

Hospital Language Services: Quality Improvement and Performance Measures

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Abstract

For a growing segment of the U.S. population, language barriers affect patients' ability to communicate effectively with health care providers. "Speaking Together" is the first national quality improvement (QI) collaborative focusing on improving operations of hospital-based language services. We employed a multistage process to develop quality performance measures for Speaking Together participants to use throughout the collaborative. The measures, which are grounded in the Institute of Medicine's six domains of quality, underwent multiple levels of review prior to pilot testing. Early experiences with the measures highlight challenges with collecting information on patient care that has not previously been collected and the importance of engaging staff, including registration staff and senior management. Speaking Together hospitals have shown that QI efforts to measure and advance the delivery of high-quality language services represent challenging but important tasks for improving delivery of care for patients with limited English proficiency.

Introduction

In the United States, 21 million individuals speak English "less than very well" and are thus said to be limited English-proficient (LEP).¹ For this growing segment of the population, poor health status and diminished access to health care are frequent challenges. As members of a racial, ethnic, or linguistic minority, people with LEP experience disproportionately high rates of infectious disease and infant mortality and are more likely to report risk factors for serious and often chronic diseases, such as diabetes and heart disease.² Furthermore, individuals with LEP are less likely to have a regular source of primary care³ and to receive fewer preventive health services, such as mammograms.⁴

Language barriers can also adversely affect the delivery of care. For LEP populations, followup compliance,⁵ adherence to medication, and patient satisfaction are significantly lower than they are for English-speaking patients.^{6, 7} On the other hand, LEP patients who are provided with an interpreter make more outpatient visits, fill more prescriptions, and have higher satisfaction with care.^{8, 9} Thus, the ability to communicate with a health care provider can mean the difference between receiving higher or lower quality care.

Physicians who are unable to communicate effectively with their patients often compensate by engaging in costly practices, such as using more diagnostic resources or invasive procedures and overprescribing medications.^{10, 11} According to one study, language barriers are associated with

an increased risk for serious medical events during pediatric hospitalizations.¹² For patients with LEP, adverse events occurring during hospitalization have also been shown to be more severe and more likely to be related to communication problems compared with English-speaking patients.¹³ Consequently, individuals with LEP have poorer health outcomes, are at greater risk for medical errors, and place a higher financial burden on the system than patients who can communicate fully with their health care providers.

Medical interpreters can bridge the communication gap between provider and patient.¹⁴ In the context of patient safety, studies have shown that this bridge is critical, particularly in hospital settings. For this reason, many hospitals have built an in-house capacity to provide language services to LEP patients using medical interpreters and other communication modalities. However, as language services programs grow, hospitals are increasingly challenged to determine whether their programs are providing high-quality language services to their patients.

The purpose of this article is to describe the development of a set of quality measures to assess the quality of spoken language services in U.S. hospitals. We also address challenges encountered by hospitals in implementing the measures and identify steps hospitals can take to improve language services operations.

The “Speaking Together” Learning Collaborative

Speaking Together is a national program funded by the Robert Wood Johnson Foundation that integrates quality improvement (QI) with hospital-based language services. The program uses a collaborative “learning network” model to foster shared learning and innovation among 10 hospitals that were selected through an open, competitive solicitation to participate in the program. Working in interdisciplinary teams, health professionals from across the United States learn what is working in other language services programs and draw on the expertise of the collaborative to address their own hospitals’ language services challenges. Program successes are shared across participants, giving hospitals with linguistically diverse patient populations concrete and tested examples of effective language services programs and interventions that they can adopt in their own busy hospital environments.

Speaking Together identifies effective ways to reduce ethnic and racial disparities in the quality of patient care by providing tools that health systems can use to improve the overall quality of care delivery. The project focuses on three areas: (1) improving the quality and accessibility of language services for patients with LEP, (2) using quality performance measures to monitor improvements in the delivery of language services to patients, and (3) identifying the link between improvements in chronic disease management for a set of target conditions (i.e., cardiovascular disease, depression, diabetes mellitus) and improvements in language services delivery.

