

Demonstration of the Health Literacy Universal Precautions Toolkit

Lessons for Quality Improvement

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Abstract: The Agency for Healthcare Research and Quality Health Literacy Universal Precautions Toolkit was developed to help primary care practices assess and make changes to improve communication with and support for patients. Twelve diverse primary care practices implemented assigned tools over a 6-month period. Qualitative results revealed challenges practices experienced during implementation, including competing demands, bureaucratic hurdles, technological challenges, limited quality improvement experience, and limited leadership support. Practices used the Toolkit flexibly and recognized the efficiencies of implementing tools in tandem and in coordination with other quality improvement initiatives. Practices recommended reducing Toolkit density and making specific refinements. **Key words:** *health literacy, primary care, qualitative, quality improvement, toolkit, universal precautions*

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HEALTH LITERACY became a target for quality improvement (QI) following its identification as a priority for national action over a decade ago (Adams & Corrigan, 2003; Nielsen-Bohlman et al., 2004; U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion, 2010). *Health literacy* is defined as a person's ability to "obtain, process, and understand basic health information and services needed to make appropriate health decisions" (Ratzan & Parker, 2000). Health literacy is also acknowledged to be dependent on the complexity of the health information and health care tasks presented to patients (Baker, 2006). Routine demands of the health care system exceed the capabilities of the 36% of U.S. adults who have limited health literacy (Kutner et al., 2006) as well as adults whose normally adequate health literacy skills are compromised by being anxious or overwhelmed with too much information (Martin et al., 2005). In fact, a national study found that the health literacy demands

are so high that only 12% of adults have proficient skills to permit them to understand basic health information and complete common health care tasks, such as following directions on a medication label (Kutner et al., 2006). This discrepancy between the health literacy skills of patients and the demands they face in the health care system has been recognized as a reason why many Americans may not be fully engaged in their care and may be unable to move from being “passive participants to activated, informed consumers of health and health care” (Parker & Ratzan, 2010).

The Agency for Healthcare Research and Quality (AHRQ) commissioned the Health Literacy Universal Precautions Toolkit (the Toolkit) (DeWalt et al., 2010) to help primary care practices take a systematic approach to reducing the complexity of medical care and ensure that patients can succeed in the health care environment. The Toolkit adopts a universal precautions approach. It asks practices to assume that all patients—regardless of their health literacy levels—may experience difficulty understanding and using health information. Through implementation of the Toolkit, health care organizations make systems-level changes to simplify communication and enhance support of their patients. Adopting a universal precautions approach overcomes the problem that health care providers cannot accurately identify patients with limited health literacy skills (Kelly & Haidet, 2007; Powell & Kripalani, 2005).

DEMONSTRATION OF THE HEALTH LITERACY UNIVERSAL PRECAUTIONS TOOLKIT

The AHRQ contracted with the University of Colorado Denver and the American Academy of Family Physicians (AAFP) to conduct a national demonstration of the Toolkit. The primary objectives were to (1) examine the utility of the Toolkit for primary care practices seeking to improve their health literacy-related systems and processes and (2) identify possible refinements that would enhance the value of the Toolkit as a resource for primary care practices.

In this article, we present insights into practices’ experiences with implementing the Toolkit. We describe the key barriers they faced in using the Toolkit, the utility of the Toolkit, and opportunities for improving the Toolkit. Finally, we discuss the implications for Toolkit use and enhancement and lessons for the QI field.

METHODS

Practice recruitment and selection

Primary care practices were recruited from 2 large practice-based research networks (AAFP National Research Network and State Network of Colorado Ambulatory Practices & Partners) and members of the American College of Physicians for participation in the demonstration. Recruitment of practices was conducted primarily through e-mails to the listservs of these organizations and a newsletter article. Of the practices that expressed interest, 12 primary care practices were selected on the basis of their expressed motivation to address health literacy issues, their previous experience with QI work, and practice features that would contribute to a diverse sample (see Table 1).

