlled Trial in Community-Based Primary Care

ID# 63828 (June 2008–November 2010): $298,741

**Contact Information**

Dominick L. Frosch, PhD

(310) 794-6712

dfrosch@mednet.ucla.edu

**Hilary Ann Llewellyn-Thomas, PhD, Dartmouth Institute for Health Policy and Clinical Practice (Lebanon, NH)**

Testing a Design Strategy for Studying Shared Decision-Making in Diverse Orthopedic Patient Populations

ID# 63833 (February 2008–August 2010): $149,992

**Contact Information**

Hilary Ann Llewellyn-Thomas, PhD

(603) 653-0866

hilary.llewellyn-thomas@dartmouth.edu

**Stergios Roussos, PhD, MPH, San Diego State University Graduate School of Public Health (San Diego, CA)**

Shared Decision-Making When an Interpreter Is Needed: A Case Study With Latino Men at Risk for Prostate Cancer Screening

ID# 63830 (February 2008–August 2010): $297,022

**Contact Information**

Stergios Roussos, PhD, MPH

(209) 724-0973

steve@akouo.org