As Table 1 illustrates, the 10 hospitals in the collaborative are diverse in terms of their location. They also vary in size and the scope of their language services programs, with the size of their employed language services workforce varying from 7.9 to 63.1 fulltime equivalents (FTEs). All have more than 10,000 admissions per year, with volumes of interpreter encounters varying from

Table 1. Summary of hospitals participating in the Speaking Together collaborative

	Bellevue Hospital Center	Cambridge Health Alliance	Hennepin County Medical Center	Phoenix Children's Hospital	Regions Hospital	U. Rochester (Strong Memorial Hospital)	Children's Hospital and Medical Center	U. California Davis Medical Center	U. Mass Memorial Medical Center	U. Michigan
Location	New York, NY	Cambridge, MA	Minneapolis, MN	Phoenix, AZ	St. Paul, MN	Rochester, NY	Seattle, WA	Sacramento, CA	Worcester, MA	Ann Arbor, MI
Number of beds ^a	771	350	434	285	399	973	250	526	731	802
Total admissions ^a	26,068	15,263	22,117	11,712	22,827	36,321	11,608	27,946	44,231	42,811
Annual interpreter encounters ^b	58,962	140,556	120,000	48,043	28,887	14,885	40,690	65,000	59,134	21,503
Total FTE for language services ^b	34.0	63.1	53.0	13.9	12.1	10.4	7.9	22.8	28.5	16.0
Interpretation encounters in top 5 languages ^b	60% Span 6% Mand 6% Cant 3% Polish 2% French	55% Braz Port 24% Span 7% Hait cre 2% Eur Port 2% Hindi	60% Span 12% Somali 4% Russ 3% Hmong 1% Laotian	>99% Span	50% Span 12% Hmong 10% Somali 9% Viet 4% ASL	46% Span 35% ASL 3% Viet 2% Russ 2% Arabic	55% Span 7% Viet 4% Somali 4% Russ 2% Cant	58% Span 20% Russ 8% Mien 5% Hmong 5% Cant/Mand	62% Span 13% Port 7% Viet 5% Albanian 3% ASL	22% Span 18% Chin 14% Jap 12% Arab 10% Russ

a **Source:** AHA Annual Survey Database, FY 2005. See: AHA Trendwatch Reports and Chartbooks. Washington, DC: American Hospital Association; 2005. Available at http://www.aha.org/aha_app/trendwatch/archive.jsp. Accessed May 8, 2008.

b **Source:** *Speaking Together*, 2006.

FTE = fulltime equivalents

Arab = Arabic; ASL = American Sign Language; Braz = Brazilian; Cant = Cantonese; Chin = Chinese; Eur = European; Hait Cre = Haitian Creole; Jap = Japanese; Mand = Mandarin; Port = Portuguese; Russ = Russian; Span = Spanish; Viet = Vietnamese

14,000 to more than 40,000. In all but one hospital, Spanish is the most common language spoken by LEP patients. Many have substantial numbers of patients who speak Mandarin, Cantonese, Portuguese, Haitian Creole, Somali, Hmong, Arabic, and Russian. Most also have many patients who communicate using American Sign Language (ASL), which Speaking Together includes among the other languages requiring effective QI interventions.

Language Services Measures

Speaking Together is the first national QI collaborative focusing on improving operations of hospital-based language services. Speaking Together grantees apply techniques and tools similar to those used in other QI collaboratives, including rapid cycle change, uniform and routine data collection, transparent reporting mechanisms, and learning sessions for sharing strategies. These types of QI activities have proven to be extremely useful in other similarly structured learning collaboratives.

Because the field of language services does not currently have commonly used language performance measures, hospitals customarily report fluctuations in the number of interpreter services encounters as a proxy for evaluating their programs and operations. However, in our examination of the published literature and extensive interviews with field experts, we have found no evidence linking quality of language services to total volume of services provided.

The Speaking Together staff developed a set of performance measures for language services for grantees to use throughout the learning collaborative, with the goal that these performance measures would provide relevant and consistent information about aspects of quality associated with the delivery of language services. The measures address only one important component of communication in the health care setting—i.e., verbal communication. We recognize that other important aspects of communication within the health care arena will require additional performance measures. Nevertheless, Speaking Together provides an opportunity to test the utility and adequacy of this set of performance measures and to determine whether they can be sustained over a long period.

Development of the Measures

We employed a multistage process to develop these measures. First, we used the Institute of Medicine's (IOM's) six dimensions of quality (i.e., safety, timeliness, effectiveness, efficiency, equity, and patient-centeredness) as articulated in *Crossing the Quality Chasm*¹⁵ as a framework for developing language service performance measures. As Table 2 illustrates, we applied these quality dimensions to language services to create guidelines for the measures' development process.

With the IOM framework guiding our work, we conducted an extensive literature search to develop an evidence base that would support measures in language services and identify key quality concerns related to the delivery of language services in hospitals and other health care settings. The literature review formed the basis for developing draft measures and identifying important questions for discussions with experts.