Tool assignment and implementation

All participating practices were asked to implement Tool 1: *Form a Team* and Tool 2: *Assess Your Practice*. Tool 1 describes how a practice should form a “health literacy team” to lead Toolkit implementation activities. Tool 2 guides practices in assessing their health literacy environment and identifying areas to target for QI.

Using the results of the self-assessment recommended in Tool 2, practices were asked to identify and rank (in priority order) 4 tools they wanted to implement. Practices selected from a set of 11 tools previously identified as “high priority” by the research team. These 11 tools were those expected to be of greatest interest to practices and those for which quantitative measurement of implementation outcomes was most feasible. The research team then assigned each practice 2 “practice-specific” tools, taking into consideration

Table 1. Characteristics of Demonstration Practices

Practice Type	Practice Specific Tool Implemented	Region	Location	Patients Served	Patient Sociodemographics (%) ^a							Non-English Speaking	Limited Health Literacy
					Medicaid	Black	White	Hispanic	Age ≥ 65 Years	Years	Speaking		
FM/FQHC/Residency	8, 13	West Coast	Suburban	10 000	75	5	10	79	12	50	56		
FM/PCMH/Residency	12, 6	Midwest	Peri-urban	5 000	15	5	92	3	20	5	31		
GIM/Residency	3, 5	Northeast	Suburban	11 400	20	10	70	12	40	15	26		
FM/PCMH	3, 17	Northeast	Rural	13 000	8	2	90	10	30	4	31		
GIM/Residency	11, 17	West Coast	Urban	3 336	30	N/A	N/A	4	23	4	33		
FM/PCMH/Residency	4, 17	Northeast	Urban	7 000	85	85	5	10	15	10	60		
FM	11, 17	Midwest	Suburban	7 219	20	5	75	5	20	20	26		
FM/PCMH	8, 20	Midwest	Rural	4 700	35	1	95	2	30	1	32		
FM	5, 14	Midwest	Rural	1 422	22	2	64	2	7	0	22		
FM	4, 13	Northeast	Suburban	5 500	8-10	30-35	50-55	10	55	20	35		
GIM	14, 17	South	Suburban	1 500-2 000	70	60	35	5	30	10	42		
FM/PCMH	4, 17	South	Suburban	4 093	70	1	97	1	91	<1	58		

Abbreviations: FM, family medicine; FQHC, Federally Qualified Health Center; GIM, general internal medicine; NA, Not available; PCMH, patient-centered medical home.

^aApproximations provided by practices. Limited health literacy was estimated using the Health Literacy Prevalence Calculator provided with the Toolkit.

practices' preferences while also ensuring a distribution of tools across practices in different settings. Every practice was assigned at least one of their top 2 preferred tools and 9 practices were assigned 2 of their 4 preferred tools.

In total, 13 of the 20 tools in the Toolkit were implemented in 1 or more practices as part of the demonstration project (Table 2). Implementation of the practice-specific tools took place over a 6-month period from beginning in August 2013 and ending in January 2014.

Data collection

Conduct of the demonstration project was approved by the institutional review board (IRB) of the AAFP as well as the IRBs of 6 of the 12 participating practices (the remaining 6 practices did not require independent IRB review).

Qualitative data were collected in 2 ways. During the implementation period, check-in calls were conducted on a regular schedule with each practice. Before and after the conclusion of the implementation period, in-person interviews were conducted as part of site visits to each practice. These methods for gathering qualitative data are described later.

Check-in calls

Two members of the research team—referred to as technical assistance providers (TAPs)—conducted check-in calls with health literacy team representatives, usually the team leaders, from each practice 2 weeks, 4 weeks, 8 weeks, and 16 weeks following the start of the implementation period. The objectives of these calls were to support Toolkit implementation and to collect information on the practices' implementation experiences that would help generate recommended changes to the Toolkit. We purposefully tailored the amount of assistance provided with the goal of understanding what practices could accomplish without extensive facilitation.

