# The Aligning Forces for Quality Initiative: Background and Evolution From 2005 to 2015

Dennis P. Scanlon, PhD; Jeff Beich, PhD; Brigitt Leitzell, MS; Bethany W. Shaw, MHA; Jeffrey A. Alexander, PhD; Jon B. Christianson, PhD; Diane C. Farley, BA; Jessica Greene, PhD; Muriel Jean-Jacques, MD, MAPP; Megan McHugh, PhD; and Laura J. Wolf, MSW

**eAppendix A.** Alliance Overviews

WEST

## Albuquerque, New Mexico

**New Mexico Coalition for Healthcare Value**
(formerly the Albuquerque Coalition for Healthcare Quality)
*www.nmhealthcarevalue.org*

Founded in 2009 to participate in AF4Q, the Albuquerque Coalition for Healthcare Quality focused on a single county. In 2015, this coalition transformed into a statewide (2 million people) employer-led, multi-stakeholder nonprofit, the New Mexico Coalition for Healthcare Value. Organization is committed to "improve healthcare value for all New Mexicans," specifically by:

- "Focusing on value-based purchasing, transparency, quality, and cost,
- Strengthening business and government purchaser buying power,
- Supporting performance improvement through collaboration"

ajmc.com
© Managed Care & Healthcare Communications, LLC

## Humboldt County, California

**Aligning Forces Humboldt**

Partnership of 3 organizations convened in 2007 to implement AF4Q in Humboldt County, California (135,000 people), a rural county in the northern part of the state.

- *The Humboldt IPA*. Focus is to "foster local accountability while providing appropriate, proficient, cost-effective medical care for the people of Humboldt and Del Norte Counties" (*www.humboldtipa.com*).
- *St. Joseph Health*. Committed "to the highest standards of excellence in the delivery of healthcare and to ministering to the needs of the whole person– body, mind, and spirit" (*www.stjoehumboldt.org*).
- *The California Center for Rural Policy at Humboldt State University (CCRP)*.[a] Mission is to "conduct research to inform policy, build community, and promote the health and well-being of rural people and environments" (*www2.humboldt.edu/ccrp/*).

Partners are now working with an expanded set of stake-holders to improve health and healthcare in the county.

[a]CCRP was the AF4Q grant holder from 2012-2015; the Community Health Alliance originally served in that role.

## Oregon

**Oregon Health Care Quality Corporation (Q Corp)**
*www.q-corp.org*

Multi-stakeholder nonprofit founded in 2000. Joined AF4Q in 2007, and initially targeted the program to the 9-county Willamette Valley region. In 2010, expanded AF4Q statewide (3.8 million people) to align with Q Corp's organizational service area. Mission is to "improve the quality and affordability of healthcare in Oregon," specifically by:

- "Leading community collaborations,
- Providing unbiased quality and utilization information,
- Enhancing and expanding data analytics"

## Washington

**Washington Health Alliance**
(formerly the Puget Sound Health Alliance)
*www.wahealthalliance.org*

Purchaser-led, multi-stakeholder nonprofit established in 2004; originally served a 5-county region anchored by Seattle. Joined AF4Q in 2006 and expanded service area, implementing some activities statewide (6.8 million people). Mission is to build a strong alliance among healthcare stakeholders to "promote health and improve quality and affordability by reducing over-use, underuse, and misuse of healthcare services," specifically by:

- "Improving transparency of the healthcare system through performance measurement and public reporting,
- Strengthening purchaser and consumer engagement to leverage buying power and shape demand,
- Aligning payment to providers with desired outcome of higher quality at a lower price,
- Supporting performance improvement in collaboration with other organizations"

## MIDWEST

### Cincinnati, Ohio

**The Health Collaborative**
(formerly known as the Health Improvement Collaborative of Greater Cincinnati)
*www.healthcollab.org*

Nonprofit organization founded in 1992; joined AF4Q in 2007. Recently merged with long-time sister organizations, the Greater Cincinnati Health Council and HealthBridge. Serves the greater Cincinnati region (2.2 million people), consisting of 14 counties across Ohio, Kentucky, and Indiana. The Health Collaborative focuses on:

- "Serving as a neutral forum for all community stakeholders invested in the triple aim: better health, better care, lower cost,
- Providing a robust set of membership benefits to health systems and hospital members, as well as care partners, and business partners,
- Providing consulting, education, convening, technology solutions and clinical messaging for customers"

### Cleveland, Ohio

**Better Health Partnership**
(formerly known as Better Health *Greater* Cleveland)
*www.betterhealthpartnership.org*

Nonprofit multi-stakeholder organization created in 2007 to participate in AF4Q. Originally focused on a single county; now has member providers across 8 northeast Ohio counties (2.7 million people). Mission is to "drive better healthcare for all," through:

- "Accountable community health – aligning and integrating clinical and public health-based strategies to prevent chronic disease and improve its management,
- Transparency, measurement, and reporting – to drive and document healthcare transformation and its impact on clinical care and outcomes, health disparities, public health, and economic vitality,
- Patient-centered accountable care delivery – to increase the number of people receiving care in patient-centered health systems that are accountable for high-value care"

### Detroit, Michigan

**Greater Detroit Area Health Council (GDAHC)**
*www.gdahc.org*

Founded in 1944, membership council serving the 7-county southeast Michigan region (4.7 million people). Joined AF4Q in 2006. Mission is to serve as "a cross-sector, multi-stakeholder, nonprofit organization that leads innovative and transformational programs designed to improve health, increase access to whole-person care, and ensure that health-care is affordable," specifically by:

- "Bringing together those who get care, give care, and pay for care,
- Partnering with the community to improve health and well-being,
- Leading/managing projects across southeast Michigan and the state"

### Kansas City, Missouri

**Kansas City Quality Improvement Consortium (KCQIC)**
*www.healthykc.org*

Nonprofit community coalition established in 2000 by community stakeholders and the United Auto Workers Ford Community Healthcare Initiative. Joined AF4Q in 2007. Serves the Kansas City bi-state area consisting of a total of 5 counties in Missouri and Kansas (1.7 million people). Mission is to "promote quality healthcare through collaboration and by providing strategic leadership, education, and tools" in order to:

- "Improve patient outcomes and health status,
- Ensure the success of the Triple Aim in the community,
- Increase community engagement in advancing quality healthcare"

## Minnesota

**Minnesota Aligning Forces for Quality**
*www.mncm.org/af4q-report-to-the-mn-community/*

Minneapolis-St. Paul was selected as a pilot region in 2006 and expanded its focus to entire state (5.3 million people) during the first phase of AF4Q. The Minnesota AF4Q alliance was guided by a leadership team, with MN Community Measurement serving as the lead agency. Consisting of more than a dozen organizations, consumers, and community representatives, leadership team stakeholders shared their expertise and leadership to improve the quality of health and healthcare across Minnesota.

The leadership team stopped meeting with the close of AF4Q, but partner organizations continue to actively collaborate through various other programs and initiatives.

## West Michigan

**Alliance for Health**

Nonprofit organization established in 1948 as a voluntary planning and resource development agency. Based in Grand Rapids, and served the 13-county West Michigan region (1.5 million people), until May 2015, when the board of directors of the Alliance for Health voted to cease operations. Joined AF4Q in 2007.

As part of its AF4Q work, the Alliance for Health was among several organizations in the region that provided early support in the development of the Michigan Institute for Clinical Systems Improvement (Mi-CCSI), which was modeled after the Institute for Clinical Systems Improvement, an AF4Q partner organization in Minnesota.

Mi-CCSI "brings together healthcare providers and insurance companies to improve primary care. Mi-CCSI also develops and provides care management training" (*www.miccsi.org*).

ALLIANCE FOR HEALTH

# SOUTH

## Wisconsin

**Wisconsin Collaborative for Healthcare Quality (WCHQ)**
*www.wchq.org*

Nonprofit consortium founded in 2003. Joined AF4Q in 2007, and serves the residents of Wisconsin (5.8 million people). Mission is to "publicly report and bring meaning to performance measurement information that improves the quality and affordability of healthcare in Wisconsin" through these core competencies:

- "Prioritizing performance measures,
- Collecting and validating measurement results,
- Publicly reporting measurement results,
- Sharing best practices"

WCHQ Wisconsin Collaborative for Healthcare Quality

## Memphis, Tennessee

**Common Table Health Alliance**
(formerly the Healthy Memphis Common Table)
*www.commontablehealth.org*

Nonprofit, regional health and healthcare improvement collaborative established in 2003 to serve the Greater Memphis area (930,000 people). Joined AF4Q in 2006, and changed name in 2014 with desire to expand reach beyond Greater Memphis. Mission is to "achieve health equity through trust, collaboration, and education," by accomplishing its **REAL** Community Goals:

- "**R**educe childhood and family obesity,
- **E**liminate health disparities,
- **A**ctivate consumers, patients, and caregivers,
- **L**ift healthcare quality"

COMMON TABLE Health Alliance

## NORTHEAST

### Boston, Massachusetts

**Massachusetts Health Quality Partners (MHQP)**
*www.mhqp.org*

Nonprofit multi-stakeholder coalition serving the state of Massachusetts. Joined AF4Q in 2010, and focused AF4Q efforts on the Greater Boston area (2.2 million people). Mission is to "drive measureable improvement in healthcare quality, patient experience, and use of resources through patient and public engagement and broad-based collaboration" by:

- Bringing together stakeholders to "work together to produce trusted, comparable performance measures that help drive healthcare quality improvement"
- Reporting "reliable, actionable information to providers to improve the care they deliver to their patients"
- Communicating "healthcare performance information directly to patients and the public to empower them with knowledge to make more informed healthcare decisions"

### Maine

**Maine Aligning Forces for Quality**
Three organizations formed original partnership in 2007 for the AF4Q grant. The AF4Q initiative was executed statewide and the partners continue to collaborate to serve the residents of Maine (1.3 million people).

- *Maine Quality Counts (AF4Q grant holder).* Provider-led multi-stakeholder group. Mission is to "transform healthcare in Maine by leading, collaborating, and aligning improvement efforts" (*www.mainequalitycounts.org*)
- *Maine Health Management Coalition.* Purchaser-led multi-stakeholder group. Mission is to "work collaboratively to improve health and to maximize the value of healthcare services" (*www.mehmc.org*)
- *Maine Quality Forum.* Part of Maine's 2003 health reform initiative. Mission is to "advocate for high quality healthcare and help each Maine citizen make informed healthcare choices" (*www.mainequalityforum.gov*)

### South Central Pennsylvania

**Aligning Forces for Quality – South Central PA (AF4Q SCPA)**
*www.aligning4healthpa.org*

Multi-stakeholder regional health coalition created in 2007 to house the AF4Q program. Under the auspices of WellSpan Health, AF4Q SCPA serves residents in the York, northern Lancaster, Lebanon, Adams, and northern Maryland communities (920,000 people). The coalition brings together stakeholders to improve the quality of healthcare; specifically its goals are to:

- "Help physicians improve the quality of care they provide,
- Assist with improving care inside our local hospitals,
- Provide more tools and resources to engage the community,
- Educate patients on how to better partner and engage with their providers,
- Work toward reducing inequalities found in care for patients,
- Help increase access to care"

### Western New York

**P² Collaborative of Western New York (P²)**
*www.p2wny.org*

Nonprofit organization established in 2002; joined AF4Q in 2007. Serves the Western New York region (1.5 million people), which includes 8 counties in the Buffalo/Niagara area. Mission is to "align resources to measurably improve health and healthcare delivery, increase access to care, and reduce health disparities in Western New York" by:

- Improving "the quality of and access to care, with a focus on under-served populations"
- Helping "communities identify opportunities for improvement with health outcomes" through facilitation, data support, and the promotion of policy change
- Helping "healthcare providers, systems, and community-based organizations implement, replicate, and expand best practices to improve community health outcomes"

