

A Toolkit to Engage High-Risk Patients in Safe Transitions Across Ambulatory Settings



Suggested Citation:

Davis K., Collier S., Situ J., et al. A Toolkit to Engage High-Risk Patients in Safe Transitions Across Ambulatory Settings. AHRQ Publication No. 18-0005-1-EF. Rockville (MD): Agency for Healthcare Research and Quality; December 2017.

None of the investigators has any affiliations or financial involvement that conflicts with the material presented in this report.

This project was funded by the Agency for Healthcare Research and Quality (AHRQ), U.S. Department of Health and Human Services. The opinions expressed in this document are those of the authors and do not reflect the official position of AHRQ or the U.S. Department of Health and Human Services.

A Toolkit to Engage High-Risk Patients in Safe Transitions Across Ambulatory Settings

Prepared for:

Agency for Healthcare Research & Quality (AHRQ)
Department of Health and Human Services 540 Gaither Road
Rockville, MD 20850 www.ahrq.gov
Contract No. HHSP233201500016I

Prepared by: Health Research & Educational Trust (HRET)

Authors:

Kristina Davis, MS, MSN, MPH, RN, CNL
Sue Collier, MSN, RN, FABC
Jennie Situ, MPH
Martina Coe, MPH
Marie Cleary-Fishman, BSN, MS, MBA, CPHQ

AHRQ Publication No. 18-0008-1-EF
December 2017





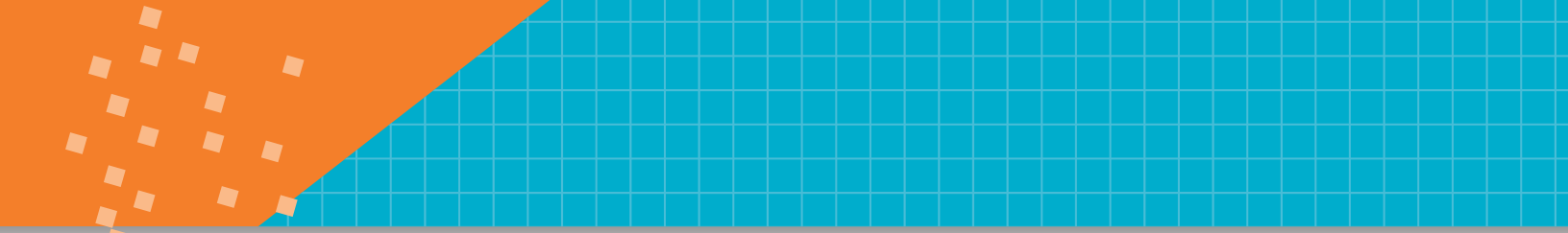
Preface

This project was funded as an Accelerating Change and Transformation in Organizations and Networks III (ACTION III) task order contract. ACTION III fosters public–private collaboration in rapid-cycle, field-based studies designed to improve care delivery, and to disseminate and implement successful care delivery models and evidence-based products and tools across diverse care settings. ACTION III projects leverage an impressive cadre of nationally recognized researchers as well as diverse health care systems and care settings within which the application and uptake of new knowledge can be tested. For more information about ACTION III, go to <http://www.ahrq.gov/research/findings/factsheets/translating/action3/index.html>.

Acknowledgements: The opinions expressed in this document are those of the authors and do not reflect the official position of AHRQ or the U.S. Department of Health and Human Services. We thank our colleagues; members of the review panel, key personnel, and technical expert panel; and the pilot sites who provided insight and expertise through their edits and participation in the development of the toolkit. All quotes contained in the document are from staff members at the pilot sites.

Contents

Executive Summary	3
Pilot Site Case Study	4
Project Overview	5
Objectives	5
Target Audience	6
Theory	6
Evidenced-based Tools	8
Development	9
Study Design	9
Toolkit Creation and Refinement	9
Description of the Toolkit	10
Health Information Technology (IT)	11
Selection of Ambulatory Settings	12
Implementation	13
Overview	13
Practice Preparation	13
Staff	13
Workflow	13
Implementation Processes	13
Analysis	14
Qualitative Analyses	14
Quantitative Analyses	14
Findings	15
Staff Roles	16
Staff Training	16
Patient Selection	16
Workflow	16
Facilitators	17
Barriers	17
Length of Toolkit	17
Staffing and Time Limitations	17



Need for Toolkit	18
Feedback on Toolkit Content	18
Patient and Care Partner Feedback	18
Evaluation and Sustainability	19
Lessons Learned to Share with Other Facilities	19
Recommendations for Improvement	20
References	21
Appendix A. Interview Guide	22

Executive Summary

Transitions of care among ambulatory sites are vulnerable to patient-safety gaps. Patients who transition from one ambulatory care facility clinician to another are especially vulnerable to patient-safety errors, in part due to a lack of effective communication and patient engagement in shared decisionmaking. The Health Research & Educational Trust (HRET) adapted select, evidence-based patient and care partner-centered acute care discharge tools to create a toolkit specifically for use in the ambulatory care setting. The toolkit is designed to help staff actively engage patients and their care partners to prevent errors during transitions of care. The toolkit includes a detailed implementation guide, a pre-intervention assessment, patient appointment aide, checklist for clinicians, and an educational video.

Toolkit materials were field tested in two facilities, one a rural setting and one in an urban environment. Qualitative analysis of interviews with nine staff members was completed to better understand how materials were implemented, the effectiveness of support materials, barriers to and facilitators of implementation, and lessons learned from implementation.

Few staff used the support materials provided in the original pilot-tested toolkit. Staff noted the necessity of the toolkit and its importance, but found it to be lengthy and hard to implement due to necessary staffing and time. They were more likely to implement the toolkit if it fit into the current workflow. Many suggested integrating the toolkit with after-visit summaries as a way to reduce burden, streamline workflow, and decrease redundancy. The importance of teamwork, communication, and mutual support were voiced throughout interviews. Staff encouraged other facilities to adapt the toolkit to fit their needs.

The patient and clinician tools were revised based on the results of the pilot testing. Key changes were designed to facilitate adaptation and use in existing or new ambulatory care workflows. The findings for this project frame the opportunities and challenges in engaging patients and their care partners as active participants in preventing harm during transitions of care. Further study is needed to evaluate the impact of the tools and resources on quality and patient safety outcomes and patient and clinician experiences.



Pilot Site Case Study

Problem Addressed

Ambulatory care facilities must meet numerous regulatory, financial, and quality demands in order to sustain operations in a unique environment. Patients who transition from one clinician to another are especially vulnerable to patient-safety errors, in part due to a lack of effective communication and patient engagement in shared decision-making. The Health Research & Educational Trust (HRET) adapted select, evidence-based patient and care partner-centered acute care discharge tools to create a toolkit to help staff actively engage patients and their care partners to prepare for new appointments. By preparing patients and their care partners for safe transitions of care, the facility can:

- Reduce errors related to transitions of care
- Increase patients' engagement in their own plan of care
- Improve communications among patients, care partners and other facilities
- Address requirements related to coordination of care
- Enhance overall patient and clinician experience.