Site visits

The research team conducted 2 rounds of site visits at each of the 12 participating prac-

tices. The first round was conducted after Tools 1 and 2 were implemented but prior to implementation of the practice-specific tools. The second round of site visits was conducted approximately 6 months later, after the conclusion of the implementation period. Each site visit included 3 separate, semistructured interviews with the following individuals: (1) health literacy team leader, (2) a health literacy team member other than the team leader, and (3) a member of the practice staff who was not directly involved with the health literacy team. Interviews with the team leader and team member took 45 to 90 minutes whereas interviews with the practice staff member took 30 to 45 minutes. Written consent was obtained prior to interview participation. The site visit also included a session where the Health Literacy Team discussed their future plans regarding the use of the toolkit.

Data analysis

Recordings from check-in calls and site visit interviews were transcribed verbatim. Transcripts were independently analyzed by 4 experienced qualitative analysts. Using a grounded theory approach (Glaser & Strauss, 1967), each analyst repeatedly read their assigned transcripts to achieve immersion. Initial themes were identified by the team using an emergent rather than a priori approach to emphasize respondent perspectives and de-emphasize research team member preconceptions.

Words, sentences, and paragraphs were treated as coding units. Coding categories were developed on the basis of the initial themes through an iterative consensus process. Coding differences that arose were reconciled through team discussion until consensus was reached. The resulting set of codes was applied to the transcripts.

RESULTS

Themes that emerged from analysis were consolidated into 3 categories: (1) barriers to tool implementation, (2) toolkit utility, and (3) toolkit improvement opportunities.

Table 2. List of Tools in the Health Literacy Universal Precautions Toolkit, 1st Edition

Tool Number	Tool Name	Implemented Tools
Tools to start on path of improvement		
1	Form a Team	X ^a
2	Plan Your Practice Improvements	X ^a
3	Raise Awareness	X
Tools to improve spoken communication		
4	Tips for Communicating Clearly	X
5	The Teach-Back Method	X
6	Follow up with Patients	
7	Telephone Considerations	
8	Brown Bag Medication Review	X
9	How to Address Language Differences	
10	Culture and other considerations	
Tools to improve written communication		
11	Assess, Create and Select Easy-to-Understand Materials	X
12	Use Health Education materials Effectively	X
13	Welcome Patients: Helpful Attitude, Signs, and More	X
Tools to improve self-management and empowerment		
14	Encourage Questions	X
15	Make Action Plans	
16	Improve Medication Adherence and Accuracy	X
17	Get Patient Feedback	X
Tools to improve supportive systems		
18	Link Patients to Non-Medical Support	
19	Medication Resources	
20	Use Health and Literacy Resources in the Community	X

^aImplemented by all practices.

Barriers to tool implementation

Specific implementation barriers were noted by the participating practices, including (1) competing demands/staff capacity, (2) bureaucratic challenges, (3) technological challenges, (4) limited quality improvement experience, and (5) limited support from leadership.

Competing demands/staff capacity

Eight practices reported staffing and time constraints as a significant impediment to im-

plementation activities. Competing demands and the perception of additional work burden influenced health literacy team members’ ability to plan and direct implementation activities and interfered with clinical and administrative staff members’ ability to complete them. Five practices reported difficulties generating enthusiasm and staff interest and commitment during implementation for this reason. All but 2 practices experienced interruptions in their implementation activities due to time constraints and competing demands. As one practice noted:

When we first started talking to staff about doing the health literacy project, I think people were a little antsy, just because we are such a busy clinic. We were kind of thinking, “How are we going to get this done?”

Some tools appeared to be more time consuming to implement than others. For instance, the 2 practices assigned to implement Tool 8: *Brown Bag Medication Review* reported that finding time to conduct the medication reviews was their biggest challenge.

Bureaucratic challenges

Although practices affiliated with large health systems benefited from resources and more flexible time to engage in tool implementation, they also experienced delays related to obtaining administrative review and approval for changes they wanted to make. For example, one practice in a large health system was unable to modify a variety of patient forms during the 6 months of the implementation period due to the health system’s lengthy review process. As that practice’s health literacy team leader said:

... a variety of our forms are system wide ... and if we change those, they have to be a system-wide change ... So we had a little bit of difficulty in that aspect [of implementation] because we couldn’t just pick the standard forms [used in the clinic] ...