**eAppendix B.** Select National and Large-Scale Initiatives in Operation During the AF4Q Program Period

| Initiative | Time Frame | Website | Focus Area(s) | Funder(s) |
|---|---|---|---|---|
| Advanced Payment ACO Model | 2012-present | https://innovation.cms.gov/initiatives/Advance-Payment-ACO-Model/index.html | Quality improvement, payment reform | CMS |
| Beacon Community Program | 2010-2013 | www.healthit.gov/policy-researchers-implementers/beacon-community-program | Quality improvement, HIT, performance measurement | ONC |
| Better Quality Information to Improve Care for Medicare Beneficiaries Project | 2006-2008 | http://archive.hhs.gov/valuedriven/pilot/ | Performance measurement, quality improvement | CMS |
| Bundled Payments for Care Improvement Initiative | 2013-present | https://innovation.cms.gov/initiatives/Bundled-Payments/ | Payment reform | CMS |
| Chartered Value Exchanges | 2008-present | www.ahrq.gov/professionals/quality-patient-safety/quality-resources/value/cvepubrptsites/index.html | Performance measurement and public reporting, quality improvement, cost, HIT | HHS |
| Choosing Wisely | 2012-present | www.choosingwisely.org/ | Care decisions, patient engagement | ABIM |
| Community-based Care Transitions Program | 2012-present | https://innovation.cms.gov/initiatives/CCTP/ | Quality improvement | CMS |
| Community Transformation Grants | 2011-2014 | www.cdc.gov/nccdphp/dch/programs/communitytransformation/ | Prevention | CDC |
| Comprehensive Primary Care Initiative | 2012-present | https://innovation.cms.gov/initiatives/Comprehensive-Primary-Care-Initiative/index.html | Practice redesign, payment reform | CMS |
| *Consumer Reports* Healthcare Ratings | 2011-2013 | N/A | Performance measurement and public reporting, consumer engagement | RWJF |
| Federally Qualified Health Center Advanced Primary Care Practice Demonstration | 2011-2014 | https://innovation.cms.gov/initiatives/FQHCs/index.html | Quality improvement | CMS, HRSA |
| Health Care Innovation Awards | 2012-2015 | https://innovation.cms.gov/initiatives/Health-Care-Innovation-Awards/Project-Profiles.html | Triple aim | CMS |
| Hospital Engagement Networks | 2011-present | https://partnershipforpatients.cms.gov/about-the-partnership/hospital-engagement-networks/thehospitalengagementnetworks.html | Quality improvement | CMS |
| Independence At-Home Demonstration | 2012-present | https://innovation.cms.gov/initiatives/independence-at-home/#collapse-tableDetails | Quality improvement, cost | CMS |

(*continued*)

**eAppendix B.** Select National and Large-Scale Initiatives in Operation During the AF4Q Program Period (*continued*)

| Initiative | Time Frame | Website | Focus Area(s) | Funder(s) |
|---|---|---|---|---|
| Integrate DIAMOND Program and Substance Abuse Programs Into Primary Care | 2011-2013 | www.icsi.org/_asset/7jjfc2/ICSI-Awarded-Grant-on-Behavioral-Health.pdf | Quality improvement | AHRQ |
| Medicare Shared-Savings Program | 2012- present | www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/index.html | Quality improvement, cost | CMS |
| Multi-Payer Advanced Primary Care Practice Demonstration | 2011-present | https://innovation.cms.gov/initiatives/Multi-Payer-Advanced-Primary-Care-Practice/ | Quality improvement, consumer engagement | CMS |
| Pioneer ACO Model | 2012- present | https://innovation.cms.gov/initiatives/Pioneer-ACO-Model/index.html | Quality improvement, incentives | CMS |
| Qualified Entity Program | 2012-present | www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/QEMedicareData/index.html | Performance measurement and public reporting | CMS |
| Regional Extension Centers | 2010-present | www.healthit.gov/providers-professionals/regional-extension-centers-recs | Quality improvement, HIT | ONC |
| Collaborative Health Network (started as the Regional Resource Network) | 2012-present | www.rwjf.org/en/library/grants/2012/05/planning-a-social-network-to-spread-knowledge-and-expertise-on-a.html<br><br>www.rwjf.org/en/library/programs-and-initiatives/R/regional-resource-network.html | Quality improvement | RWJF |
| ReThink Health | 2007-present | www.rethinkhealth.org/ | System redesign, payment reform | RWJF, the California HealthCare Foundation and an array of regional coalitions, health systems, and organizations |
| State Innovation Models Initiative | 2013-present | https://innovation.cms.gov/initiatives/state-innovations/ | System redesign, payment reform | CMS |
| Strong Start for Mothers and Newborns Initiative | 2012-present | https://innovation.cms.gov/initiatives/Strong-Start/ | Quality improvement | CMS, HRSA, ACF |
| Other RWJF Programs:<br>-Grant on Healthcare Costs<br>-Health Measurement Cooperative<br>-The DOCTOR Project | | www.rwjf.org/ | Cost, performance measurement | RWJF |

ACF indicates Administration on Children and Families; ACO, accountable care organization; AF4Q, Aligning Forces for Quality; AHRQ, Agency for Healthcare Research and Quality; CDC, Centers for Disease Control and Prevention; CMS, Centers for Medicare & Medicaid Services; DIAMOND, Depression Improvement Across Minnesota, Offering a New Direction; HHS, U.S. Department of Health & Human Services; HIT, health information technology; HRSA, Health Resources Services Administration; N/A indicates not applicable; ONC, Office of the National Coordinator; RWJF, Robert Wood Johnson Foundation.

# Evaluating a Complex, Multi-Site, Community-Based Program to Improve Healthcare Quality: The Summative Research Design for the Aligning Forces for Quality Initiative

Dennis P. Scanlon, PhD; Laura J. Wolf, MSW; Jeffrey A. Alexander, PhD; Jon B. Christianson, PhD; Jessica Greene, PhD; Muriel Jean-Jacques, MD, MAPP; Megan McHugh, PhD; Yunfeng Shi, PhD; Brigitt Leitzell, MS; and Jocelyn M. Vanderbrink, MHA

## eAppendix. Purpose, Uses, and Descriptions of the Aligning Forces for Quality Evaluation Data

This appendix includes a description of each of the main data sources used in the formative and summative phases of the Aligning Forces for Quality (AF4Q) evaluation. It includes details about the purpose and use of each data source, the target population and sampling strategy (where relevant), and other important information. Additional details on data sources and methods can be obtained by contacting the authors.

ajmc.com © Managed Care & Healthcare Communications, LLC

### Survey Data

The evaluation team administered 3 longitudinal surveys to capture important information about the AF4Q initiative, the context in which it operated, and its effects.

#### *Consumer Survey*

*Purpose and Uses.* The consumer survey was designed to capture the components of the AF4Q logic model related to consumer engagement and consumers' use of publicly available quality information. Survey questions focused on patient activation; consumer knowledge of publicly available performance reports that highlight quality differences among physicians, hospitals, and health plans; the ability to be an effective consumer in the context of a physician visit; patient knowledge about their illness; skills and willingness to self-manage their illness; and other related topics.

To provide real-time feedback and information to those implementing the AF4Q initiative, the evaluation team produced alliance-specific reports based on the results from 2 rounds of the consumer survey. These reports presented the alliance's baseline and longitudinal results, as well as comparisons with other AF4Q communities. Although originally planned in the evaluation design, the Robert Wood Johnson Foundation (RWJF) decided not to fund a third round of the survey.

Survey data analysis methods for the first round of the survey were used to examine distributions of key survey questions, model the variation in responses to survey questions, and identify factors that explain the variation in responses to survey questions. The second round of the consumer survey data was used to estimate the effect of the AF4Q initiative on consumer-related outcomes using a difference-in-difference design, where the control group included a pre- and postsample of consumers with chronic illnesses drawn from the national comparison sample created from areas of the country that did not include AF4Q communities.

*Target Population.* The targeted study population of the consumer survey was adults (≥18 years) with at least 1 of 5 chronic conditions (diabetes, hypertension, coronary heart disease, asthma, and depression). The consumer survey collected data from all of the AF4Q communities and a national comparison sample. The sampling design for the first round of the survey was a random digit–dialing telephone sample, which was created to yield a representative sample of respondents. Additionally, an oversample based on respondent race and ethnicity was drawn in 12 of the AF4Q communities to examine differences in survey responses between minorities and nonminorities. The target population for the second round of the survey was the same as the first round and included a panel sample of all available round 1 respondents who agreed to be recontacted and interviewed in the future.

*Survey Administration and Additional Details.* The survey was conducted via telephone by a contracted survey vendor and respondents were compensated for their time. The 2 rounds of the survey were administered from 2007 to 2008 and 2011 to 2012, respectively. The consumer survey population was chosen early on in the project, when the AF4Q initiative was focused solely on ambulatory care of individuals with at least 1 of the aforementioned chronic illnesses. Despite the expansion of the AF4Q

initiative to include all inpatient care and all members of the population regardless of health status, the consumer survey design remained the same to provide consistency across the 2 rounds of data collection. Also, because the focus was on those with chronic illness, it ensured that the sample consisted of individuals who were most likely to use healthcare services, especially many services that were highly relevant to the areas of focus in the AF4Q communities. Additional details about the consumer survey are available online through the consumer survey methodology reports.[1,2]

### *Physician Survey*

*Purpose and Uses.* The first round of the physician survey (National Study of Small and Medium-Sized Physician Practices [NSSMPP]) was designed to capture information related to ambulatory quality improvement (QI) and assisted the evaluation team in learning about the ambulatory QI component of the AF4Q logic model. One of the primary objectives of the NSSMPP was to assess the extent to which physician practices adopted key components of the chronic care model, the patient-centered medical home, and other care management processes. In addition to organizational information about the practice, the NSSMPP questionnaire included 7 domains: (1) adoption and use of health information technology; (2) use of care management processes to improve the quality of care for 4 chronic diseases (asthma, congestive heart failure, depression, and diabetes); (3) provision of clinical preventive services and health promotion; (4) exposure to external performance incentives, such as pay-for-performance and public reporting; (5) payer mix, forms of compensation from health plans, and forms of compensation paid by the practice to its physicians; (6) organizational culture; and (7) provision of care management and preventive services for patients. The second round of the physician survey (National Survey of Physician Organizations [NSPO]) collected information on the 7 domains identified above and information on transitions between inpatient and outpatient care, use of formal QI methods, and community-level quality reporting. As with the consumer survey, the evaluation team produced feedback reports for all alliances based on the results from both rounds of the physician survey.

The longitudinal nature of the survey allowed for estimates of change over time to identify practice characteristics and market factors that could explain baseline levels and longitudinal changes in practice adoption of QI processes; it also tracked awareness and reaction to public reports of provider quality. A difference-in-difference approach was used to examine the effects in AF4Q communities relative to non-AF4Q communities.

*Target Population.* Round 1 of the survey (the NSSMPP) collected information about physician practices with 1 to 19 physicians, and because the focus of the NSSMPP was on 4 major chronic diseases, practices were selected only if they were primary care practices; single-specialty cardiology, endocrinology, or pulmonology practices; or multi-specialty practices with a significant number of physicians across these specialties. The NSSMPP oversampled the AF4Q communities and, as much as possible, sampled reasonable numbers of practices of each of the above specialty types, as well as practices in 4 size categories: 1 to 2, 3 to 8, 9 to 12, and 13 to 20 physicians. Round 2 of the survey (the NSPO) consisted of all practices that responded to round 1, plus new practices. In addition, the survey sample was expanded to include physician organizations of all sizes.

*Survey Administration and Additional Details.* Round 1 of the survey (the NSSMPP) was administered between 2009 and 2010, and round 2 (the NSPO) was administered between 2012 and 2013.