Pilot Testing

Two facilities participated in pilot testing a toolkit designed to help patients at risk for errors during transitions of care:

- Vidant Multispecialty Clinic Belhaven, a primary care clinic located in rural eastern North Carolina that provides preventive care, chronic disease management, and health education for over 7,800 distinct patients of all ages.
- University Washington General Internal Medicine Clinic, a primary care clinic located in a predominantly urban environment that serves over 7,500 distinct adult patients for internal medicine services.

Each facility completed a pre- intervention assessment to evaluate current efforts to address safe transitions and determine opportunities for improvement. Based on the responses, the sites focused on implementing components of the toolkit with patients who needed support to prepare for appointments with new clinicians.

The toolkit included a detailed implementation guide, educational video, a pre-intervention assessment, patient tool, and checklist for clinicians. Each facility was encouraged to use existing staff to implement the tools.

The project team held monthly meetings with both pilot sites and conducted a site visit to assess findings.

Cross-Cutting Themes/Findings

The patient and clinician tools were revised based on pilot testing and the following findings:

- While both pilot sites reported using many of the best practices associated with patient engagement and safe transitions of care, each site identified a need to improve how they prepare patients for new appointments, communicate essential information concerning the patient's plan of care, and engage the care partners in the plan of care.
- Instructional materials were rarely used by participating staff, but staff reported that the tools were easy to use on their own.
- Staffing and available time were cited as the main environmental barriers to toolkit implementation. Directly related, length of the toolkit and the time required to complete the tools were also cited as barriers. Teamwork and communication were facilitators to toolkit implementation.

- Tools should be designed so that facilities can adapt individual components of the tools for use in existing or new workflows and processes.
- Patient and family engagement in preparing for new appointments is an essential need in facilities that serve high-risk, high-need patients.

Lessons Learned for Other Organizations

Tools such as the Appointment Aide and Checklist to Prepare Patients for New Appointments can help prepare patients and their care partners for safe transitions of care. More research is needed to evaluate the impact of the tools on patient outcomes. Other facilities can use and adapt the tools and resources in this toolkit to address opportunities for improvement in patient and care partner engagement and safe transitions of care.

Project Overview

Objectives

The objectives for this project were as follows:

1. Identify an evidence-based or promising patient safety practice that will address transitions in care, one of the identified areas of safety concern as outlined in Figure 1 on page 15- Matrix of Key Informant Themes in *AHRQ's Patient Safety in Ambulatory Settings Technical Brief*
2. Develop a toolkit and methods to support successful implementation in ambulatory care practice sites
3. Pilot test the implementation of the toolkit in two medium or large ambulatory care settings, including at least one primary care setting
4. Evaluate facilitators and barriers to implementation of the toolkit in two ambulatory care practice settings and submit the findings in the form of a case study report.

"How do you find the space to do something this important?"

This project focused on enhancing safe patient transitions to new clinicians in an ambulatory setting. Based on findings from Agency for Healthcare Research & Quality *Patient Safety in Ambulatory Settings, Technical Brief, No. 27* key informant interview themes, the objectives were addressed through the development of materials focused on the following areas of concern in care transitions:

- Synchronous communication
- Interoperability
- Information that moves with the patient during transition
- Patient education and self-training¹

In addition, this project serves as formative work to better understand the unique needs of the ambulatory care environment and to promote spread of safety practices in these settings.



Target Audience

This report is intended for clinical and non-clinical professionals working in or anticipating work in ambulatory care, especially those who may be designing new materials or care delivery process flows for this setting. Key stakeholders include ambulatory care clinicians and patients and their care partners.

Theory

Several models were used to inform the development of strategies and content for this project, including:

- A Logic Model for Conceptualizing the Impact of Patient Engagement, adapted from Epstein and Street and referenced in the 2010 AHRQ publication *Engaging Patients and Families in the Medical Home*.² The Logic Model describes the importance of supporting patients and their care partners as engaged and informed partners in care and implementing processes that promote shared decisionmaking. The model also promotes improved communication among patients and clinicians as a means to achieve positive health outcomes and experiences (See Figure 1).
- The Preliminary Conceptual Framework used to support development of the *Guide to Patient and Family Engagement in Hospital Quality and Safety*.³ This framework recognizes the impact of organizational and individual behaviors and environmental context on patient safety, patient engagement, and provider-patient communications. Much like the Logic Model, it poses how inputs into a health system may impact anticipated outcomes. This framework uniquely identifies areas of interaction between target audiences and the environment that can be modified through interventions to shift engagement (See Figure 2). We adapted evidence-based tools in the hospital guide for use in the ambulatory care setting.
- The Transitions of Care Model.⁴ This model, while designed for an inpatient setting, outlines the key components of a successful transition in health care. Because this project focused on improving safe patient transitions from one clinician to a new clinician, this model provided useful context for tool development (See Table 1).