Technological challenges

Some practices found that they were unable to modify their electronic medical record (EMR) systems to suit their implementation needs. For instance, one practice wanted to develop and use a patient medication card that could be accessed through their EMR, but discovered that the card was “not quite as easy to use as we thought it would be since it is not built into our [EMR] program.” The practice’s IT department was unable to assist with this EMR change since they were busy addressing other requested changes to the system.

Another practice hoped to implement Tool 17: *Get Patient Feedback* by collecting patient survey data on a tablet. Doing so required extensive technical support, as the practice had no internal expertise in collection and

analysis of electronic data. With the assistance of their TAP, the practice identified and hired a consultant to guide them through the various aspects of this process—something not all practices would be able to do.

Limited quality improvement experience

During the process of selecting practices, all practices reported that they had QI experience. During the demonstration project, however, we found that practices’ experience with and ability to implement QI methods varied greatly. The 3 practices that demonstrated a working knowledge of, and consistently used, QI methods had more success implementing their tools. They were better able to assess their environments, engage in a detailed planning process, and evaluate their activities using data. Practices that implemented common QI methods were also better able to anticipate barriers, seek appropriate assistance, and quickly adjust plans as necessary. These practices also understood that the success of tool implementation was dependent on the continuous engagement and buy-in of staff members.

Unlike the small number of practices that implemented standard QI techniques, most practices relied on verbal plans that evolved through discussion among health literacy team members. These plans had varying levels of specificity. Lack of specificity compromised a practice’s ability to anticipate barriers to implementation, develop solutions in a timely manner, and assess implementation success.

Practices’ lack of familiarity with QI methods was reflected in their failure to appreciate the importance of assessing whether their efforts were successful. Technical assistance providers routinely asked practices how they planned to evaluate their activities and directed them to the “Track Your Progress” recommendations available in each tool. Technical assistance providers encouraged nearly every practice to evaluate its activities by pointedly asking them about their measures of success and effectiveness in relation to tool implementation.

Limited support from leadership

Implementation efforts were hampered when practice leadership did not actively champion health literacy improvement. For example, one practice reported that, although individuals in practice leaders were officially on the health literacy team, they were really ad hoc members who did not actively participate. If practice leaders were not directly involved in planning or implementation, it was important that they publicly empower the health literacy team to carry out project activities. Continuity of leadership was also important. Practices that experienced turnover in leadership of the practice or of the health literacy team lost momentum.

Toolkit utility

The demonstration provided insights into how practices used QI methods to implement health literacy tools, limitations with these tools, and how they can be strengthened.

Adaptive use of the toolkit

Practices used the Toolkit “flexibly.” They did not always implement all portions of their assigned tools. For example, when establishing a plan to implement Tool 17: *Get Patient Feedback*, one practice indicated that they “probably don’t have the capacity to do more than one aspect [of the tool].” We however argue that implementing only 1 aspect of the tool may have diluted its utility. In addition, practices often implemented action steps and used resources provided in tools beyond the ones they were assigned to implement.

Tool 3: *Raising Awareness* provides a more positive instance of how practices implemented the Toolkit adaptively. Although only 2 practices were assigned to implement the tool, qualitative data revealed that 6 of the 12 practices held a training session similar to what is recommended in Tool 3 to introduce the demonstration project and the tool implementation activities to their practice. Those practices used Tool 3 to educate practice staff about health literacy, using monthly all-staff meetings, lunch-and-learns, or arranged all-staff training sessions, that reached all or

nearly all of their staff, including clerical staff, clinical staff, and providers. The training sessions were used to familiarize staff with the importance of health literacy issues, introduce implementation activities, and create momentum and interest for their health literacy improvement work. For instance, the health literacy team leader from one of the residency practices felt that the training session contributed to greater staff buy-in, saying that they received:

... A lot of good questions [and] a lot of good suggestions ... the staff came away feeling like this was [an] ongoing project in our office. So they seemed kind of energized by it ... we were very happy with the turn out and the general enthusiasm from everybody.