The survey was conducted via telephone by a contracted survey firm that interviewed the lead physician or lead administrator of each practice. When this was not possible, the firm interviewed another knowledgeable physician in the practice. Interviews lasted 30 to 45 minutes, and respondents were compensated for their time. The physician survey, like the consumer survey, was built into the evaluation design; however, RWJF decided not to fund a third round of the physician survey.

### *Alliance Survey*

*Purpose and Uses.* The first 4 rounds of the alliance survey were designed to provide information regarding the degree to which alliance stakeholders coalesced around a common vision. The survey also allowed for assessment of elements of alliance management, leadership, governance, and organizational structure thought to provide the foundation for successful, sustainable collaboration, and demonstrated how these elements changed over time. The fifth and final round of the survey changed focus and was designed to understand alliance participants' views about the impact of alliance work, alliance importance in the community, and alliance sustainability.

Similar to the consumer and physician surveys, customized reports were prepared for each AF4Q alliance for

all rounds of the survey. These reports provided alliances with specific feedback they could use to target areas for improvement or attention and identify success. These reports presented baseline and longitudinal results, and comparisons among other AF4Q communities.

*Target Population.* The alliance survey targeted individuals associated with the alliance, as defined by membership on alliance boards, leadership groups, work groups, advisory groups, and staff. Respondents who continued to participate in the alliance were surveyed at multiple times, allowing for comparisons of individual responses over time.

*Survey Administration and Additional Details.* The alliance survey was administered online, through a contracted survey firm, at multiple points throughout the AF4Q initiative between 2006 and 2015. Multiple administrations of the survey, each approximately 18 months apart, facilitated longitudinal comparisons. By the initiative's end, 5 rounds of the alliance survey were completed in 13 of the 14 original AF4Q communities (1 alliance was unable to participate in the fifth round because it was in the process of closing down operations at the time of survey implementation), and 3 or 4 rounds were completed in the newer AF4Q communities, depending upon their entrance date into the program.

## Qualitative Data

The evaluation team periodically conducted 3 different types of semi-structured interviews with key stakeholders in the AF4Q alliances: in-person site visit interviews, follow-up telephone interviews, and targeted telephone interviews. In addition, a round of semi-structured telephone interviews was conducted with a sample of national thought leaders in healthcare and health policy. Rather than focus on any individual area of the logic model, qualitative data played a role throughout the research design. High-level descriptions of the 3 types of interviews and the processes used to prepare for interviews are described below; they are followed by a description of the evaluation team's collection and synthesis of documents related to the program.

### *Site Visit Interviews*

To gain the perspective of a variety of stakeholders within each AF4Q community and develop a deep understanding of the alliances' structure and work, the evaluation team conducted 4 rounds of site visits throughout the program.

The first 2 rounds involved 2-day site visits, during which evaluation team researchers conducted in-depth, one-on-one conversations with a mix of participants in the community. In addition to interviewing alliance staff and volunteer leaders, AF4Q leadership team members, key committee and work group leaders, and other participants in the local AF4Q effort, the evaluation team worked to ensure that interviews were conducted with representatives from each of the initiative's targeted community stakeholder groups (eg, consumers, physicians, hospital leaders, health plans, employers, and nurse leaders). The team also identified 1 or 2 leaders, who were not directly involved in the AF4Q initiative, in each community to gain an outsider's perspective on the alliance's work. Site visit interview questions were tailored to each type of interviewee, and a typical interview lasted approximately 1 hour. Collectively, the interviews covered a wide range of topics, including participants' views of the alliance's organizational structure and governance, vision, and strategy; collaboration among members; and progress and barriers in each of the AF4Q programmatic areas. The first evaluation team site visit was held approximately 6 months after each community entered the AF4Q initiative, and the second site visit occurred approximately 36 months later in each of the original AF4Q communities.

The round 3 site visits involved a slightly different approach and focus. These visits were 1 day in length and typically consisted of small group interviews. The primary focus was alliance governance and sustainability. Given the more specific focus, the field of respondents was more limited than in past visits and primarily included stakeholders who were involved in alliance leadership at some point during the AF4Q program. A typical visit was divided into 4 to 6 sessions: a session with the AF4Q project director or alliance director focused on alliance organizational and membership structures, 2 to 4 sessions focused on specified time periods in the alliance's history (the purpose of these sessions was to gather first-person accounts—before and during the AF4Q initiative—of how the alliance changed over time, what precipitated those changes, and the consequences of those changes for the alliance and its activities), and a session that involved both staff and volunteer leaders of the alliance focused on the future direction of the alliance. These visits were conducted in all 16 communities between February 2013 and July 2013.

As discussed in the main text of this article, the round 4 site visits involved a tailored approach to all aspects of data collection for each individual alliance, including interview mode (telephone, in person, or a combination), number of respondents, and types of roles of the respondents.

Although guided, in part, by the team's overarching goals for the summative phase of the evaluation, the focus and topic areas of the visits also varied to some extent, as the goal of data collection was to fill in any gaps in the evaluation team's understanding of alliance governance, work in the AF4Q programmatic areas, plans for sustainability, and lessons learned by key stakeholders as a result of their involvement in the AF4Q initiative. Data collection occurred in all 16 communities between February 2015 and February 2016. In total, across the 4 rounds of site visits, the evaluation team conducted 844 interviews, resulting in approximately 14,500 pages of double-spaced, typed transcripts.

### *Biannual Telephone Interviews With AF4Q Staff Leaders*

The evaluation team also conducted follow-up telephone interviews with staff leaders in each AF4Q community (ie, AF4Q project directors and alliance directors) approximately every 6 months between 2007 and 2014. These 90-minute interviews covered topics such as progress and barriers in each of the AF4Q programmatic areas; changes in alliance governance structure, leadership, and stakeholder participation; the effects of external factors on the alliance's AF4Q efforts; and alliance strategies for alignment of AF4Q programmatic areas. The evaluation team conducted 10 rounds of interviews with staff leaders, resulting in 138 interviews and approximately 3400 pages of double-spaced, typed transcripts.

### *Targeted Telephone Interviews*

Targeted telephone interviews complemented the site visits and the staff leader interviews by providing an opportunity for in-depth discussions with the individual(s) who led work in the AF4Q programmatic areas within each alliance or AF4Q community. These interviews were conducted throughout the study—in the earlier years as part of the site visits and later in the program as a separate round of telephone interviews developed and conducted by individual programmatic area teams. Questions included in these interviews focused on the goals, processes, barriers, and successes in the intervention area of focus. The evaluation team conducted 120 targeted telephone interviews, resulting in approximately 2000 pages of double-spaced, typed transcripts.

### *National Vantage Interviews*

The evaluation team conducted telephone interviews with national leaders in healthcare and health policy to understand how the AF4Q initiative was viewed in the national conversation related to community-based healthcare improvement. Through an extensive, team-based sample development process, the team identified semi-external policy and national thought leaders who had some connection to the AF4Q initiative (ie, technical assistance providers, current and former members of the AF4Q National Advisory Committee) and those external to the program who had no known connection to the AF4Q initiative. A total of 26 interviews were conducted between April 2013 and October 2014, resulting in approximately 400 pages of double-spaced, typed transcripts. Interviews typically lasted 45 minutes, and topics covered included the respondent's knowledge of the AF4Q program, the AF4Q initiative's impact overall and in the programmatic areas, and advice or recommendations.

### *Public Reporting Tracking*

The evaluation team tracked and documented the presence and content of AF4Q alliance reports of physician and hospital quality, as well as reports produced by other organizations in those communities. Without knowledge of their public reporting history, 10 geographic areas that were similar to the 16 AF4Q communities in location, population size, and demographics were selected as comparison communities and were tracked for the presence and content of reports on physician and hospital quality. This process provided information on whether alliance public reporting efforts contributed to the type and amount of physician and hospital performance information available, and how the availability of this information compared with other communities.

Using the contents of the reports produced during the AF4Q program, the evaluation team constructed a longitudinal dataset for each community that contained information on type of measure reported, when reporting of the measure started and stopped, level of reporting (eg, group or practice), data sources used to construct each measure (eg, claims, medical records, and surveys), and frequency with which measures were reported (eg, annually or biannually). In addition, beginning in 2007 for 14 AF4Q alliances and corresponding comparison communities, and in 2010 for 2 additional AF4Q alliances and corresponding comparison communities, the evaluation team reviewed the websites of hospital and medical associations, healthcare coalitions, QI organizations, state departments of health, and the AF4Q alliances to document public reporting activities and the content of those reports. In addition, the team examined websites for the 5 largest commercial health plans, which included national plans. In communities where there were fewer than 5 significant health plans,

the team reviewed websites for health plans with membership that constituted approximately 75% or more of the total private-sector health plan enrollment in the area.

### *Documentation*

Throughout the program, the evaluation team gathered, organized, and synthesized AF4Q-related documents to understand and track what happened in each of the AF4Q communities and with the AF4Q initiative on a national level. These data included community funding proposals, information available on alliance or community partner websites, strategic planning documents, meeting agendas and minutes, alliance reports to the AF4Q National Program Office and RWJF, news articles and other media, and documents from a host of other sources. In addition, evaluation team members observed key meetings, webinars, conference calls, and special events to gain additional information. These observations were entered into a projectwide tracking system (database) and provided important context about the program and its implementation.

The documents described here collectively provided the evaluation team with an extensive dataset that was contrasted with the key stakeholder interview data and survey data to challenge or corroborate conclusions that the team developed on any given research question. Additionally, documentation in the evaluation team's projectwide tracking system represented the single most comprehensive view of the AF4Q initiative, from its inception to its conclusion, and was used to develop descriptions of the initiative and its evolution.[3]

## Existing Observational Data

Because primary data collection was not possible prior to the start of the AF4Q initiative, the evaluation team used existing secondary data to explore and understand pre-program trends and ex-ante differences. Although these data did not always contain the exact information sought by the evaluation team, they provided valuable insight into these issues. Additional advantages of using these data sources included: (1) cost and collection times were minimized because the data already existed, (2) data that were national in scope and included information on areas outside of the AF4Q alliances, and (3) standardized data that allowed for comparable measures across AF4Q alliances and over time. The main secondary data sources used by the evaluation team are described below in greater detail. Other data sources (eg, the US Census Bureau's American Community Survey, publicly reported quality measures from AF4Q communities, and HealthLeadersInterStudy) that provided descriptive information about the AF4Q communities and their healthcare characteristics were used to supplement our analyses.

### *Behavioral Risk Factor Surveillance System*

Using repeated cross-sectional samples, the Behavioral Risk Factor Surveillance System (BRFSS) collects information on US residents regarding their health behaviors, chronic health conditions, health status, and use of preventive services.[4] A number of outcome measures related to several intervention areas in the AF4Q program, particularly consumer engagement and QI, are drawn from BRFSS.

### *CMS' Hospital Compare Database*

Over 4200 hospitals voluntarily reported their adherence to recommended processes and treatments for patients admitted for acute myocardial infarction, heart failure, and pneumonia. The Hospital Quality Alliance program data contains hospitals' performance on these process measures and the associated risk-standardized 30-day readmission and mortality rates.[5] This data source was also used to estimate the effect of the AF4Q initiative on hospital quality over time and reductions in disparities in care relative to hospitals in non-AF4Q communities.

### *Dartmouth Atlas of Health Care*

The Dartmouth Atlas of Health Care data contains claims-based quality measures for the fee-for-service Medicare population, computed by AF4Q service areas and other regions not participating in the AF4Q initiative.[6] Specific aspects of quality of care, such as chronic disease management, care coordination, and hospital readmissions, were measured and served to assess the AF4Q initiative's effect on long-term quality outcomes identified in the logic model.

### *Health Resources and Service Administration's Area Health Resource Files*

The Area Health Resource Files contain measures of resource scarcity and information on health facilities, health professions, health status, economic activity, health training programs, and socioeconomic and environmental characteristics.[7] Data are also available for hospitals in non-AF4Q service areas.