Figure 1. Logic Model for Conceptualizing the Impact of Patient Engagement²

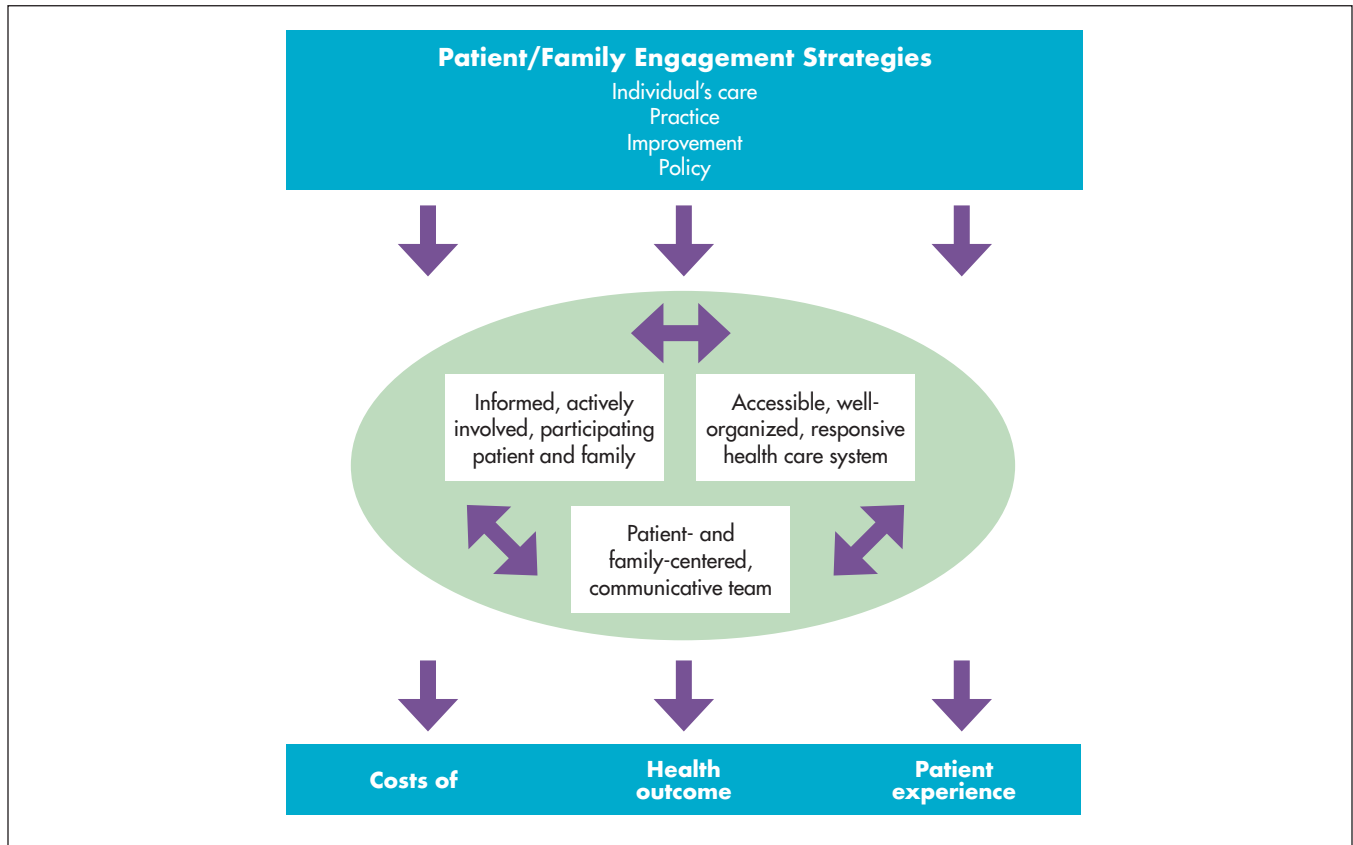


Figure 2. Preliminary Conceptual Framework for the Guide to Patient and Family Engagement in Hospital Quality and Safety³

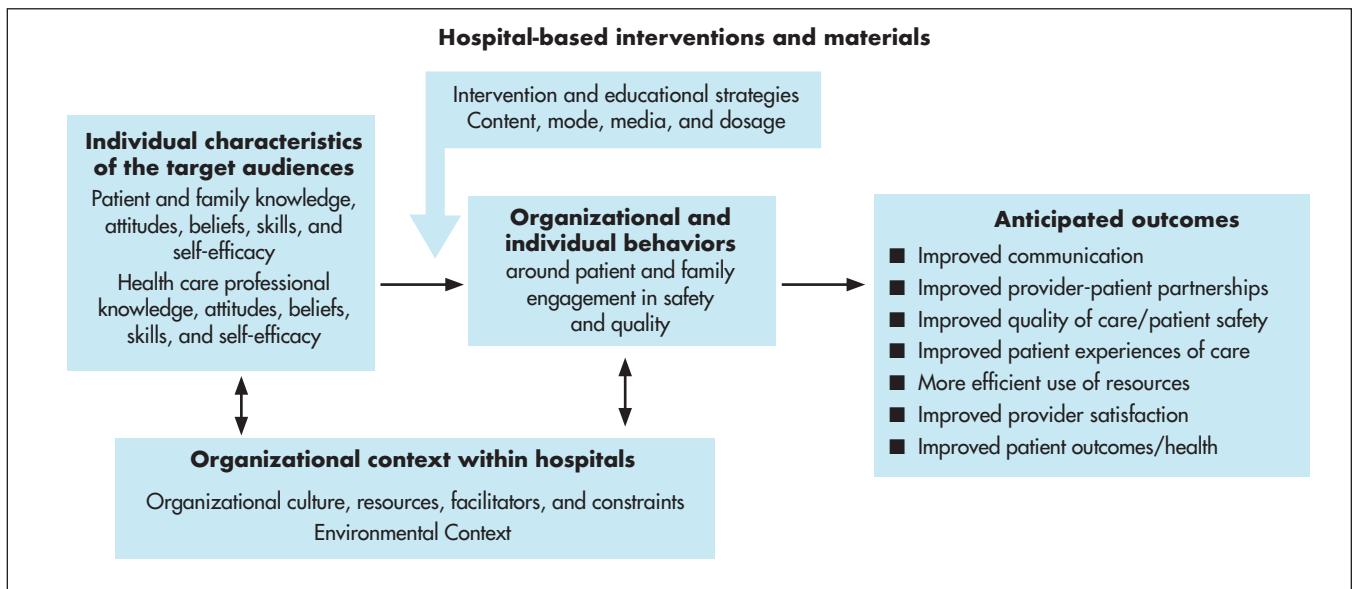


Table 1. Transitional Care Model Components

Component	Definition
Screening	Targets adults transitioning from hospital to home who are at high risk for poor outcomes.
Staffing	Uses APRNs who assume primary responsibility for care management throughout episodes of acute illness.
Maintaining Relationships	Establishes and maintains a trusting relationship with the patient and family caregivers involved in the patient's care.
Engaging Patients and Caregivers	Engages older adults in design and implementation of the plan of care aligned with their preferences, values, and goals.
Assessing/Managing Risks and Symptoms	Identifies and addresses the patient's priority risk factors and symptoms.
Educating/Promoting Self-Management	Prepares older adults and family caregivers to identify and respond quickly to worsening symptoms.
Collaborating	Promotes consensus on plan of care between older adults and members of the care team.
Promoting Continuity	Prevents breakdowns in care from hospital to home by having same clinician involved across these sites.
Fostering Coordination	Promotes communication and connections between health care and community-based practitioners.

In addition to the models referenced above, a review of research on implementation science was conducted to provide suggestions for successful implementation of new tools in real-world settings.

Evidenced-based Tools

Several evidence-based acute care resources were reviewed and adapted to develop the ambulatory patient and clinician tools in the project toolkit (see Table 2), including AHRQ's *IDEAL Discharge Planning tools* and the Center for Medicare and Medicaid Services (CMS) *Discharge Planning Checklist*.^{5,6} Additionally, the LACE Index Scoring and the HARMS-8 tools were reviewed to determine if risk-stratification assessments could help pilot sites, with limited time and resources, focus interventions on high-risk patients who may benefit from enhanced self-care training.^{7,8} Supplemental materials that reinforced shared decisionmaking and self-care, such as follow-up calls for targeted high-risk patients post-discharge, were also reviewed for inclusion in the project resources.⁹

Table 2. Evidence-based Tools

Tool	Purpose
AHRQ's IDEAL Discharge Planning Tools	This set of tools uses key elements of engaging patients in care transitions from hospital to home to improve the discharge process through inclusion, education, assessment, and listening to and honoring perspectives.
CMS Discharge Planning Checklist	This checklist is for use during stay at a hospital, nursing home, or other care setting and during the discharge process to help prepare patients and their caregivers for the transition.
LACE Index Scoring	This tool is used to help identify patients at risk for readmission or death within 30 days of discharge.
HARMS-8 Tool	This tool is designed to help identify patients at risk for future utilization of medical services by identifying critical intervention areas for patients with high-risk medical conditions.

Development

Study Design

This rapid-cycle improvement project was designed as a one-year effort consisting of toolkit development, piloting of toolkit materials by two sites, analysis of findings, toolkit revisions, and recommendations for spread (Appendix A). The pilot sites were asked to implement the newly developed tools and provide feedback on whether or not the tools could be used to engage patients in improving safe transitions of care. The toolkit components were revised based on the feedback from the pilot sites.