We discussed the findings from the literature review and our own questions developed through field work with approximately 36 researchers, directors of established hospital-based interpreter services departments, and other experts in language services to help identify issues related to quality of language services and potentially valuable performance measures. These discussions, the literature review, and our own observations of language services programs identified similar quality issues and created the empirical basis upon which performance measures could be framed.

Table 2. Applying IOM’s six domains of quality to language services

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- **Safety:** Avoiding injuries to patients from the language assistance that is intended to help them
 - **Timeliness:** Reducing waits and sometimes harmful delays for those who receive and those who provide language services
 - **Effectiveness:** Providing language services based on scientific knowledge that contributes to all who could benefit, and refraining from providing services to those not likely to benefit
 - **Efficiency:** Avoiding waste, including waste of scarce language services resources; the time of patients and clinicians, hospital staff, and interpreter services personnel; and equipment, supplies, ideas, and energy
 - **Equity:** Providing language assistance that does not vary in quality because of personal characteristics, such as language preference, sex, ethnicity, geographic location, and socioeconomic status
 - **Patient-centeredness:** Providing language assistance that is respectful of and responsive to individual patient preferences, needs, culture, and values; and ensuring that patient values guide all clinical decisions
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Source: Institute of Medicine, *Crossing the Quality Chasm*. Washington, DC: National Academies Press; 2001.

Identifying a Framework for Organizational Change

After determining that the IOM domains of quality would be an appropriate conceptual framework to identify and define the principles of high-quality language services, we looked to the literature on performance measures to find guidance on how to apply the measures of quality to an organization. We used Nerenz and Neil’s paper, “Performance Measures for Health Care Systems,”¹⁶ to help us develop an organizational framework for hospital language services that could be used to encompass the quality measures. Nerenz and Neil ask three key questions that we considered essential for the language services measures development process:

- What is the entity being measured?
- Who is using the information?
- What core organizational processes or skills are the measures designed to reflect?

The first two questions are easily answered by the goals of Speaking Together. The program seeks to measure the quality of language services in an effort to improve those services and the care received by patients who need them. Thus, language services are the “what” that is being measured; and hospital language services departments, QI committees, and clinical staff are all part of the “who” that is using the information.

The Nerenz and Neil article¹⁶ was particularly useful in helping us determine what core organizational processes or skills should be included in the quality measures. Specifically, we used their “domains of performance measurement” to identify the key elements involved in the delivery of language services and to examine how they should be integrated into the quality measures.

We identified the following specific organizational elements related to language services:

- Organizational structure of language service departments.
- Processes involved in the delivery of language services.
- Operational efficiencies of language services.
- Outcomes associated with quality language services.

Once these elements were identified, we used them to help us pinpoint and define the variables that would be included in the actual measurement of quality language services, as identified using the IOM domains of quality.¹⁵

Drafting Performance Measures for Quality in Language Services

Using the quality and organizational frameworks described previously and information from the literature and interviews, Speaking Together staff developed 10 measures for external review. These measures focused primarily on the operations of language services in hospitals, the delivery of verbal and signed interpreter services, and verbal communication with bilingual hospital staff and clinicians.

We developed a glossary of terminology used to describe the performance measures. Many of the definitions were based on those developed by the California Healthcare Interpreter Association,¹⁷ the National Council on Interpreting in Health Care,¹⁸ and The California Endowment.¹⁹ We defined interpreters and bilingual providers as “qualified” to communicate with patients if they were:

- Bilingual staff or providers who have been assessed for proficiency in the language(s) for which they provide care.
- Medical interpreters who have been trained in medical interpreting methods and protocols and assessed for language proficiency.

We did not include specific standards or guidance on the types of assessments used to determine whether bilingual providers or interpreters were qualified, but instead, we left it to health care organizations to determine whether they met their own organizational standards or requirements.

Once we had a set of draft measures, we assembled two groups of experts to review the language services performance measures. The first group comprised individuals who were most likely to ultimately use performance measures in language services. Each of the eight participants in the group was either the director of a large ambulatory care service in a linguistically diverse hospital or the director of a large, established, and complex interpreter services department at a different hospital. Our goal was to capture opinions about the day-to-day challenges of the demand and supply sides of language services in busy hospital environments and to determine

whether the draft language services performance measures would be appropriate for their hospitals. The panel convened to review the measures according to uniform evaluation criteria and to discuss the feasibility of implementing the measures in the context of busy acute care hospitals and outpatient settings.