### *Hospital Consumer Assessment of Healthcare Providers and Systems Survey*

The Hospital Consumer Assessment of Healthcare Providers and Systems survey provided a standardized

instrument and data collection methodology for measuring patients' experiences with hospital care. The survey contained 18 questions that encompassed 8 key topics. It was used to assess trends in patient experience with hospital care in AF4Q communities relative to non-AF4Q communities.[8]

### *Truven Health MarketScan Research Databases*

The Truven Health MarketScan Research Databases contain claims-based patient-level quality measures for the commercially insured population.[9] Measures calculated from the Truven Health MarketScan Research Databases are similar to those from the Dartmouth Atlas of Health Care and complement the latter by providing information on a different target population.

## REFERENCES

1. RTI International. Aligning Forces for Quality Consumer Survey 2.0. Final Methodology Report. Penn State College of Health and Human Development website. http://hhd.psu.edu/media/CHCPR/alignforce/files/AF4Q2.0_Final_Methodology_Report.pdf. Published February 19, 2013. Accessed June 29, 2016.

2. RTI International. Aligning Forces for Quality (AF4Q) Consumer Survey 2.2. Final Methodology Report. Penn State College of Health and Human Development website. http://hhd.psu.edu/media/CHCPR/alignforce/files/AF4Q_Consumer_Survey_Methods_-_Round_2_in_3_New_Communities.pdf. Published August 11, 2014. Accessed June 29, 2016.

3. Scanlon DP, Beich J, Leitzell B, et al. The Aligning Forces for Quality initiative: background and evolution from 2005 to 2015. *Am J Manag Care*. 2016:22(suppl 12):S346-S359.

4. About BRFSS. Centers for Disease Control and Prevention website. www.cdc.gov/brfss/about/index.htm. Accessed June 29, 2016.

5. Hospital Compare. CMS website. https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/HospitalCompare.html. Accessed June 29, 2016.

6. The Dartmouth Atlas of Health Care. The Dartmouth Institute for Health Policy and Clinical Practice website. www.dartmouthatlas.org/. Published 2016. Accessed June 29, 2016.

7. Area Health Resources Files (AHRF). Health Resources and Services Administration website. http://ahrf.hrsa.gov/. Published 2016. Accessed June 29, 2016.

8. CAHPS Hospital Survey. Hospital Consumer Assessment of Healthcare Providers and Systems website. www.hcahpsonline.org/home.aspx. Accessed June 29, 2016.

9. MarketScan Research. Truven Health Analytics website. https://marketscan.truvenhealth.com/marketscanportal/. Published 2012. Accessed June 29, 2016.

# The Longitudinal Impact of Aligning Forces for Quality on Measures of Population Health, Quality and Experience of Care, and Cost of Care

Yunfeng Shi, PhD; Dennis P. Scanlon, PhD; Raymond Kang, MA; Megan McHugh, PhD; Jessica Greene, PhD; Jon B. Christianson, PhD; Muriel Jean-Jacques, MD, MAPP; Yasmin Mahmud, MPH; and Jeffrey A. Alexander, PhD

**eAppendix.** AF4Q Impact (% Points) Based on Fixed Effects Difference-in-Difference Estimates for All Outcomes Organized by the Triple Aim and Data Sources

| Number | Outcome and Measurement | Data | AF4Q Impact (% Points) | Pre-Post Change in AF4Q | Pre-Post Change in non-AF4Q |
|---|---|---|---|---|---|
| **Aim #1: Improving Population Health** | | | | | |
| A1 | Percentage of patients with asthma who were able to take asthma medications, including inhalers, as their doctor recommended | AF4Q Consumer Survey (2008, 2012) | –1% | –8% | –3% |
| A2 | Percentage of patients with asthma who were able to avoid things in the past month that made their asthma worse | AF4Q Consumer Survey (2008, 2012) | –5% | –2% | 0% |
| A3 | Percentage of patients with diabetes who were able to take diabetes medications, as recommended, in the past month | AF4Q Consumer Survey (2008, 2012) | 8% | –4% | –9% |
| A4 | Percentage of patients with diabetes who were able to check their blood sugar at least once a week in the past month | AF4Q Consumer Survey (2008, 2012) | 1% | –3% | –2% |
| A5 | Percentage of patients with diabetes who were able to take cholesterol medications, as recommended, in the past month | AF4Q Consumer Survey (2008, 2012) | 9% | –6% | –8% |
| A6 | Percentage of patients with diabetes who were able to take blood pressure medications, as recommended, in the past month | AF4Q Consumer Survey (2008, 2012) | 1% | –4% | –3% |
| A7 | Percentage of patients with diabetes who were able to check their blood pressure at least once a week in the past month | AF4Q Consumer Survey (2008, 2012) | 6% | 2% | –1% |
| A8 | Percentage of patients with heart disease who took cholesterol medications, as recommended, in the past month | AF4Q Consumer Survey (2008, 2012) | 9% | –10% | –22% |
| A9 | Percentage of patients with heart disease who were able to take heart medications, as recommended, in the past month | AF4Q Consumer Survey (2008, 2012) | 1% | –7% | –6% |
| A10 | Percentage of patients with depression who were able to take depression medications, as recommended, in the past month | AF4Q Consumer Survey (2008, 2012) | –2% | –4% | 3% |
| A11 | Percentage of patients with depression who attended counseling sessions for depression, as recommended, in the past month | AF4Q Consumer Survey (2008, 2012) | 6% | –6% | –17% |

(continued)

ajmc.com ©Managed Care Forum Healthcare Communications, LLC

■ **eAppendix.** AF4Q Impact (% Points) Based on Fixed Effects Difference-in-Difference Estimates for All Outcomes Organized by the Triple Aim and Data Sources (continued)

| Number | Outcome and Measurement | Data | AF4Q Impact (% Points) | Pre-Post Change in AF4Q | Pre-Post Change in non-AF4Q |
|---|---|---|---|---|---|
| A12 | Percentage of chronically ill adults who always take medications for all the conditions they have | AF4Q Consumer Survey (2008, 2012) | 2% | –7% | –7% |
| A13 | Percentage of chronically ill adults maintaining a low-fat diet | AF4Q Consumer Survey (2008, 2012) | –3% | 1% | 5% |
| A14 | Percentage of chronically ill adults reading food labels at the grocery store | AF4Q Consumer Survey (2008, 2012) | –2% | 2% | 4% |
| A15 | Percentage of chronically ill adults reporting regular exercise | AF4Q Consumer Survey (2008, 2012) | –1% | 1% | 2% |
| A16 | Percentage of chronically ill adults eating at least 5 fruits and vegetables on most days | AF4Q Consumer Survey (2008, 2012) | –1% | 0% | 1% |
| A17 | Percentage of chronically ill adults reporting good or excellent health | AF4Q Consumer Survey (2008, 2012) | 2% | –1% | –2% |
| A18 | Percentage of chronically ill adults who report that physical health problems limit physical activities | AF4Q Consumer Survey (2008, 2012) | –2% | 1% | 5% |
| A19 | Percentage of chronically ill adults who report difficulty doing daily work due to their physical health | AF4Q Consumer Survey (2008, 2012) | –3% | –1% | 2% |
| A20 | Percentage of chronically ill adults who report that their health problems limit social activities | AF4Q Consumer Survey (2008, 2012) | 1% | 0% | –1% |
| A21 | Percentage of chronically ill adults who are overweight | AF4Q Consumer Survey (2008, 2012) | 3% | 0% | –5% |
| A22 | Percentage of adults who are overweight | BRFSS (2007, 2011) | –5% | –3% | –3% |
| A23 | Percentage of adults told by their doctor that they have diabetes | BRFSS (2007, 2011) | 0% | 1% | 1% |
| A24 | Percentage of adults who smoke | BRFSS (2007, 2011) | 0% | 1% | 0% |
| A25 | Percentage of adults exercising on a regular basis | BRFSS (2007, 2011) | 0% | –2% | –1% |
| A26 | Percentage of adults reporting good or excellent health | BRFSS (2007, 2011) | 0% | 0% | –1% |
| A27 | Percentage of adults eating at least 5 servings of fruits or vegetables on most days | BRFSS (2007, 2011) | 1%[a] | –7% | –8% |
| **Aim #2: Improving Quality of Care and Patient Experience** | | | | | |
| B1 | Percentage of patients with diabetes who received the recommended preventive care of A1C screening: Medicare population | Dartmouth Atlas (2005-2013) | –1%[a] | 2% | 4% |
| B2 | Percentage of patients with diabetes who received the recommended preventive care of A1C screening: commercially insured population | MarketScan (2006-2013) | 3%[a] | 10% | 5% |
| B3 | Percentage of patients with diabetes who received the recommended preventive care of blood lipids testing: Medicare population | Dartmouth Atlas (2005-2013) | 0% | 4% | 4% |
| B4 | Percentage of patients with diabetes who received the recommended preventive care of blood lipids testing: commercially insured population | MarketScan (2006-2013) | 2%[a] | 8% | 5% |

(continued)

**eAppendix.** AF4Q Impact (% Points) Based on Fixed Effects Difference-in-Difference Estimates for All Outcomes Organized by the Triple Aim and Data Sources (continued)

| Number | Outcome and Measurement | Data | AF4Q Impact (% Points) | Pre-Post Change in AF4Q | Pre-Post Change in non-AF4Q |
|---|---|---|---|---|---|
| B5 | Percentage of patients with diabetes who received the recommended preventive care of an eye exam: Medicare population | Dartmouth Atlas (2005-2013) | –2%[a] | –1% | –1% |
| B6 | Percentage of patients with diabetes who received the recommended preventive care of an eye exam: commercially insured population | MarketScan (2006-2013) | 3%[a] | 2% | –1% |
| B7 | Percentage of patients with acute myocardial infarction having any primary care visits post discharge: Medicare population | Dartmouth Atlas (2005-2013) | 0% | 3% | 5% |
| B8 | Percentage of patients with acute myocardial infarction having any primary care visits post discharge: commercially insured population | MarketScan (2006-2013) | 1% | 1% | 2% |
| B9 | Percentage of patients with acute myocardial infarction having any ambulatory care visits[b] post discharge: Medicare population | Dartmouth Atlas (2005-2013) | 2% | 2% | 2% |
| B10 | Percentage of patients with acute myocardial infarction having any ambulatory care visits[b] post discharge: commercially insured population | MarketScan (2006-2013) | –2% | –1% | 2% |
| B11 | Percentage of patients with congestive heart failure having any primary care visits post discharge: Medicare population | Dartmouth Atlas (2005-2013) | 1%[a] | 0% | 1% |
| B12 | Percentage of patients with congestive heart failure having any primary care visits post discharge: commercially insured population | MarketScan (2006-2013) | 0% | 2% | 5% |
| B13 | Percentage of patients with congestive heart failure having any ambulatory care visits[b] post discharge: Medicare population | Dartmouth Atlas (2005-2013) | 2%[a] | 2% | 3% |
| B14 | Percentage of patients with congestive heart failure having any ambulatory care visits[b] post discharge: commercially insured population | MarketScan (2006-2013) | –1% | 1% | 2% |
| B15 | Percentage of patients with pneumonia having any primary care visits post discharge: Medicare population | Dartmouth Atlas (2005-2013) | 0% | –2% | 1% |
| B16 | Percentage of patients with pneumonia having any primary care visits post discharge: commercially insured population | MarketScan (2006-2013) | –1% | 0% | 3% |
| B17 | Percentage of patients with pneumonia having any ambulatory care visits[b] post discharge: Medicare population | Dartmouth Atlas (2005-2013) | 0% | –1% | 2% |
| B18 | Percentage of patients with pneumonia having any ambulatory care visits[b] post discharge: commercially insured population | MarketScan (2006-2013) | 0% | 1% | 1% |
| B19 | Percentage of patients having any primary care visits post discharge, all medical admissions: Medicare population | Dartmouth Atlas (2005-2013) | 0% | 0% | 1% |
| B20 | Percentage of patients having any primary care visits post discharge, all medical admissions: commercially insured population | MarketScan (2006-2013) | 0% | 4% | 5% |