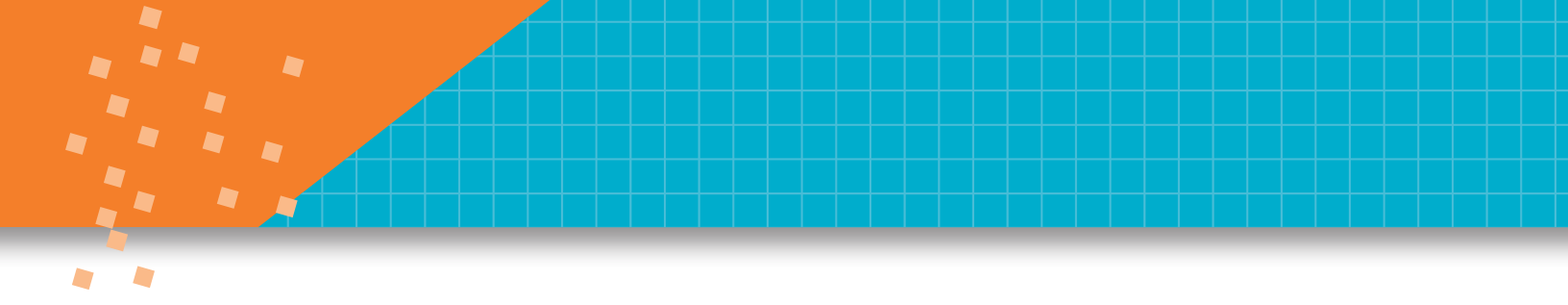
“It’s very, very comprehensive. So, it clearly was a lot of time and energy went into getting the wording and the language exactly right, and making sure that nothing was left out...I definitely appreciate how a lot of people clearly put a lot of work into polishing this up and making it user friendly.”

Toolkit Creation and Refinement

Input for developing and refining the toolkit was solicited from key personnel, a Technical Expert Panel (TEP), a review panel, AHRQ reviewers, HRET project staff, and two pilot sites (see Table 3).

Table 3. Review Groups

Review Groups	Role in Toolkit Development	Expertise of Members	Number of Members	Number of Formal Meetings	Duration of Service
Key Personnel	The key personnel were responsible for the initial recommendations concerning toolkit content and revising the tools based on input from AHRQ and TEP. The key personnel also reviewed edits to the toolkit following pilot testing.	National experts in patient advocacy, patient- and family-centered care, care coordination, and performance improvement leaders.	4	5	October 2016 - September 2017
Technical Expert Panel (TEP)	TEP was responsible for content review and strategic oversight of the project. This panel reviewed AHRQ’s IDEAL Discharge Planning tool, the CMS Discharge Planning Checklist, the LACE risk-assessment tool for the ambulatory setting, and other recommended evidence-based resources, along with feedback from AHRQ and the key personnel.	Ambulatory care delivery experts, performance improvement leaders, patient advisors, care coordination leaders, and patient and family engagement experts.	7	3	November 2016 - January 2017
Review Panel	The review panel was responsible for the final review of the toolkit for usability and usefulness in the ambulatory care setting.	Patients, family members, and ambulatory care clinicians.	8	2	December 2016 - February 2017



Components of the toolkit were drafted and refined during two time periods: the project startup and after the pilot testing. During the first 3 months of the project, the initial drafts of all the toolkit components were created and refined through multiple rounds of review by the key personnel, TEP, and review panel members. Initial development occurred using a modified Delphi approach with the key personnel, which was then followed by AHRQ and TEP review, and a final round by the review panel for feasibility and applicability.

The facilities were provided the initial toolkit and asked to implement the materials over a period of 4 months. During the pilot period, the HRET project team solicited input on the toolkit using monthly team calls. After the pilot, HRET project team conducted onsite interviews to finalize feedback on the toolkit from the sites. All toolkit materials were edited by the HRET team based on the site input. The key personnel and pilot sites were given the opportunity to provide additional feedback before submitting the next draft to AHRQ.

Input for refining the toolkit came from a variety of sources, including the key personnel, the TEP, the review panel, AHRQ reviewers, HRET project staff, and the pilot sites. There were similar ideas for improvement as well as conflicting suggestions for changes to the toolkit. Staff incorporated the majority of suggested changes but deferred to consensus, evidence-based suggestions, or expertise-based suggestions when conflicting ideas were presented. All changes to the toolkit were logged along with the rationale for each change. Toolkit materials were shared with external and internal team members after edits to solicit final comments and to ensure that the changes were acceptable to the experts who provided the edits.

Description of the Toolkit

The pilot-tested toolkit consisted of six components:

1. Pre-Intervention Assessment
2. Engaging High-Risk Patients in Safe Transitions: A Guide to Preparing for New Ambulatory Care Appointments
3. Narrated PowerPoint Presentation: Team Lead
4. Narrated PowerPoint Presentation: Team
5. Appointment Aide: Be engaged. Be prepared.
6. Improving Care Transitions: Engaging and Preparing High-Risk Patients (Team Tool)

After piloting, the core components were refined and retitled. Table 4 provides additional information concerning each component of the toolkit.

Table 4. Description of Toolkit Components

Tool	Audience	Purpose	Description
Guide for Safe Transitions to New Appointments	Facility Team and Patients and Care Partners	Provide rationale for the toolkit; resources to supplement skills, knowledge, and confidence; and implementation steps.	Short word document providing essential information to support successful implementation of tools.
ACF Team Training PowerPoint Video	Facility Team	Educate team members on how to implement toolkit based on opportunities for improvement.	Short, narrated PowerPoint video for all team members to view prior to implementing the toolkit.
Pre-Intervention Assessment (PIA)	Team Lead and Facility Team Members	Assess current practices in patient and care partner engagement to promote safe transitions to new clinicians.	Excel workbook with tabs that correspond to key components of the patient and staff tools. Responses to questions in the spreadsheet trigger specific recommendations for facilities to consider when engaging patients and family members in care transitions.
Appointment Aide: Preparing for Your Appointment	Patient and Care Partner	Prepare the patient and their care partner to think about and document questions and health information in preparation for a new appointment.	Word format booklet that encourages patients to ask questions, communicate needs and preferences, and be an engaged team member. The pages can be printed individually, printed as an entire booklet, or incorporated directly into an after visit summary (AVS) or electronic health record (EHR). Team members are encouraged to help the patient review the questions in the Appointment Aide and document essential information and questions.
Checklist to Prepare Patients for New Appointment	Facility Team	Assist the team in supporting the patient's efforts to be prepared for a new health care appointment.	Once the team is aware that the patient has a new health care appointment, this two-page checklist in Word format can be used to prompt team members to reinforce key steps that promote patient engagement and preparation.

Health Information Technology (IT)

Pilot sites were encouraged by instruction in *Engaging High-Risk Patients in Safe Transitions: A Guide to Preparing for New Ambulatory Care Appointments* and during monthly phone calls to incorporate toolkit materials into existing or improved process flows, including the EHR and AVS when possible. Both sites noted that, due to limited staff resources and the short time frame for implementation, they were unable to make significant changes in IT processes during the pilot. Using health IT was not a requirement of implementation, although both sites found it useful to employ the patient-clinician portals to deliver the patient tool and suggested additional IT functionality would facilitate use of the tools.

Selection of Ambulatory Settings

The project scope required identification of two medium or large ambulatory care settings, including at least one primary care setting, in which to conduct pilot testing of the toolkit. The two sites chosen met these requirements and provided geographic and patient diversity. Vidant Health – Belhaven is a medium-sized facility in rural North Carolina. University of Washington – General Internal Medicine Clinic is a large facility in urban Washington. Additional information about each clinic was collected via the PIA and is displayed in Tables 5 and 6.