The second group of reviewers consisted primarily of experts who had contributed to the research in the field of language services. These researchers were well versed in the key issues, methodologic concerns, and challenges facing language services programs. Both groups of reviewers were asked to evaluate the draft measures using four evaluation criteria:

1. **Importance power.** Does the measure address a significant and important quality issue pertaining to delivery of language services?
2. **Proxy power.** Does the measure address the specified domain of quality? Is the measure an approximation of the description in the value of the measure?
3. **Communication power.** Is the measure clearly worded and easily understood by users collecting the data?
4. **Data collection power.** Is the data collection required for the measure obtainable in a format that minimizes bias? Is the data collection required feasible? Are the data reproducible? Are the data reliable?

Based on reviewer discussions and suggestions, five performance measures were selected for field-testing, as shown in Table 3.

Future Measures Development

We were unable to identify a performance measure for “patient-centeredness,” because the scope, design, and timeframe of Speaking Together did not enable us to gather feedback directly from patients in any systematic way. Patient-centeredness is a critical domain of quality. For this reason, the Robert Wood Johnson Foundation has since funded focus groups of patients with LEP across all the Speaking Together hospitals. Thirty focus groups—held in Spanish, Portuguese, Somali, Russian, Vietnamese, ASL, Haitian Creole, and Chinese—were conducted in fall 2007 and provided extremely important information to the hospitals as they developed strategies to improve their language services programs.

Piloting the Measures

The five Speaking Together performance measures were piloted at two hospitals with active and well-regarded language services programs: Boston Medical Center (BMC) and The Children’s Hospital of Philadelphia (CHOP). The two pilot sites received a toolkit designed to assist clinical department managers, language services department managers, interpreters, and others in collecting the required information to calculate the measures. The toolkit included data and information submission templates that served as the paper version of a Web-based data reporting program that participants in the collaborative were to use to submit data and information to the Speaking Together program office throughout the duration of the collaborative. Also included were data-tracking tools, measure specifications, details about variables and metrics required for each measure (e.g., inclusion and exclusion criteria), and information to link how the measure would be useful for patient care and/or language services operations.

Feedback from the pilot sites allowed us to assess the feasibility of collecting the data for the measures and to refine the tools and documents that grantee hospitals would utilize during the collaborative. No substantive changes were made to the performance measures because of the pilot tests at the two hospitals.

Early Experience with the Measures

We introduced the measures to the Speaking Together hospitals at the first learning network meeting in November 2006 and

expected that they would face certain challenges in being able to gather data to report on their performance on a monthly basis. In anticipating some of these challenges, we designed the project as a 16-month collaborative. This would provide a full year for participation in QI activities following a 3- to 4-month period for hospitals to become accustomed to the reporting requirements and to make necessary adjustments to their information systems and data collection practices.

A focus on patients rather than interpreters. As we anticipated, the hospitals encountered a number of challenges during implementation of the language services measures. For example, the measure ST2 requires hospitals to document whether patients who prefer to receive care in a language other than English actually receive language services during two critical points in the health care encounter, i.e., initial assessment and discharge. This is a complicated measure, but we consider it essential to safe, effective, and equitable care. Patients with LEP must be able to communicate fully with their physicians and nurses when complex interactions take place.

We identified two instances in a patients’ interactions with their providers—initial assessment and discharge—when adequate communication was essential, and we required hospitals to document that, in those two instances, the LEP patient had either received care directly from a bilingual provider whose language fluency had been assessed or indirectly via the help of an interpreter whose fluency had been assessed and who had been trained in medical interpreting.

Speaking Together takes no position on whether communications take place via bilingual staff, in-person interpreters, telephonic or video interpreting, or through other modalities. Regardless of the vehicle, interpreters must be assessed and trained, and bilingual providers must be assessed to be deemed qualified for the encounter and to “get credit” for meeting the measure.

Table 3. Proposed Speaking Together performance measures

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- **ST1: Screening for preferred language.** The percent of patients who have been screened for their preferred spoken language
 - **ST2: Patients receiving language services from qualified language service providers.** The percent of LEP patients receiving initial assessment and discharge instructions from assessed and trained interpreters or from bilingual providers assessed for language proficiency
 - **ST3: Patient wait time.** The percent of encounters where the patient wait time for an interpreter is 15 minutes or less
 - **ST4: Time spent interpreting.** The percent of time interpreters spend providing medical interpretation in clinical encounters with patients
 - **ST5: Interpreter delay time.** The percent of encounters during which interpreters wait less than 10 minutes to provide interpreter services to provider and patient
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Source: Speaking Together, 2006.