(continued)

■ **eAppendix.** AF4Q Impact (% Points) Based on Fixed Effects Difference-in-Difference Estimates for All Outcomes Organized by the Triple Aim and Data Sources (continued)

| Number | Outcome and Measurement | Data | AF4Q Impact (% Points) | Pre-Post Change in AF4Q | Pre-Post Change in non-AF4Q |
|---|---|---|---|---|---|
| B21 | Percentage of patients having any ambulatory care visits[b] post discharge, all medical admissions: Medicare population | Dartmouth Atlas (2005-2013) | 1%[a] | 0% | 2% |
| B22 | Percentage of patients having any ambulatory care visits[b] post discharge, all medical admissions: commercially insured population | MarketScan (2006-2013) | –1%[a] | 1% | 3% |
| B23 | Percentage of patients having any ambulatory care visits[b] post discharge, all surgical admissions: Medicare population | Dartmouth Atlas (2005-2013) | 1%[a] | –0.3% | 0.3% |
| B24 | Percentage of patients having any ambulatory care visits[b] post discharge, all surgical admissions: commercially insured population | MarketScan (2006-2013) | –1%[a] | 5% | 6% |
| B25 | Percentage of enrollees with ambulatory care visits[b]: Medicare population | Dartmouth Atlas (2005-2013) | –2%[a] | –3% | 0% |
| B26 | Percentage of enrollees with ambulatory care visits[b]: commercially insured population | MarketScan (2006-2013) | 1%[a] | 2% | 1% |
| B27 | Percentage of patients with coronary artery disease who received a blood lipids test: Medicare population | Dartmouth Atlas (2005-2013) | –1%[a] | 3% | 3% |
| B28 | Percentage of patients with coronary artery disease who received a blood lipids test: commercially insured population | MarketScan (2006-2013) | 3%[a] | 11% | 6% |
| B29 | Percentage of female enrollees who received mammography screening: Medicare population | Dartmouth Atlas (2005-2013) | –2%[a] | –2% | –1% |
| B30 | Percentage of female enrollees who received mammography screening: commercially insured population | MarketScan (2006-2013) | –2% | 13% | 14% |
| B31 | Percentage of adults with diabetes having cholesterol screening | AF4Q Consumer Survey (2008, 2012) | 3% | –2% | –4% |
| B32 | Percentage of adults with diabetes having A1C screening | AF4Q Consumer Survey (2008, 2012) | 10% | –1% | –10% |
| B33 | Percentage of adults with diabetes having an eye exam | AF4Q Consumer Survey (2008, 2012) | 3% | –5% | –10% |
| B34 | Percentage of adults with diabetes having a foot exam | AF4Q Consumer Survey (2008, 2012) | 7% | 1% | –7% |
| B35 | Percentage of adults with heart disease having a blood pressure check | AF4Q Consumer Survey (2008, 2012) | –1% | –1% | 0% |
| B36 | Percentage of chronically ill adult smokers receiving information about smoking cessation | AF4Q Consumer Survey (2008, 2012) | 8% | 1% | –3% |
| B37 | Percentage of smokers with asthma receiving information about smoking cessation | AF4Q Consumer Survey (2008, 2012) | 46% | –10% | –23% |
| B38 | Percentage of smokers with diabetes receiving information about smoking cessation | AF4Q Consumer Survey (2008, 2012) | –5% | 1% | 0% |
| B39 | Percentage of smokers with hypertension receiving information about smoking cessation | AF4Q Consumer Survey (2008, 2012) | 1% | 3% | 5% |
| B40 | Percentage of smokers with heart disease receiving information about smoking cessation | AF4Q Consumer Survey (2008, 2012) | 87% | –5% | –50% |

(continued)

**eAppendix.** AF4Q Impact (% Points) Based on Fixed Effects Difference-in-Difference Estimates for All Outcomes Organized by the Triple Aim and Data Sources (continued)

| Number | Outcome and Measurement | Data | AF4Q Impact (% Points) | Pre-Post Change in AF4Q | Pre-Post Change in non-AF4Q |
|---|---|---|---|---|---|
| B41 | Patient Activation Measure (scale of 0-100)[1] | AF4Q Consumer Survey (2008, 2012) | –1% | 2.6 | 3.2 |
| B42 | Percentage of chronically ill adults asking doctor to explain something until they understand | AF4Q Consumer Survey (2008, 2012) | 3% | 5% | 5% |
| B43 | Percentage of chronically ill adults who consider reports showing which doctors follow recommended treatment approaches as important | AF4Q Consumer Survey (2008, 2012) | 0% | –2% | –1% |
| B44 | Percentage of patients reporting awareness of reports showing outcomes for similar patients treated by different doctors | AF4Q Consumer Survey (2008, 2012) | –5% | –3% | 2% |
| B45 | Percentage of chronically ill adults who consider reports showing how satisfied other chronically ill adults are with their doctor or medical group as important | AF4Q Consumer Survey (2008, 2012) | 0% | –1% | 0% |
| B46 | Percentage of chronically ill adults seeing information comparing doctors, hospitals, or health insurance plans in the last 12 months | AF4Q Consumer Survey (2008, 2012) | 1% | 1% | 0% |
| B47 | Percentage of chronically ill adults seeing information comparing doctors in the last 12 months | AF4Q Consumer Survey (2008, 2012) | –2% | 3% | 6% |
| B48 | Percentage of chronically ill adults seeing information comparing hospitals in the last 12 months | AF4Q Consumer Survey (2008, 2012) | –1% | 0% | 0% |
| B49 | Percentage of chronically ill adults seeing information comparing health insurance plans in the last 12 months | AF4Q Consumer Survey (2008, 2012) | 2% | 0% | 0% |
| B50 | Percentage of chronically ill adults using information comparing doctors | AF4Q Consumer Survey (2008, 2012) | –2% | 2% | 4% |
| B51 | Percentage of chronically ill adults using information comparing hospitals | AF4Q Consumer Survey (2008, 2012) | –1% | 1% | 2% |
| B52 | Percentage of chronically ill adults using information comparing health insurance plans | AF4Q Consumer Survey (2008, 2012) | –1% | 1% | 2% |
| B53 | Percentage of chronically ill adults reporting no problem with coordination among healthcare professionals | AF4Q Consumer Survey (2008, 2012) | –4% | 3% | 8% |
| B54 | Percentage of chronically ill adults reporting no problem with coordination between healthcare professionals and alternative healthcare practitioners | AF4Q Consumer Survey (2008, 2012) | 1% | 2% | 7% |
| B55 | Chronically ill adults' rating of their care in the past year (scale of 1-10) | AF4Q Consumer Survey (2008, 2012) | 2% | 0.131 | 0.094 |
| B56 | Percentage of chronically ill adults who reported that their healthcare professionals explained things in a way they could understand | AF4Q Consumer Survey (2008, 2012) | –1% | 0% | 2% |
| B57 | Percentage of chronically ill adults who reported that their healthcare professionals spent enough time with them | AF4Q Consumer Survey (2008, 2012) | –3% | –2% | 2% |
| B58 | Percentage of chronically ill adults who reported that their healthcare professionals treated them with respect and dignity | AF4Q Consumer Survey (2008, 2012) | –1% | 1% | 3% |

(continued)

**eAppendix.** AF4Q Impact (% Points) Based on Fixed Effects Difference-in-Difference Estimates for All Outcomes Organized by the Triple Aim and Data Sources (continued)

| Number | Outcome and Measurement | Data | AF4Q Impact (% Points) | Pre-Post Change in AF4Q | Pre-Post Change in non-AF4Q |
|---|---|---|---|---|---|
| B59 | Percentage of chronically ill adults who reported that their healthcare professionals helped them set specific goals for their diet | AF4Q Consumer Survey (2008, 2012) | 2% | 4% | 7% |
| B60 | Percentage of chronically ill adults who reported that their healthcare professionals helped them set specific goals for exercise | AF4Q Consumer Survey (2008, 2012) | 0% | 6% | 7% |
| B61 | Percentage of chronically ill adults who reported that their healthcare professionals taught them how to monitor their condition | AF4Q Consumer Survey (2008, 2012) | 0% | 7% | 10% |
| B62 | Percentage of chronically ill adults receiving a telephone call from their healthcare professionals or health insurance company to see how they were doing | AF4Q Consumer Survey (2008, 2012) | –1% | 4% | 5% |
| B63 | Percentage of chronically ill adults who reported receiving an appointment reminder letter | AF4Q Consumer Survey (2008, 2012) | –1% | 5% | 5% |
| B64 | Percentage of chronically ill adults who reported receiving materials on how to care for their condition | AF4Q Consumer Survey (2008, 2012) | 2% | 2% | 0% |
| B65 | Percentage of chronically ill adults who reported that their doctor or nurse arranged for them to see a dietician or nutritionist | AF4Q Consumer Survey (2008, 2012) | 3% | 1% | 0% |
| B66 | Percentage of chronically ill adults who reported that their doctor or nurse arranged for them to join a support group | AF4Q Consumer Survey (2008, 2012) | –3% | 1% | 4% |
| B67 | Percentage of chronically ill adults who reported that their doctor or nurse arranged for them to see a health coach | AF4Q Consumer Survey (2008, 2012) | 0% | 2% | 2% |
| B68 | Percentage of chronically ill adults who reported that their doctor or nurse arranged for them to see a social worker | AF4Q Consumer Survey (2008, 2012) | 1% | 1% | 0% |
| B69 | Percentage of chronically ill adults who reported that their doctor or nurse arranged for them to go to a smoking-cessation program | AF4Q Consumer Survey (2008, 2012) | 0% | 0% | 1% |
| B70 | Percentage of chronically ill adults who reported that their doctor or nurse arranged for them to see an exercise consultant | AF4Q Consumer Survey (2008, 2012) | 0% | 2% | 3% |
| B71 | Percentage of chronically ill adults who reported that their doctor or nurse arranged for them to go to health-related classes | AF4Q Consumer Survey (2008, 2012) | –1% | 2% | 4% |
| B72 | Percentage of chronically ill adults who reported that their doctor or nurse arranged for them to go to see alternative health practitioners | AF4Q Consumer Survey (2008, 2012) | –1% | 2% | 4% |
| B73 | Percentage of chronically ill adults who reported that their doctor or nurse arranged for them to go to seek other help (other than B65 through B72) | AF4Q Consumer Survey (2008, 2012) | 4%[a] | –1% | –5% |
| B74 | Physician Organization Care Management Index (scale of 0-24)[2] | NSPO survey (2009, 2013) | 11%[a] | 1.667 | 0.617 |
| B75 | Health Information Technology Adoption Index (scale of 0-18)[3] | NSPO survey (2009, 2013) | 6%[a] | 3.626 | 2.63 |

(continued)