Table 5. Patient Information

Patient Information	Vidant Health	University of Washington
Approximate number of annual patient visits	16,000	20,000
Approximate number of distinct patients seen in the past year	7,800	7,500
The average time (in minutes) for a patient visit in the facility	25	20
On average, percentage of patients served by facility who are new patients	75%	10%

Table 6. Staff Roles

Staff Role	Vidant Health	University of Washington
Physician (primary care, family practice, pediatricians, OB/GYN)	3	0
Physician (internal medicine)	0	80
Nurse Practitioner	1	3
Physician Assistant	1	0
Nurse (RN)	4	6
Nurse (LPN)	1	0
Nursing Assistant	2	0
Medical Assistant/Technician	2	13
Clerical/Operations Support Staff	6	5
Health Coach	1	0
Medicare Wellness Nurse	0.5	0

Implementation

Overview

Vidant Health and University of Washington both identified team leads at each site who would be responsible for overseeing the implementation of the toolkit components. A contract was executed with each pilot site's health system in return for meeting a defined scope of work. The scope of work included identifying the facility that met the desired criteria, identifying a facility-site lead to manage toolkit implementation and evaluation, completing project reports and participation requirements, and ensuring and maintaining the facility's participation in the project.

"I said, 'Take this home and read through it. If you're not going to go with your dad to his next appointment, make sure you put your thoughts on this.' But again that makes it a one-time-use tool. It doesn't make it an ongoing tool. I wanted to see this as an ongoing tool that they could take from place, to place, to place, but it didn't seem to flow that way. It's kind of a one-time use."

Individual sites did not receive funding incentives. The identified team leads were responsible for recruiting a diverse team to participate in the implementation efforts, including physicians, nurses, medical assistants, case workers, and support staff. Both sites completed the intervention period and met all the terms in the scope of work; however, not all staff recruited to implement the toolkit used the tools with patients during the pilot period.

Practice Preparation

Staff

Team leads at both pilot sites were provided in unison an overview of how to use the toolkit via an online webinar using the team lead narrated PowerPoint presentation. The team leads were then instructed to read Engaging High-Risk Patients in Safe Transitions: A Guide to Preparing for New Ambulatory Care Appointments completely before training other staff members. The guide listed suggestions for how the team lead could train other staff members including: sharing information at a staff meeting, having staff view the narrated PowerPoint presentations on their own, sending the instructions through a group email, or having an in-service style meeting. Team members who interacted with patients were encouraged to participate in project implementation and to provide ongoing input on the successes and barriers to using the tools.

Workflow

A sample workflow was included in the initial guide provided at the beginning of the pilot testing period. The proposed workflow assumed the sites could identify patients who would need transition of care support at the beginning of the visit. Staff were encouraged to rework the workflow based on their individual setting and needs. The project team desired input on how existing workflows could be revised to incorporate use of the toolkit in diverse settings and solve the problem of lack of patient engagement in safe transitions of care.

"I recommended...that they run it as a PDSA cycle...get feedback from the providers and the patients and not just keep doing it if it's not really going to work."

Implementation Processes

The pilot sites were provided key implementation steps at the beginning of pilot testing via Engaging High-Risk Patients in Safe Transitions: A Guide to Preparing for New Ambulatory Care Appointments. These steps were refined after pilot testing based on the input from each of the sites. The nine steps are listed in the text box. Steps six and seven were added to address gaps identified during pilot testing and reinforce the importance of workflow steps and rollout.

Implementation Steps

1. Identify a leader or champion.
2. Engage all team members who are responsible for supporting patient engagement and safe transitions of care.
3. Complete the Pre-Intervention Assessment (PIA) tool.
4. Identify which patients may need additional support to prepare for a new appointment.
5. Begin to share the Appointment Aide and Checklist to Prepare Patients for New Appointments.
6. Integrate Toolkit into workflow.
7. Roll out the Toolkit to the whole team.
8. Use resources and other supplementary materials as needed to promote effective skills, knowledge, and confidence among all team members.
9. Evaluate use and benefits of tools and processes.

Analysis

Qualitative Analyses

This project involved piloting a new toolkit in ambulatory settings. Qualitative analysis was chosen as the main form of analysis for this project because of its usefulness in situations where little is known or when researchers are looking to understand the interactions of culture and environment.¹⁰ This analysis was primarily conducted after the pilot test in order to refine the toolkit based on pilot site experiences and to promote use by other facilities post-project completion. Additionally, ad hoc formative analysis was conducted throughout implementation of the interventions to maximize understanding and how and why the implementation of the toolkit was successful or not.

Nine individual, semi-structured interviews were conducted (Appendix B) across the two sites in July 2017. Each interview lasted approximately 30 minutes. Interviews were recorded and transcribed before being coded using Atlas.ti version 7.5.17. Inductive coding was performed by one team member with reliability established through consensus with another team member. Number of staff interviewed was limited by the project scope of work, but still there was saturation of key ideas. Preliminary codes were developed based on question themes and then refined inductively. The purpose of this analysis was to investigate barriers and facilitators to implementation and to answer the following questions:

- How well, in what ways, and to what degree was the ambulatory care practice able to implement the patient safety practice?
- How effective was available guidance and materials in supporting implementation? What additional support, guidance, assistance, or information was or would have been needed to support implementation?
- What were the specific barriers and facilitators to implementation? What methods and/or strategies were used to overcome barriers?
- What were the lessons learned during implementation that would be helpful for future ambulatory care practices to know?

Quantitative Analyses

Quantitative analysis was not a requirement of the project contract. Additionally, limited quantitative analysis was conducted for this project in order to comply with OMB requirements and project scope.

Findings

The qualitative analysis yielded 18 distinct codes that can be connected to the four key questions provided by the contractor to evaluate the barriers and facilitators to implementation (Table 7). Overall, the coded responses reflected support for the toolkit, identification of lessons learned, and possible revisions to support use of the tools by other facilities. Staffing and time limitations were referenced by all interviewees as a key barrier to implementation. Other responses reflected opportunities to continue use of the tools (workflow and sustainability) in order to address opportunities to improve patient and care partner engagement and safe transitions of care.