Synergy among tools

Practices found that some tools were best implemented in tandem and recognized the efficiencies in implementing them in this manner. For example, when discussing their implementation of Tool 4: *Tips for Communicating Clearly* and Tool 13: *Welcome Patients: Helpful Attitudes, Signs, and More*, one practice’s team leader saw the tools as being linked and felt that conceptualizing their tools together facilitated implementation. They chose to focus on their front desk staff interactions to improve communication with patients (Tool 4) by using several of the suggestions from Tool 13 to help patients feel welcome. Practices also liked to combine Tool 3 with other tools, such as Tool 4: *Tips for Communicating Clearly* and Tool 5: *Teach-Back Method*. This allowed them to educate staff about health literacy in general while introducing specific skills staff could use to improve patient comprehension.

Coordination with other QI initiatives

When practices did not coordinate Toolkit implementation with other practice initiatives, there was a sense that each initiative represented a set of new demands on staff that had to be managed. On the contrary, linking health literacy implementation activities to other practice-wide QI initiatives (eg, patient-centered medical home accreditation)

raised staff awareness and increased engagement. Several health literacy team members reported that making these connections explicit facilitated staff “buy-in.” As one health literacy team representative shared:

I know in terms of turning our practice into a Patient-Centered Medical Home, we will be incentivized to do a lot of these things [tool implementation]. So that can be a driving force to improve health literacy in our practice.

Toolkit reinforcement

While practices worked independently on Toolkit implementation, they benefited from having external support and accountability. During check-in calls, TAPs routinely helped health literacy team leaders troubleshoot implementation problems. Sometimes assistance took the form of directing a practice to a resource that had been overlooked in the Toolkit. At other times, TAPs filled in the gaps when guidance in the Toolkit was not clear or resources in the Toolkit did not exactly match practice needs. For instance, one urban practice struggled with addressing its staff members’ limited understanding of basic health literacy issues and concerns, despite “aggressive education efforts.” During routine check-in calls, the TAP talked with the health literacy team leader to help problem solve this barrier by suggesting that they integrate health literacy discussions into existing education efforts and staff meetings rather than presenting it as a stand-alone topic.

Toolkit sustainability

At least three-quarters of the practices reported that they plan to continue to use the Toolkit as a resource to guide their health literacy-related QI work. Eight of the 12 practices indicated that they would continue with their 2 assigned tools and the improvement work implemented during the study period. Many of these practices made concrete plans for further work with assigned and additional tools and appeared to have developed a shared understanding that the health literacy work they implemented would become their new standard of practice. For example, 8 of the 12 practices planned to continue using some aspect of Tool 8: Brown Bag Medica-

tion Reviews, although only 2 were originally assigned the tool.

Toolkit Improvement

Demonstration findings pointed to the need for specific Toolkit revisions. On one hand, practices found that the density of information in the Toolkit was overwhelming, particularly for small practices, and noted that some of the tools were too long and needed to be shortened. Some tools presumed skills that practices did not have. For example, all 6 practices that worked on Tool 17: *Getting Patient Feedback* seemed incapable or unsure of how to collect patient feedback, even when the TAPs provided information and walked them through the details of the tool. Indeed, many practices avoided using the Toolkit’s lengthy questionnaire because of a lack of understanding of sampling procedures and instructions that were overwhelming and difficult to grasp.

On the other hand, practices consistently indicated a desire for tools that had more specific tips and detailed examples. For example, 7 practices noted that components of their assigned tools did not seem to provide specific enough recommendations and resources that applied directly to their style of practice, practice type, needs, and routines (eg, small practice, large residency practices, practices within a larger health system). Some practices reported that practical resources, like customizable forms, signs, and posters, were the most helpful parts of the Toolkit and suggested adding more.