**eAppendix.** AF4Q Impact (% Points) Based on Fixed Effects Difference-in-Difference Estimates for All Outcomes Organized by the Triple Aim and Data Sources (continued)

| Number | Outcome and Measurement | Data | AF4Q Impact (% Points) | Pre-Post Change in AF4Q | Pre-Post Change in non-AF4Q |
|---|---|---|---|---|---|
| B76 | Patient-Centered Medical Home index (scale of 0-90)[4] | NSPO survey (2009, 2013) | 8% | 11.672 | 9.744 |
| B77 | Percentage of physicians reporting that clinical quality of care measures are publicly reported | NSPO survey (2009, 2013) | 7% | 17% | 12% |
| B78 | Percentage of patients who report that the patients' rooms and bathrooms are kept clean | HCAHPS (2008-2013) | 0% | 4% | 2% |
| B79 | Percentage of patients who report that nurses communicate well with patients | HCAHPS (2008-2013) | 0% | 3% | 2% |
| B80 | Percentage of patients who report that doctors communicate well with patients | HCAHPS (2008-2013) | 0.4%[a] | 1% | 1% |
| B81 | Percentage of patients who report that they receive help quickly from hospital staff | HCAHPS (2008-2013) | 0% | 4% | 3% |
| B82 | Percentage of patients who report that their pain was well controlled | HCAHPS (2008-2013) | 0% | 1% | 1% |
| B83 | Percentage of patients who report that staff explained about medicines before giving them to the patients | HCAHPS (2008-2013) | 1% | 3% | 2% |
| B84 | Percentage of patients who report that they were given information about what to do during their recovery at home | HCAHPS (2008-2013) | –0.6%[a] | 4% | 2% |
| B85 | Percentage of patients who report that the areas around patients' rooms were kept quiet at night | HCAHPS (2008-2013) | 1% | 4% | 3% |
| B86 | Percentage of patients who rate their overall hospital experience a 9 or 10 (scale of 1-10) | HCAHPS (2008-2013) | 0% | 1% | 3% |
| B87 | Percentage of patients who report that they would recommend the hospital to friends and family | HCAHPS (2008-2013) | 0% | 4% | 1% |
| **Aim #3: Reducing Cost of Care** | | | | | |
| C1 | Total payments ($) per enrollee: Medicare population | Dartmouth Atlas (2005-2013) | –1%[a] | 1961 | 1896 |
| C2 | Total payments ($) per enrollee: commercially insured population | MarketScan (2006-2013) | 2%[a] | 1210 | 1205 |
| C3 | All hospitalizations per enrollee for patients with diabetes: Medicare population | Dartmouth Atlas (2005-2013) | 4%[a] | –5% | –7% |
| C4 | All hospitalizations per enrollee for patients with diabetes: commercially insured population | MarketScan (2006-2013) | 1%[a] | –1% | –2% |
| C5 | Diabetes-related hospitalizations per enrollee for patients with diabetes: Medicare population | Dartmouth Atlas (2005-2013) | 1%[a] | 0% | 0% |
| C6 | Diabetes-related hospitalizations per enrollee for patients with diabetes: commercially insured population | MarketScan (2006-2013) | 0.1%[a] | –1% | –1% |
| C7 | All ED visits per enrollee for patients with diabetes: Medicare population | Dartmouth Atlas (2005-2013) | 1%[a] | 6% | 5% |
| C8 | All ED visits per enrollee for patients with diabetes: commercially insured population | MarketScan (2006-2013) | 0% | 0% | 1% |

(continued)

**eAppendix.** AF4Q Impact (% Points) Based on Fixed Effects Difference-in-Difference Estimates for All Outcomes Organized by the Triple Aim and Data Sources (continued)

| Number | Outcome and Measurement | Data | AF4Q Impact (% Points) | Pre-Post Change in AF4Q | Pre-Post Change in non-AF4Q |
|---|---|---|---|---|---|
| C9 | Diabetes-related ED visits per enrollee for patients with diabetes: Medicare population | Dartmouth Atlas (2005-2013) | 0% | 0% | 0% |
| C10 | Diabetes-related ED visits per enrollee for patients with diabetes: commercially insured population | MarketScan (2006-2013) | 0.1%[a] | 0% | –0.1% |
| C11 | Percentage of patients with acute myocardial infarction with postdischarge ED visits: Medicare population | Dartmouth Atlas (2005-2013) | 0% | 1% | 1% |
| C12 | Percentage of patients with acute myocardial infarction with postdischarge ED visits: commercially insured population | MarketScan (2006-2013) | 1% | 1% | 0% |
| C13 | Percentage of patients with acute myocardial infarction with postdischarge readmissions: Medicare population | Dartmouth Atlas (2005-2013) | 0% | –3% | –3% |
| C14 | Percentage of patients with acute myocardial infarction with postdischarge readmissions: commercially insured population | MarketScan (2006-2013) | 2% | 3% | –1% |
| C15 | Percentage of patients with congestive heart failure with postdischarge ED visits: Medicare population | Dartmouth Atlas (2005-2013) | 0% | 2% | 2% |
| C16 | Percentage of patients with congestive heart failure with postdischarge ED visits: commercially insured population | MarketScan (2006-2013) | 2%[a] | 2% | 2% |
| C17 | Percentage of patients with congestive heart failure with postdischarge readmissions: Medicare population | Dartmouth Atlas (2005-2013) | 0% | –1% | 0% |
| C18 | Percentage of patients with congestive heart failure with postdischarge readmissions: commercially insured population | MarketScan (2006-2013) | 1% | 4% | 4% |
| C19 | Percentage of patients with pneumonia with postdischarge ED visits: Medicare population | Dartmouth Atlas (2005-2013) | 0% | 3% | 2% |
| C20 | Percentage of patients with pneumonia with postdischarge ED visits: commercially insured population | MarketScan (2006-2013) | 1% | 2% | 2% |
| C21 | Percentage of patients with pneumonia with postdischarge readmissions: Medicare population | Dartmouth Atlas (2005-2013) | 0% | 1% | 0% |
| C22 | Percentage of patients with pneumonia with postdischarge readmissions: commercially insured population | MarketScan (2006-2013) | 1% | 7% | 4% |
| C23 | Percentage of patients with postdischarge ED visits, all medical admissions: Medicare population | Dartmouth Atlas (2005-2013) | –0.2%[a] | 2% | 3% |
| C24 | Percentage of patients with postdischarge ED visits, all medical admissions: commercially insured population | MarketScan (2006-2013) | 1%[a] | 4% | 3% |
| C25 | Percentage of patients with postdischarge readmissions, all medical admissions: Medicare population | Dartmouth Atlas (2005-2013) | –0.1%[a] | –0.5% | –0.5% |

(continued)

**eAppendix.** AF4Q Impact (% Points) Based on Fixed Effects Difference-in-Difference Estimates for All Outcomes Organized by the Triple Aim and Data Sources (continued)

| Number | Outcome and Measurement | Data | AF4Q Impact (% Points) | Pre-Post Change in AF4Q | Pre-Post Change in non-AF4Q |
|---|---|---|---|---|---|
| C26 | Percentage of patients with postdischarge readmissions, all medical admissions: commercially insured population | MarketScan (2006-2013) | 1%[a] | 2% | 2% |
| C27 | Percentage of patients with postdischarge ED visits, all surgical admissions: Medicare population | Dartmouth Atlas (2005-2013) | 0% | 2% | 2% |
| C28 | Percentage of patients with postdischarge ED visits, all surgical admissions: commercially insured population | MarketScan (2006-2013) | 2%[a] | 4% | 4% |
| C29 | Percentage of patients with postdischarge readmissions, all surgical admissions: Medicare population | Dartmouth Atlas (2005-2013) | 0% | –1% | –1% |
| C30 | Percentage of patients with postdischarge readmissions, all surgical admissions: commercially insured population | MarketScan (2006-2013) | 0% | 1% | 1% |

[a] $P \leq .05$.
[b] Ambulatory care visits include both primary care visits and nonprimary ambulatory care visits, such as visits to specialty clinics or ambulatory surgery centers.
A1C indicates glycated hemoglobin; AF4Q indicates Aligning Forces for Quality; BRFSS, Behavioral Risk Factor Surveillance System; ED, emergency department; HCAHPS, Hospital Consumer Assessment of Healthcare Providers and Systems; NSPO, National Study of Physician Organizations.

## REFERENCES

1. Hibbard JH, Stockard J, Mahoney ER, Tusler M. Development of the Patient Activation Measure (PAM): conceptualizing and measuring activation in patients and consumers. *Health Serv Res*. 2004;39(4 pt 1):1005-1026.

2. Wiley JA, Rittenhouse DR, Shortell SM, et al. Managing chronic illness: physician practices increased the use of care management and medical home processes. *Health Aff (Millwood)*. 2015;34(1):78-86. doi: 10.1377/hlthaff.2014.0404.

3. McHugh M, Shi Y, McClellan SR, et al. Using multi-stakeholder alliances to accelerate the adoption of health information technology by physician practices. *Healthc (Amst)*. 2016;4(2):86-91. doi: 10.1016/j.hjdsi.2016.01.004.

4. McHugh M, Shi Y, Ramsay PP, et al. Patient-centered medical home adoption: results from Aligning Forces For Quality. *Health Aff (Millwood)*. 2016;35(1):141-149. doi: 10.1377/hlthaff.2015.0495.

# Reporting Provider Performance: What Can Be Learned From the Experience of Multi-Stakeholder Community Coalitions?

Jon B. Christianson, PhD; Bethany W. Shaw, MHA; Jessica Greene, PhD; and Dennis P. Scanlon, PhD

**eAppendix A.** AF4Q Public Reporting Logic Model

| Basis for RWJF AF4Q Focus on Community-Level Public Reporting | RWJF Activities in Support of Public Reporting | Alliance Preparation for Public Reporting | Alliance Production of Public Reports | Intermediate Goal Attainment | Long-Term Goal Attainment |
|---|---|---|---|---|---|
| • Consumers would benefit in their healthcare decision making by having more and better information about provider performance, including quality of care.<br>• Providers would be stimulated to improve their performance, including the quality of care they provide, if their performance is measured and publicly disclosed.<br>• RWJF, through a specific initiative (AF4Q), can play an important role in supporting the development and diffusion of information about provider performance through intellectual leadership and the provision of funding and technical assistance.<br>• Because healthcare system change often occurs at the local level and requires the commitment of local participants to maximize its impact, RWJF's efforts to support the measurement and diffusion of information about provider performance should recognize and support community-based activities in these areas.<br>• The impact of information regarding provider performance on consumer and provider behavior in local communities can be enhanced if community-level activities that support consumer engagement in healthcare and provider engagement in quality improvement are aligned with public reporting activities and the outcomes contained in public reports. | • Set goals for public reporting (eg, provider participation, timing of reports, and new measures) and communicate goals to community alliance grant recipients.<br>• Conduct continuing education meetings and programs to reinforce goals and share implementation experiences.<br>• In collaboration with alliances, convene community stakeholder gatherings to publicize alliance activities and recruit community stakeholders to alliance activities.<br>• Monitor and provide feedback to alliances regarding progress toward goals.<br>• Fund-related initiatives. | • Agrees to AF4Q public reporting goals and accepts role as community organization responsible for mobilizing community stakeholders to pursue these and other alliance goals.<br>• Recruits community stakeholders to alliance membership.<br>• Establishes organizational structure within alliance to provide leadership for public reporting activities.<br>• Develops a work plan for accomplishing public reporting activities, including outcomes measurement, performance reporting, dissemination of public reports, and the garnering of media attention for public reports.<br>• Coordinates alliance activities in areas of consumer engagement and quality improvement to support and align with public reporting activities. | • Implement process for measure adoption, data acquisition, aggregation, and measure construction.<br>• Produce public reports according to RWJF's time table and alliance work plan.<br>• Expand measures in public reports to include patient experience, provider cost and efficiency, and hospital quality measures.<br>• Report performance measures disaggregated by racial/ethnic groups.<br>• Develop or refine alliances' websites that display public report findings.<br>• Secure commitment of stakeholders to support ongoing public reporting process, including plans for continued funding of reporting activities. | Consumers<br>• Increased awareness and use of comparative provider performance data in healthcare decision making (ie, choice of providers, interacting with providers).<br>Providers<br>• Implement quality improvement activities consistent with public report findings.<br>Purchasers<br>• Institute financial incentives to reward high-performing providers and consumers who seek care from high-performing providers.<br>Community<br>• Increased breadth and depth of available provider performance data in alliance communities. | • Quality of care in community increases.<br>• Racial/ethnic quality of care differences diminish.<br>• Provider cost and efficiency improves.<br>• Patient experience with healthcare system improves.<br>• Health status of community residents increases. |