Table 7. Code Definition and Frequency

Code	Definition	Raw count	Interviews with Code (n=9)
Acceptance	Acceptance of the current norms or mention of cultural norms as not possible to change.	4	3
Adaptation	Ways in which the toolkit was modified in order to adapt it to the clinic.	6	3
Barriers	Parts of the toolkit or the environment that impeded implementation (e.g., not enough time).	35	9
Duplication	Something in the tool that is already being done (i.e., already included in AVS or another protocol).	14	5
Epiphany	Any time someone mentions learning something about themselves, their setting, patients from implementation of the tool.	2	2
Evaluation	Formal assessments of staff and patient reactions to the toolkit. Examples include surveys, group meetings, or one-on-one interviews.	2	1
Facilitators	Parts of the toolkit or the environment that helped with implementation (e.g., support from team lead).	6	5
Lessons	Things learned during the pilot testing that would be useful for others to know (which do not fit under one of the other codes).	21	7
Liked	What the person liked about the toolkit.	27	8
Need	The necessity of improving transitions of care.	6	4
Overcoming Barriers	Ways to deal with or avoid the barriers. Note: If the barrier text is preceding immediately before the overcoming of the barrier, highlight the barrier as well to give context.	13	6
Patient/Family Feedback	Any input from a patient or the patient's family or friend helping with care about the patient or staff tools.	16	7
Patient Selection	How patients are selected to use the tools.	5	2
Revisions	What the person would modify in the toolkit. Examples include changing headers of tables or shortening text.	28	8
Staff Training	Information related to number and type of staff trained.	13	8
Staffing & Time	Any mention of staffing or time limitations	29	9
Sustainability	Issues surrounding whether clinics will continue to use any parts of the toolkit and why or why not.	8	6
Workflow	How the toolkit was incorporated into the daily routine or workflow and general use of the toolkit.	27	9



Staff Roles

The nine team members who were interviewed included three physicians, a case manager, two practice managers, a master's level nursing student who was supporting project implementation, a staff nurse, and a health coach. Interviewees reported working in their roles an average of 9.5 years (range 6 months- 24 years).

Staff Training

The project team provided each pilot site with narrated PowerPoint slides and notes to support education of team members who may be involved in implementation of the toolkit. One staff member reported using the narrated PowerPoint video. Two additional staff members were known by interviewers to have completed the PowerPoint presentation but did not recall having used the training slides when asked. The remainder of the staff interviewed reported receiving no training or training through team or individual discussion with the team leader. These findings prompted edits to streamline the content on the training slides and integrate the team lead and staff training materials.

Patient Selection

Only two interviewees shared specifically how patients were selected. One interviewee “found that patients that were high-risk benefited from [the toolkit] mostly. [Patients] that had a lot of multiple appointments... that seemed to be who I migrated to more in helping patients.” This site used a risk assessment process to identify high-risk patients. Another interviewee noted difficulty identifying the ideal staff who could appropriately select patients to use the tool, stating “I tried getting my referral secretaries to give this out, but they’re not clinical, and that didn’t work very well. They started giving it to patients that just had colonoscopy referral, which wasn’t really my high-risk, and they don’t identify that.” Key lessons learned relative to patient selection include establishing a standardized process to select patients that includes risk assessment and clinical judgement and assigning the task owner who will share the tools with the appropriate patients.

Additionally, one interviewee mentioned the complexity of knowing which patients would want the tool at all. “It’s hard to guess ahead of time who would want this and who wouldn’t. I’ve had some people who were particularly savvy, who were like, ‘Oh, that’s a great idea. I’ll do that,’ where I would have thought they might not have wanted that, or I’ve had other people who I thought would have benefited from it, and they were just like, ‘Nah.’”

Workflow

Responses relative to integration of the tools into existing processes reflected that users had some difficulty initially, but with increased usage reported improved integration. One clinician reported that she kept a stack of Appointment Aides on her desk so that they were easy to see if she needed one. “If I referred a patient to a subspecialist, then I handed them this piece of paper and I said, ‘It’s sometimes confusing or hard to remember what happens with a consultant, so it might be useful for you to put down some of your questions ahead of time, and here’s a guide that you can use, when you go, to help you with that.’”

Another person responded, when discussing integration of the toolkit, “That idea failed. At first, I was like, ‘Yeah, sounds great. I’ll do that,’ and it became quickly clear that the percentage of time that I was actually sending a patient to a new referral specialty clinic, where this aid would be important to use, was such a small fraction of the patients I was seeing, that it was impossible to keep it in my mind as something I would automatically reach for when the moment was right.” However, this interviewee also mentioned they modified existing workflows in order to ensure the toolkit was used with patients. “The initial failure of me trying to remember to hand it out, failed. But then... the clinic manager [did] quick screening of the referrals that I was making... she was reaching out to people after a visit, if a referral had been made, and was mailing this to them and talking to them on the phone about it. From her perspective, I think that there were good connections made, and that reach made, and it was just the question of how much of her time that that took.”

The pilot testing results showed that the sites were not able to confirm whether or not patients would have new appointments or need support until after the current visit. These findings were used to revise the toolkit and reinforce the importance of understanding current workflows and how steps in current processes could be changed to improve patient engagement and preparation.

Facilitators

The project team posed a number of questions to discover methods that helped the facilities implement the toolkit. One interviewee mentioned, “Having people that I could talk to and bounce stuff off made a difference.” This staff member and several other staff indicated that it would have been helpful had someone from the HRET project team been on site or more readily available to support implementation. HRET project team encouraged sites to build internal support systems to promote efficient and effective toolkit implementation. “I think the staff all worked very well together here with it, a lot of clinician support as well. We do a lot of teamwork, anything that benefits the patient, and that’s our ultimate goal.” Another interviewee mentioned that having evidence of positive outcomes such as improved patient satisfaction from previous implementation projects helped support efforts to implement new tools to support patient safety.

What were facilitators to implementation?

- Clear instructions
- Accessibility of toolkit for patients and staff
- Ease of incorporation into workflow
- Having time available to implement the toolkit
- Feedback from others
- Interdisciplinary approach to implementation

What were barriers to implementation?

- Toolkit length
- Not enough time or staff to implement
- Uncertainty of process owner
- Necessary resources unavailable
- Toolkit did not fit in current workflow
- Redundancy within toolkit and AVS
- Toolkit not accessible for non-English reading patients

Barriers

Length of Toolkit

“It’s long.” While much effort was spent reducing the toolkit to only key components prior to pilot testing, its length remained a barrier for both sites. Interviewees cited the importance of brevity “not just in the workflow of the clinic but, in the life of a high-risk, disengaged, overwhelmed patient.”

Staffing and Time Limitations

Staffing and time limitations were mentioned multiple times by every person interviewed. There was a general sense that patients who would benefit the most from using the tools already required additional time and staff attention and the toolkit materials required even more staff and time to effectively integrate into existing workflows.

As one interviewee mentioned, “patients who really need this, and at the moment when they need it, are likely being seen in a really complex visit, in which there’s a lot of stuff to cover and talk about, and so you’re already out of time, because everything is sort of shoved into these same sort of time slots. So, just this as an additional piece that you’d want to discuss and introduce with a patient is added onto a visit that’s already

too full and time crunched.” Staffing and time were also noted as barriers during project startup and implementation. “It’s very resource intensive on the part of the facility to figure out how to build infrastructure like this...the current state just really doesn’t support the resources that are needed to bill this out.”

Need for Toolkit

Even with the barriers noted above, half of the interviewees liked the toolkit and mentioned the need for materials like the toolkit in their work. As one interviewee stated, “The toolkit itself it’s too lengthy, it’s too cumbersome, and it’s just too much paper, but it’s necessary you know... We got to figure out a way to make this work, because it’s needed.” Staff commented during the interviews that the toolkit length may be ideal, but the length also made it difficult to implement in real-world settings. “This is... very aspirational, in that our current state is so lacking and broken that this is a beautiful dream place that we could get to someday.”

Feedback on Toolkit Content

Staff noted many things that they liked about the toolkit, including specific content and pages. Most staff found “My Medications,” “My Problems,” and “Care Partner Questions” in the Appointment Aide to be very useful. One interviewee found the toolkit in general to be “a recheck way of making sure I get what I want out of the visit and the patient gets what they want out of the visit.”