LEP = Limited English proficiency

For initial assessment and discharge, Speaking Together considers the use of family or friends, untrained interpreters, or unassessed providers to be identical to the patient receiving no language services whatsoever.

The ST2 measure required hospitals to collect information on patient care that had previously never been collected, and it often required cooperation and collaboration from clinical staff in inpatient and outpatient settings. Hospitals regularly collect training and assessment information for interpreter staff, but they had not previously collected this information for bilingual providers. To our knowledge, no hospitals in the country systematically documented whether LEP patients received adequate language services during specific encounters or interactions. Thus, this measure required hospitals to change data collection practices to focus less on numbers of language services encounters provided and more on whether each LEP patient received services at certain points during the inpatient stay or outpatient encounter. Such a shift in focus, though completely understood and embraced by the hospitals, remains a challenge for the Speaking Together hospitals and is likely to challenge most hospitals that undertake data collection focused on patients rather than interpreters.

Standardizing definitions. One of the benefits of participating in a QI collaborative is the opportunity to benchmark performance against a group of similar organizations. Without national benchmarks related to quality of care in language services, the Speaking Together hospitals were in a position to set benchmarks for the country, assuming the group could agree on certain basic definitions to enable “apples-to-apples” comparisons in performance. However, we soon learned that although identifying a common set of definitions was possible, requiring all hospitals in the collaborative to adopt those common definitions would create problems that could not be addressed within the scope of the project.

For example, hospital teams struggled with the definition of a language services encounter. Within the collaborative, various hospitals considered the term “encounter” to describe a single interaction among an interpreter, a patient, and a provider; multiple interactions among an interpreter, a patient, and the same provider; and a time-defined (e.g., 22 minutes) interaction among an interpreter, a patient, and a provider, with lengthier interactions among the same three parties constituting multiple encounters.

Similarly, in recording timeliness of interpreter services, hospitals used different definitions for the start time of the encounter. Consequently, they would see their performance rise or fall based on the particular definition chosen. Even without standard definitions, the Speaking Together hospitals were relatively close in most of the variables necessary to report on the measures. For the purposes of the collaborative, we suggested a number of common measures but allowed hospitals to use their own definitions if they felt doing so would be more appropriate for internal reasons.

Engaging staff beyond interpreter services. Reporting on the Speaking Together measures required hospitals to engage the interest and cooperation of other services and departments in the organization, a task that was new to many hospitals. For example, the measure ST1 requires all patients—including English-speaking patients—to be asked about preferred language for health care delivery. While many hospitals ask patients about their primary language, it was unusual for hospitals to query all patients about language preference. Yet, we believe that true demand for

language services cannot be identified without full screening of all inpatients and outpatients for preferred language.

Such a change required hospitals to interact, either directly or indirectly, with registration staff to educate them about the importance of asking about preferred language, offer suggestions about how the information could be recorded, and encourage them to routinely collect the information, despite adding another information field to the registration process. Because many of the registration systems did not easily accommodate this information, language services staff also met with information technology staff to discuss opportunities for adding a field in the registration system for preferred language.

None of these changes could have taken place without the support of senior management in the hospitals. True change in the quality of language services requires the ongoing support and participation of multiple departments, clinicians, and managers; and it hinges on executive leadership embracing the notion of change and its practical implications. Speaking Together benefited from an enormously supportive cadre of forward-thinking chief executives who well understood the safety implications of high-quality language services and the need to facilitate linkages between various support services in the hospital and the Speaking Together team.

Conclusion

The quality of communication between patients and providers is a strong determinant of whether patients receive optimal care. By identifying specific strategies that help hospitals build effective language services programs, health care organizations can improve quality and patient safety for millions of people.

Hospitals have shown that they can undertake serious QI efforts to measure and advance the delivery of language services in hospitals. Advances in improving quality do not come without challenges, but the Speaking Together program illustrates how committed health care professionals and organizations can meet those challenges and overcome substantial obstacles to improve quality for their patients.

The Speaking Together hospitals are poised to set benchmarks for hundreds of other hospitals that are struggling with the challenges of providing high-quality language services to their LEP patients. For the first time, hospitals are gathering information to estimate true demand for language services and to determine whether they are effectively meeting that demand. The result will certainly be better and safer care for patients with limited English proficiency.

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