AF4Q indicates Aligning Forces for Quality; RWJF, Robert Wood Johnson Foundation.

ajmc.com © Managed Care & Healthcare Communications, LLC

**eAppendix B (Table 1).** Status of AF4Q Alliances' Ambulatory Public Reporting Efforts as of May 2012 and May 2015

| AF4Q Community (Public report sponsor–AF4Q alliance or AF4Q alliance partner) *Public reporting website as of 2015* | Ambulatory Quality: First/Most Recent Report Year | Ambulatory Quality: 2012 # Process Measures | 2012 # Outcome Measures | 2012 # Chronic Conditions | 2012 Prevention Measures | 2012 Reporting Level | 2012 Data Source | Ambulatory Quality: 2015 # Process Measures | 2015 # Outcome Measures | 2015 # Chronic Conditions | 2015 Prevention Measures | 2015 Reporting Level | 2015 Data Source | Ambulatory Patient Experience: 2012 & 2015 First/Most Recent Report Year | Ambulatory Patient Experience: 2012 & 2015 Reporting Level | Ambulatory Cost/Efficiency/Overutilization First/Most Recent Report Year | Ambulatory Cost/Efficiency/Overutilization 2012 Measure Type | Ambulatory Cost/Efficiency/Overutilization 2012 Level | Ambulatory Cost/Efficiency/Overutilization 2015 Measure Type | Ambulatory Cost/Efficiency/Overutilization 2015 Level |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Boston** (Massachusetts Health Quality Partners) *www.healthcarecompassma.org* | 2005/2015 | 21 | X | 4 | Y | G | Admin. (comm. claims) | 15 | X | 4 | Y | P | Admin. (comm. claims) | 2006/2014 | P | 2005/2015 | Util. | G | Util. | P |
| **Cincinnati** (The Health Collaborative) *www.yourhealthmatters.org* | 2010/2015 | 1 | 11 | 2 | Y | P | MR | 1 | 12 | 3 | Y | P | MR | 2014/2015 | P | X | X | X | X | X |
| **Cleveland** (Better Health Partnership) *www.betterhealthpartnership.org* | 2008/2015 | 6 | 18 | 3 | X | P | MR | 6 | 18 | 3 | X | P | MR | X | X | X | X | X | X | X |
| **Detroit** (Greater Detroit Area Health Council) *www.mycarecompare.org* | 2008/2015 | 14 | 2 | 3 | Y | PO | Admin. (comm. claims) | 16 | X | 3 | Y | PO | Admin. (comm. claims) | 2010 (pilot only) | P | 2008/2015 | Util. | PO | Util. | PO |
| **Humboldt County** (Humboldt Independent Practice Association) *www.humboldtipa.com/af4qh/* | 2010/2013 | 19 | 7 | 2 | Y | P | Admin. (comm. claims) | 19 | 7 | 2 | Y | P | Admin. (comm. claims) | 2010/2013 | P (2010-2012); G (2013) | 2010/2013 | Util. | P | Util. | P |
| **Kansas City** (Kansas City Quality Improvement Consortium) *www.healthykc.org* | 2010/2014 | 9 | 4 | 3 | Y | P | Admin. (comm. claims) | 11 | 4 | 3 | Y | P | Admin. (comm. claims) | 2009 (pilot only) | I | 2010/2014 | Util. | P | Util. | P |
| **Maine** (Maine Health Management Coalition) *www.getbettermaine.org* | 2002/2015 | Y[a] | Y[a] | 3 | Y | P | MR | Y[a] | Y[a] | 5 | Y | P | MR | 2010 (pilot); 2014 (recurring effort)/2015 | P | 2015 | X | X | TCOC | P |
| **Memphis** (Common Table Health Alliance) *www.healthcarequalitymatters.org* | 2010/2014 | 7 | X | 1 | Y | P | Admin. (comm. claims) | 9 | 4 | 2 | Y | P | Admin. (comm. claims) | 2009 (pilot only) | I | 2012/2014 | Util. | P | Util. | P |
| **Minnesota** (Minnesota Community Measurement) *www.mnhealthscores.org* | 2004/2015 | 15 | 12 | 5 | Y | P & G | MR and admin. (comm. claims) | 21 | 4 | 5 | Y | P & G | MR and admin. (comm. claims) | 2009/2015 | P | 2009/2015 | Util. & avg. proc. costs | G | Util., avg. proc. costs, and TCOC | G |

*(continued)*

■ **eAppendix B (Table 1).** Status of AF4Q Alliances' Ambulatory Public Reporting Efforts as of May 2012 and May 2015 *(continued)*

| AF4Q Community (Public report sponsor–AF4Q alliance or AF4Q alliance partner) *Public reporting website as of 2015* | First/ Most Recent Report Year | Ambulatory Quality | | | | | | | | | | | | Ambulatory Patient Experience: 2012 & 2015 | | Ambulatory Cost/Efficiency/ Overutilization | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2012 | | | | | | 2015 | | | | | | First/Most Recent Report Year | Reporting Level | First/ Most Recent Report Year | 2012 | | 2015 | |
| | | # Process Measures | # Outcome Measures | # Chronic Conditions | Prevention Measures | Reporting Level | Data Source | # Process Measures | # Outcome Measures | # Chronic Conditions | Prevention Measures | Reporting Level | Data Source | | | | Measure Type | Level | Measure Type | Level |
| **New Mexico** (New Mexico Coalition for Healthcare Value) *www.nmhealthcarequality.org* | 2010/ 2015 | 8 | 5 | 4 | Y | G | Admin. (comm. claims & Medicaid) | 10 | 5 | 4 | Y | P & G | Admin. (comm. claims & Medicaid) | X | X | X | X | X | X | X |
| **Oregon** (Oregon Health Care Quality Corporation) *www.q-corp.org/compare-your-care* | 2010/ 2014 | 9 | X | 3 | Y | P & G | Admin. (comm. claims & Medicaid) | 9 | X | 3 | Y | P | Admin. (comm. claims, Medicare, and Medicaid) | 2013 (pilot only) | P | 2013/ 2014 | X | X | Util. | P |
| **South Central Pennsylvania** (Aligning Forces for Quality - South Central Pennsylvania) *www.aligning4healthpa.org/* | 2009/ 2013 | 6 | 7 | 2 | X | P | MR | 6 | 7 | 2 | X | P | MR | 2013 (pilot only) | P | X | X | X | X | X |
| **Washington** (Washington Health Alliance) *www.wacommunitycheckup.org* | 2008/ 2015 | 12 | X | 4 | Y | P & G | Admin. (comm. claims & Medicaid) | 17 | X | 5 | Y | P & G | Admin. (comm. claims & Medicaid) | 2012/2014 | P & G | 2008/ 2015 | Util. | P & G | Util. | P & G |
| **West Michigan** (Alliance for Health) *Not reporting in 2015 (alliance ceased operations in 2015)* | 2010/ 2012 | X | 3 | 1 | X | PO | MR | X | X | X | X | X | X | X | X | X | X | X | X | X |
| **Western New York** ($P^2$ Collaborative of Western New York) *Not reporting in 2015* | 2011/ 2012 | 4 | X | 1 | X | I | Admin. (comm. claims) | X | X | X | X | X | X | X | X | X | X | X | X | X |
| **Wisconsin** (Wisconsin Collaborative for Healthcare Quality) *www.wchq.org* | 2004/ 2015 | 19 | 13 | 5 | Y | G | MR | 18 | 12 | 4 | Y | P & G | MR | 2010 (pilot); 2013 (recurring effort)/ 2014 | P & G | X | X | X | X | X |

Admin indicates administrative; AF4Q, Aligning Forces for Quality; avg. proc. costs, average procedure costs; comm. claims, commercial claims; G, group; I, individual physician; MR, medical record; P, practice; PO, physician organization; TCOC, total cost of care; Util., utilization; X, not reporting; Y, yes.

[a]The Maine Health Management Coalition does not report the results of individual ambulatory quality measures, but rather benchmarks achieved for Bridges to Excellence and National Committee for Quality Assurance recognition programs, as well as its own locally developed measurement programs. The guidelines for these recognition programs and the locally developed efforts include component outcome and/or process measures.

■ **eAppendix B (Table 2).** Status of AF4Q Alliances' Inpatient Public Reporting Efforts as of May 2012 and May 2015

| AF4Q Community (Public report sponsor–AF4Q alliance or AF4Q alliance partner) *Public reporting website as of 2015* | Inpatient Quality | | | | | | | Inpatient Patient Experience: 2012 & 2015 | | Inpatient Cost/Efficiency/Overutilization | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2012 | | | 2015 | | | | | | 2012 | 2015 |
| | First/Most Recent Report Year | # Process Measures | # Outcome Measures | Data Source | # Process Measures | # Outcome Measures | Data Source | First/Most Recent Report Year | Data Source | First/Most Recent Report Year | Measure Type | Measure Type |
| **Boston** (Massachusetts Health Quality Partners) *www.healthcarecompassma.org* | X | X | X | X | X | X | X | X | X | X | X | X |
| **Cincinnati** (The Health Collaborative) *www.yourhealthmatters.org* | 2013/2015 | X | X | X | 21 | X | CMS; The Commonwealth Fund | 2013/2015 | H-CAHPS | 2013/2015 | X | Readmissions |
| **Cleveland** (Better Health Partnership) *www.betterhealthpartnership.org* | 2010/2015 | 4 | X | CMS | X | X | X | 2010/2015 | H-CAHPS | 2010/2015 | Readmissions | X |
| **Detroit** (Greater Detroit Area Health Council) *www.mycarecompare.org* | 2004/2015 | 36 | 3 | CMS | 50 | 14 | CMS | 2009/2015 | H-CAHPS | 2009/2015 | Readmissions & Med. proc. costs | Readmissions & Med. proc. costs |
| **Humboldt County** (Humboldt Independent Practice Association) *www.humboldtipa.com/af4qh/* | 2010/2014 | 33 | 3 | CMS | X | X | X | 2010/2014 | H-CAHPS | 2010/2014 | Readmissions & Med. proc. costs | X |
| **Kansas City** (Kansas City Quality Improvement Consortium) *www.healthykc.org* | 2010/2014 | 33 | 3 | CMS | X | X | X | 2010/2014 | H-CAHPS | 2010/2014 | Readmissions & Med. proc. costs | X |
| **Maine** (Maine Health Management Coalition) *www.getbettermaine.org* | 2003/2015 | Y[a] | Y[a] | CMS; Leapfrog; Maine Health Management Coalition | Y[a] | Y[a] | CMS; Leapfrog; Maine Health Management Coalition | 2010/2015 | H-CAHPS | 2014/2015 | X | Early elective deliveries[a] |
| **Memphis** (Common Table Health Alliance) *www.healthcarequalitymatters.org* | 2010/2014 | 33 | 3 | CMS | 28 | 3 | CMS | 2010/2014 | H-CAHPS | 2010/2014 | Readmissions & Med. proc. costs | Readmissions & Med. proc. costs |
| **Minnesota** (Minnesota Community Measurement) *www.mnhealthscores.org* | 2010/2015 | 27 | 9 | CMS; Minnesota Hospital Association | 27 | 9 | CMS; Minnesota Hospital Association (AHRQ measures) | 2010/2015 | H-CAHPS | X | X | X |
| **New Mexico** (New Mexico Coalition for Healthcare Value) *www.nmhealthcarequality.org* | 2010/2015 | 25 | X | CMS | 13 | X | CMS | 2010/2015 | H-CAHPS | 2010/2015 | Readmissions | Readmissions |