Fewer than half of staff interviewed used the Engaging High-Risk Patients in Safe Transitions: A Guide to Preparing for New Ambulatory Care Appointments or the Improving Care Transitions: Engaging and Preparing High-Risk Patients. Most staff disliked the design of the Improving Care Transitions: Engaging and Preparing High-Risk Patients and suggested reorganizing it as a checklist. Additionally, many found the graphics to be distracting and not useful across the various components of the toolkit.

Staff at both facilities mentioned duplication between the tools and the AVS or other tools currently in use in their facility. One person stated, “I think that most of the rest of this toolkit is pretty redundant for what’s already in our AVS...the medications, the problems, and the care provider questions.” Another interviewee said “The medications list is great, but we have the after-visit summary.” Staff suggested the Appointment Aide we formatted with tear away pages to allow the facility to customize the tool for individual patient and/or facility use. After hearing this input, the HRET project team reviewed each of the facilities’ AVS and found that the content in the toolkit was rarely duplicative of the content in the AVS.

An interesting finding is that there was some variation between the facility self-assessment of level of support for patient engagement and safe transitions and the actual practices described during site visits and content contained in sample AVS materials.

Patient and Care Partner Feedback

Feedback from patients was limited because few patients returned for follow-up visits during the pilot-testing time period and OMB requirements did not support individual patient interviews. Staff did report that they asked patients about their use of the tool during follow-up phone calls. Feedback varied, but it was predominantly positive. “Of the 12 that I spoke to, 94% of them thought it was a great thing. They talked highly of it and thought it looked really neat, but only two had ever written anything in it.” When patients viewed the Appointment Aide unfavorably, it was because they did not find it useful. As one interviewee reported, “I think I got one, only one negative, like, ‘This really doesn’t help me. The doctor has my chart.’” Another staff member noted:

We called [the patient] and she’s like, “Yeah, yeah. Hang on, let me go get my packet.” Then, she opened it up and she said, “Are you calling me because I missed my appointment this morning?” She had her packet and she had her stuff in there. She opened it up, and her itinerary was right there on the top... So she liked the packet, used it but never looked back at it again, I guess. She still missed her appointment.

Evaluation and Sustainability

Both sites mentioned integrating the toolkit into the AVS as a way to continue implementation of the tools. Additionally, both sites mentioned creative ways to continue using the toolkit such as including the use of the tools in required audit calls or reevaluating what a high-risk transition means for the patients served by the facility. One person mentioned the need for a formative evaluation and a potential plan-do-study-act cycle. As one interviewee stated, “I think just continuous encouragement to the staff of using it. You know it’s one of those things, it’s there, so we need to make use of it and make it work to our advantage.”

Lessons Learned to Share with Other Facilities

During the onsite interviews the staff highlighted a number of lessons learned that would be helpful for other facilities implementing the toolkit. Many of the lessons center around staff time and resources and other barriers ambulatory facilities face when implementing new tools. Multiple interviewees suggested EHR integration is key to successful implementation and sustainment. One interviewee said, “If this was all in the AVS, it would be wonderful. I mean a separate tool for patients may be needed, but ideally having one place for everything would be great.” By integrating the toolkit into the EHR, the interviewee felt the content could more easily be included in the workflow and added, “It has to be something easy. It has to be that this appears right in front of them in the electronic medical record so they can put in their thoughts.”

One interviewee noted the importance of having a team lead or staff member familiar with quality improvement involved in project implementation from the beginning. “It might have helped if there had been someone on site to push, not in a mean way, but to be there to give real-time coaching, observing people as they’re working with... patients to give them feedback on how they’re doing. I liken this to when I used to do quality improvement projects on a nursing unit.”

“We found that it was easier to redo this tool kit and adapt it to fit our needs,” mentioned one staff member. Others agreed and offered additional encouragement when stating, “It’s worth looking at these tools, seeing how they fit you, and it might be in our case, it might be a little while before you get all the feedback that you really want to get on it. It’s not going to be a quick process, but be patient and go the distance; it’s worth it.”

Recommendations for Improvement

In this rapid-cycle improvement project, the project team developed a toolkit for ambulatory care by adapting evidence-based tools designed to promote safe transitions of care and patient engagement in acute care settings, pilot-tested the toolkit in two pilot sites, used qualitative methods to analyze input from pilot sites, and revised the toolkit to support spread among other ambulatory care settings. This project, while applied in a very small sample of ambulatory sites, is one example of how existing evidence-based tools may be adapted to promote patient safety in ambulatory care.

The lessons learned from this project helped inform recommendations for improvement in the toolkit development and implementation and for spread to other ambulatory settings. Based on feedback from the onsite interviews and monthly calls, materials were modified to be more succinct, streamlined, and easier for the facility to modify to meet their needs. Sites noted ways they could integrate the toolkit with the facility's AVS in order to eliminate redundancy and include key concepts in preexisting workflows.

Since education and training are essential to independent implementation of tools, the PowerPoint presentations for site leads and other team members were consolidated into one training. This step reduced staff training time by half and created greater role transparency among team leaders and supporting team members. Since few staff knew how patients were being selected to use the Appointment Aide and not all staff need to select the patients to receive the tool, education was revised to ensure all staff were at least informed of how patients are selected for additional transition of care support in their facility. Staff also recommended the materials reinforce the importance of team sharing and buy-in to reduce frustration and promote group identification of solutions when staff encounter barriers to implementation of new tools.

Steps were added to the implementation process to accommodate the need to test different workflows before scaling up implementation. Staff reinforced the importance of teamwork and shared goals so the pre-intervention assessment was modified to include TeamSTEPPS® for Office-Based Care resources for additional support.¹¹

The project team noted that clinicians should familiarize themselves with billing codes to ensure appropriate reimbursement for services and support, such as use of the toolkit, that promote safe transitions in care.

A few staff members highlighted the importance of using the toolkit not just for its content, but also for its ability to encourage partnerships with patients to enhance patient safety. The project team recommends that the toolkit be used by other ambulatory care teams to carefully examine current processes and reflect on opportunities to demonstrate the principles and practices of patient engagement. This examination can include review of the AVS to be sure it not only includes a medication summary, but it also includes all the components of the medication summary that are contained in the Appointment Aide. It should also be presented in a manner accessible to patients and their care partners.

When asked by staff, patients responded favorably to the Appointment Aide and other materials in the toolkit, but additional work is needed to understand the toolkit's impact on safe transitions of care by examining patient outcomes and additional process improvements. Future work on patient safety in the ambulatory care environment needs to connect the use of toolkits, such as the one developed in this project, with patient safety and quality outcomes. Similarly, any materials developed for this setting should be simple, streamlined, customizable, and visually appealing. Additionally, the development, implementation, and evaluation of any resources for ambulatory care settings should include patients and their care partners.