DISCUSSION

The Health Literacy Universal Precautions Toolkit was designed to provide primary care practices with a practical way to make it easier for patients to understand health information and navigate the health care system. The Toolkit’s universal precautions approach reflects the growing shift in focus from addressing individual patients’ health literacy skills to addressing broader organizational systems changes (Brach et al., 2012). Indeed, the Toolkit has been recommended as a way for health care organizations to move toward the adoption of a “health-literate care model”

through which health literacy becomes a core value, and health literacy-related QI efforts are integrated into the organization's routine planning and operations (Koh et al., 2013).

Implications for toolkit use

The Toolkit was designed so that practices with various levels of QI expertise could immediately begin to make changes in their practice (DeWalt et al., 2011). This demonstration highlighted challenges practices experienced implementing the Toolkit. Practices seeking to become health literate, however, found the Toolkit helpful in charting a direction for QI efforts and pointing them to resources to speed them along. We note that practices appreciated having the support of the TAPs, who were able to help them trouble-shoot challenges and develop implementation strategies that would fit their needs. We thus encourage practices to also consider seeking assistance from QI experts when possible. Practices can use their own local or national practice-based research networks, quality improvement networks (formerly QIOs), or area health education centers. These networks and organizations can provide resources such as practice facilitators, consultants, learning collaboratives, and technology assistance.

Implications for toolkit enhancements

We received varied, sometimes contradictory, advice on improving the Toolkit. Striking a balance between clarifying points of confusion and keeping the length and flow of tools manageable was challenging. In its second edition, the AHRQ Health Literacy Universal Precautions Toolkit (Brega et al., 2015) includes streamlined tools, hands-on resources, and links to resources that give more detailed direction. In addition, a guide for practice facilitators and health literacy team leaders distills the Toolkit implementation lessons learned from this demonstration (Cifuentes et al., 2015).

Limitations

The data reported here suggest important ways to increase the probability that practices will successfully implement the action steps recommended in the Toolkit. However, there

are some limitations. First, practices had only 6 months to implement their tools. This restricted implementation period may have influenced the practices' plans as well as the research team's ability to observe and evaluate longer-term effects of implementation activities.

Second, practices were assigned tools to implement. Although every participating practice was assigned at least one of their top 2 preferred tools, practices were sometimes asked to implement tools that were not their top choices. If practices had full choice of tools to implement, we might have seen more synergy of tool implementation and integration with other practice quality improvement activities and abandonment of ineffective tools.

Third, all practices applied to participate in the demonstration. Less successful results are likely should the Toolkit be implemented in a top-down manner in a system with practices that do not have champions interested in health literacy quality improvement.

CONCLUSION

Any type of practice change is not easy (Crabtree et al., 2011). The demonstration provided an opportunity not only to study implementation of health literacy universal precautions, but also to examine a Toolkit created to identify opportunities for improvement and facilitate implementation. By and large the practices were successful in implementing their assigned tools, but met with various challenges. They suggest that changes were needed to make the Toolkit more directly relevant to primary care practice processes, staffing, and organizational structures and that additional implementation assistance would be valuable.

This study offers lessons for developers of QI tools more generally. First, tools should be simple yet comprehensive. Layering information, providing the basics at a glance and supplying details for those who want to delve further, is a way of balancing those competing interests. Second, tools should be practical and easy-to-use. Practices value labor-saving devices, from a video or slide show, to materials they can distribute, to automation of

QI data collection. Third, tools should be flexible. Practices will always want to pick and choose what they think is applicable to their unique setting. They will also want to adapt, and possibly reinvent, tools so they fit with their organizational culture. Fourth, practices must master the requisite QI skills to put the tools to good effect. Even practices that purport to have QI experience may not have mas-

tered the basics. Fifth and finally, practices can magnify the benefit from QI tools with facilitation from outside the practice. Whether to coach practices in QI skills, bring specific expertise to bear, assist in the tool customization process, or just be a source of accountability that keeps the practice on track, a practice facilitator or equivalent provider of technical assistance, can boost the value of QI tools.

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