*(continued)*

■ **eAppendix B (Table 2).** Status of AF4Q Alliances' Inpatient Public Reporting Efforts as of May 2012 and May 2015 *(continued)*

| AF4Q Community (Public report sponsor–AF4Q alliance or AF4Q alliance partner) *Public reporting website as of 2015* | Inpatient Quality | | | | | | | Inpatient Patient Experience: 2012 & 2015 | | Inpatient Cost/Efficiency/Overutilization | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2012 | | | 2015 | | | | | | 2012 | 2015 |
| | First/Most Recent Report Year | # Process Measures | # Outcome Measures | Data Source | # Process Measures | # Outcome Measures | Data Source | First/Most Recent Report Year | Data Source | First/Most Recent Report Year | Measure Type | Measure Type |
| **Oregon** (Oregon Health Care Quality Corporation) *www.q-corp.org/compare-your-care* | 2009/2014 | 30 | X | CMS | X | X | X | 2009/2014 | H-CAHPS | X | X | X |
| **South Central Pennsylvania** (Aligning Forces for Quality - South Central Pennsylvania) *www.aligning4healthpa.org/* | 2010/2015 | 28 | 21 | CMS; Pennsylvania Health Care Quality Alliance; Pennsylvania Health Care Cost Containment Council; Pennsylvania Department of Health | 28 | 21 | CMS; Pennsylvania Health Care Quality Alliance; Pennsylvania Health Care Cost Containment Council; Pennsylvania Department of Health | 2010/2015 | H-CAHPS | 2010/2015 | Readmissions & avg. charges | Readmissions & avg. charges |
| **Washington** (Washington Health Alliance) *www.wacommunitycheckup.org* | 2009/2015 | 28 | 8 | CMS; Leapfrog | 5 | 11 | CMS; Foundation for Health Care Quality's Clinical Outcomes Assessment Program; Washington State Hospital Association | 2009/2015 | H-CAHPS | 2011/2015 | Readmissions | Readmissions & early elective deliveries |
| **West Michigan** (Alliance for Health) *Not reporting in 2015 (alliance ceased operations in 2015)* | 2010/2012 | 28 | 3 | CMS | X | X | X | 2010/2012 | H-CAHPS | 2010/2012 | Readmissions | X |
| **Western New York** ($P^2$ Collaborative of Western New York) *Not reporting in 2015* | 2010/2012 | 25 | 3 | CMS | X | X | X | 2010/2012 | H-CAHPS | 2010/2012 | Readmissions | X |
| **Wisconsin** (Wisconsin Collaborative for Healthcare Quality) *www.wchq.org* | 2004/2015 | X | 5 | Society of Thoracic Surgeons; Wisconsin Hospital Association | X | 5 | Society of Thoracic Surgeons; National Cardiovascular Disease Registry | X | X | 2005/2013 | Charges; charge/quality comparisons; charge/LOS comparisons | X |

AF4Q, Aligning Forces for Quality; ARHQ, Agency for Healthcare Research and Quality; avg., average; CMS, Centers for Medicare & Medicaid Services' Hospital Compare; H-CAHPS, Hospital Consumer Assessment of Healthcare Providers and Systems; LOS, length of stay; Med. proc. costs, Medicare procedure costs; X, not reporting; Y, yes.

[a]The Maine Health Management Coalition does not report the results of individual hospital quality measures, but rather benchmarks achieved based on national programs such as Leapfrog and the Centers for Medicare & Medicaid Services' Hospital Compare or locally developed measurement programs.

# From Rhetoric to Reality: Consumer Engagement in 16 Multi-Stakeholder Alliances

Jessica Greene, PhD; Diane C. Farley, BA; Jon B. Christianson, PhD; Dennis P. Scanlon, PhD; and Yunfeng Shi, PhD

## eAppendix

To assess whether the Aligning Forces for Quality (AF4Q) program had an impact on self-management at the population level, we assessed whether there were changes in patient activation or an individual's knowledge, skills, and confidence to manage their health and healthcare. We used the Patient Activation Measure (PAM), which is a widely used measure of activation.[1] In a prior paper, we used similar methods to examine whether there were population-level effects on consumer awareness and use of comparative quality reports for healthcare providers (Greene J, et al; unpublished manuscript).

ajmc.com © Managed Care & Healthcare Communications, LLC

The data source we used was the AF4Q Consumer Survey of people with chronic conditions, which was conducted in 2007-2008 and 4 years later (2011-2012). Each AF4Q community was sampled, along with a comparison group from the rest of the country. For the 2 alliances that joined the AF4Q program late, Boston and New Mexico, round 1 was conducted in 2010 and round 2 in 2013-2014. The survey sample sizes were: round 1, n = 9385; round 2, n = 10,775; and the panel, n = 5355. More details on the survey, including response rates, have been published elsewhere.[2]

We examined the round 1 and round 2 mean PAM scores, as well as the change in PAM scores, for each alliance, all the AF4Q communities combined, and the national comparison sample. We then conducted 2 sets of regression analyses to examine whether there was greater improvement in PAM scores in any AF4Q community or in all AF4Q communities combined, relative to the comparison sample drawn from the rest of the country. We used difference-in-differences analyses with all respondents in both waves, controlling for demographic (age, sex, race/ethnicity, educational attainment, and poverty level) and health factors (insurance coverage, usual source of care, and type of chronic condition). Using the smaller panel, we conducted fixed effects analyses that controlled for time-invariant characteristics and the characteristics above that could change (eg, insurance, poverty level, usual source of care, and type of chronic condition). Results from these models are presented below.

## References

1. Hibbard JH, Greene J. What the evidence shows about patient activation: better health outcomes and care experiences; fewer data on costs. *Health Aff (Millwood).* 2013;32(2):207-214. doi:10.1377/hlthaff.2012.1061.

2. Scanlon DP, Alexander JA, Beich J, et al. Evaluating a community-based program to improve healthcare quality: research design for the Aligning Forces for Quality initiative. *Am J Manag Care.* 2012;18(suppl 6):S165-S176.

**eAppendix Table 1.** Changes in Patient Activation Measures, Fixed Effects, Multivariate Regression Results

| | | Patient Activation Measure | | |
|---|---|---|---|---|
| | Sample Size | Round 1 (Mean) | Round 2 (Mean) | Difference |
| National comparison sample | 503 | 64.3 | 67.5 | 3.2 |
| AF4Q alliances combined | 4852 | 64.8 | 67.5 | 2.6 |
| Boston | 252 | 67.1[a] | 68.5 | 1.4 |
| Cincinnati | 360 | 63.3 | 68.1 | 4.8 |
| Cleveland | 360 | 63.3 | 66.9 | 3.6 |
| Detroit | 334 | 64.6 | 67.8 | 3.3 |
| Humboldt County, California | 204 | 63.2 | 67.6 | 4.4 |
| Kansas City | 367 | 64.3 | 67.1 | 2.8 |
| Maine | 266 | 67.5[a] | 70.1[a] | 2.6 |
| Memphis | 300 | 65.7 | 69.1 | 3.4 |
| Minnesota | 435 | 64.4 | 65.9 | 1.6 |
| New Mexico | 238 | 66.7[a] | 68.7 | 2.0 |
| South Central Pennsylvania | 233 | 63.1 | 67.4 | 4.4 |
| Washington | 328 | 64.7 | 68.1 | 3.5 |
| West Michigan | 219 | 64.9 | 67.6 | 2.7 |
| Western New York | 341 | 66.2 | 65.5 | -0.7[b,c] |
| Oregon | 379 | 64.4 | 66.4 | 2.0 |
| Wisconsin | 236 | 65.6 | 66.8 | 1.2 |

AF4Q indicates Aligning Forces for Quality.
[a] $P < .05$ for the difference between the AF4Q community percentage and the national comparison sample percentage in the given round.
[b] $P < .05$ for the change in the AF4Q community compared with the change in the national comparison sample, without control variables.
[c] $P < .05$ in the multivariate regression analysis for the change in AF4Q community compared with the national comparison sample, with individual fixed effects controlling for changes in insurance, poverty status, usual source of care location, and chronic conditions.

**eAppendix Table 2.** Changes in Patient Activation Measures, Difference-in-Differences

**Multivariate Regression Results**

| | Sample Size (Round 1) | Round 1 (Mean) | Sample Size (Round 2) | Round 2 (Mean) | Difference |
|---|---|---|---|---|---|
| National comparison sample | 803 | 63.7 | 966 | 67.5 | 3.8 |
| AF4Q alliances combined | 7601 | 64.5 | 9021 | 67.3 | 2.8[a] |
| New Mexico | 566 | 66.3 | 555 | 69.7 | 3.4 |
| Boston | 529 | 66.2 | 567 | 67.6 | 1.4 |
| Cincinnati | 508 | 63.6 | 644 | 67.3 | 3.7 |
| Cleveland | 524 | 63.1 | 649 | 66.7 | 3.6 |
| Detroit | 535 | 64.2 | 576 | 67.6 | 3.4 |
| Humboldt County, California | 306 | 62.4 | 401 | 66.7 | 4.3[a] |
| Kansas | 547 | 64.3 | 631 | 67.4 | 3.1 |
| Maine | 360 | 67.2 | 472 | 69.1 | 1.9 |
| Memphis | 532 | 65.0 | 601 | 68.2 | 3.2 |
| Minnesota | 175 | 63.9 | 225 | 65.6 | 1.6[a] |
| South Central Pennsylvania | 326 | 62.9 | 461 | 66.4 | 3.6 |
| Washington | 540 | 64.4 | 639 | 67.2 | 2.9 |
| West Michigan | 312 | 63.4 | 409 | 67.1 | 3.8 |
| Western New York | 526 | 65.5 | 602 | 66.2 | 0.7[a] |
| Oregon | 536 | 63.4 | 664 | 66.8 | 3.4 |
| Wisconsin | 323 | 64.6 | 389 | 66.7 | 2.1 |

AF4Q indicates Aligning Forces for Quality.
[a] $P < .05$ in the multivariate regression analysis for the change in AF4Q community compared with the national comparison sample, controlling for demographics (age, sex, race/ethnicity, poverty status, and education) and health characteristics (chronic conditions, insurance coverage, and usual source of care).

**eAppendix Table 3.** Consumer Friendliness of Public Reporting for Diabetes Quality in 2015

| Alliance[a] | Reading Grade Level | Technical Language | Evaluable or Not | Number of Consumer-Friendly Attributes[b] |
|---|---|---|---|---|
| Maine | 8.7 | Plain English | Word icons | 3 |
| Oregon | 8.0 | Plain English | Word icons | 3 |
| Boston | 6.2 | Technical | Circles (empty, half-full, and full) | 2 |
| Humboldt County | 5.3 | Plain English | Bar chart/percentage | 2 |
| Kansas City | 6.0 | Plain English | Bar chart/percentage | 2 |
| Minnesota | 11.7 | Plain English | Word icons (intuitive and words) and percentages | 2 |
| Washington | 6.8 | Mixed | Word and icons | 2 |
| Cincinnati | 7.4 | Mixed | Bar chart/percentage | 1 |
| Cleveland | 8.1 | Mixed | Bar chart/percentage | 1 |
| Detroit | 9.7 | Plain English | Bar chart/percentage | 1 |
| Memphis | 9.9 | Technical | One star (colored to indicate best, good, and fair) | 1 |
| South Central Pennsylvania | 8.5 | Mixed | Bar chart/percentage | 1 |
| Wisconsin (consumer-oriented reporting site) | 7.5 | Mixed | Bar chart/percentage | 1 |
| New Mexico | 9.4 | Mixed | Bar chart/percentage | 0 |

[a]West Michigan and Western New York were no longer publicly reporting in 2015, so they are not included in this table.
[b]Consumer-friendly attributes included reading level less than ninth grade, plain English language, and use of evaluable icons (eg, stars or word icons rather than percentages).