References

1. Shekelle PG, Sarkar U, Shojania K, et al. Patient Safety in Ambulatory Care Settings, Technical Briefs, No. 27. Report No. 16(17)-EHC033-EF. Rockville (MD): Agency for Healthcare Research and Quality; 2016. <https://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0091575/>.
2. Scholle H, Torda P, Peikes D, et al. Engaging Patients and Families in the Medical Home. AHRQ Publication No. 10-0083-EF. Rockville (MD): Agency for Healthcare Research and Quality; 2010. <https://pcmh.ahrq.gov/sites/default/files/attachments/Engaging%20Patients%20and%20Families%20in%20the%20Medical%20Home.pdf>.
3. Maurer M, Dardess P, Carman L, et al. Guide to Patient and Family Engagement: Environmental Scan Report. AHRQ Publication No. 12-0042- EF. Rockville (MD): Agency for Healthcare Research and Quality; 2012. <https://www.ahrq.gov/sites/default/files/publications/files/ptfamilyscan.pdf>.
4. Hirschman K, Shaid E, McCauley K, et al. Continuity of care. The transitional care model. Online J Issues Nurs 2015 September;20(3). DOI: 10.3912/OJIN.Vol20No03Man01
5. Agency for Healthcare Research and Quality. Strategy 4: Care Transitions From Hospital to Home: IDEAL Discharge Planning. <http://www.ahrq.gov/professionals/systems/hospital/engagingfamilies/strategy4/index.html>. Accessed December 2016.
6. Centers for Medicare and Medicaid Services. Your Discharged Planning Checklist. <https://www.medicare.gov/pubs/pdf/11376-discharge-planning-checklist.pdf>. Accessed September 2017.
7. Walraven C, Wong J, Foster AJ. LACE+ index: extension of a validated index to predict early death or urgent readmission after hospital discharge using administrative data. Open Med 2012 July;6(3):e80-e90. PMID: 23696773.
8. Ramsay R, Labby D. Hospitalization Risk Screening Tool for Primary Care Providers and Teams. <https://www.ihconline.org/media/cms/HARMS-8.pdf>. Accessed September 2017.
9. Jack B, Paasche-Orlow M, Mitchell S, et al. Re-Engineered Discharge (RED) Toolkit. Tool 5: How To Conduct a Post-discharge Follow-up Phone Call. AHRQ Publication No. 12(13)-0084. Rockville (MD): Agency for Healthcare Research and Quality; 2013. <http://www.ahrq.gov/professionals/systems/hospital/red/toolkit/redtool5.html>.
10. Krein L, Harrod M, Collier S, et al. A national collaborative approach to reduce catheter-associated urinary tract infections in nursing homes: A qualitative assessment. Am J Infect Control: 2017. 1-7. PMID: 28807424.
11. Agency for Healthcare Research and Quality. TeamSTEPPS® for Office- Based Care Version. <http://www.ahrq.gov/teamstepps/officebasedcare/index.html>. Accessed September 2017.

Appendix A. Interview Guide

Pre-Interview Briefing

Hi, my name is [NAME] and this is [NAME]. Thank you for agreeing to talk with us today. I will be asking you a few questions about your participation in the project on adapting and implementing patient safety practices in ambulatory care, funded by the Agency for Healthcare Research & Quality. The purpose of the project is to develop a toolkit for use in the ambulatory care setting. The toolkit is meant to provide strategies, tools, and education to help ambulatory care facility staff engage with high-risk patients and their care partners (such as family and friends helping with care) as the patients transition to other ambulatory care facilities. When I say toolkit, I'm referring to all six components of the toolkit [show printouts].

- Pre-intervention Assessment
- Toolkit guide (Engaging High-Risk Patients in Safe Transitions)
- Appointment Aide
- ACF Team tool (Improving Care Transitions: Preparing and Engaging Patients)
- Narrated PowerPoint for team leads
- Narrated PowerPoint for staff

The purpose of this interview is to obtain feedback on what worked well and what didn't in your experience implementing the toolkit components. Information you provide will help us make changes to the toolkit to help other facilities. This interview should take no more than 30-45 minutes of your time.

With your permission, this interview will be audio recorded and we will take notes. Only the researchers at my organization, HRET, will have access to the recording and the notes; the notes and recordings will not be shared with anyone external, including with your facility. Is it okay if I audio record this interview? (Pause to secure a yes or no response).

Your comments may be shared as part of the findings in the final report to the Agency for Healthcare Research and Quality or others. Any findings will be presented in aggregate or de-identified. We will never identify you personally as a source of the comments in the report or in any other project summaries.

You may choose to end the interview at any time or not answer a question for any reason. Do you have any questions before we begin?

Questions

I'll start the interview asking for some general information about you.

1. What is your position?
2. How long have you been in this position?
3. What do you do on a day-to-day basis?

Now, I'd like to talk about this project and how the toolkit was implemented. We'll talk about the specifics of the toolkit later.

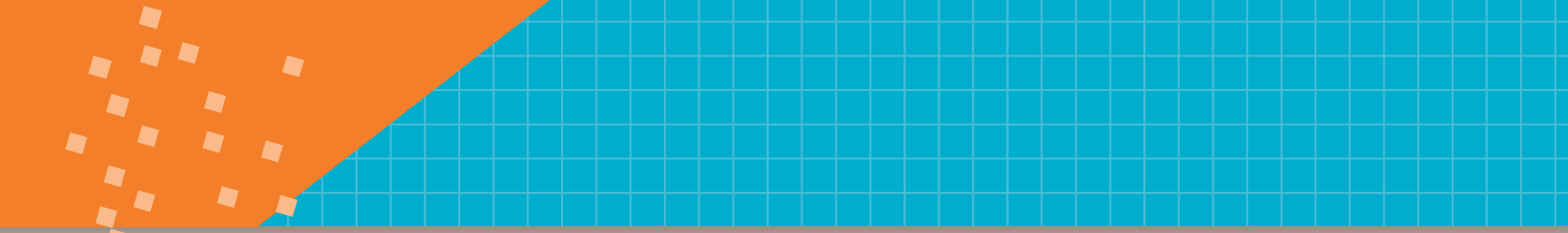
4. How did you first learn about the toolkit?
5. How were you trained to use it?
6. Describe how the toolkit was used in your routine.

7. What helped you use this toolkit?
8. What were some environmental factors that helped you use the toolkit? I am referring to anything in your workplace such as culture or staff that helped make it easier to implement the toolkit.
9. What were some barriers to using the toolkit?
10. How might one overcome some of those barriers?
11. Do you have recommendations on how we could improve implementation?

Now, let's talk about the toolkit itself.

12. Which components of the toolkit have you used?
 - a. Interviewer: check off as respondent provides a response.
13. Describe your experience using the components of the toolkit.
 - a. Clarifier to respondent (if necessary): Your experience could be any interaction you've had with the materials, such as preparing to implement them, using them to prepare for a patient visit, or using them during a patient visit.
 - b. Interviewer: If the respondent has not answered any of the points below, use the following probes:
 - i.. What changes were made in order to incorporate the toolkit into your work?
 - ii. What did you like about the toolkit?
 - iii. What would you change about the toolkit?
14. Would you have preferred additional clarification or instructions in order to use the toolkit? If so, what sections needed additional clarification or instructions?
15. Would you have needed any additional support or resources to use the toolkit? If so, what support or resources would you have needed?
16. Describe how your facility might continue to use the toolkit.
 - a. Interviewer: If the respondent has not answered any of the points below, please use the following probes:
 - i.. What are some of the reasons why you may continue to use the toolkit?
 - ii. What are some of the reasons why you would not continue to use the toolkit?
17. What were any lessons learned that would be helpful for future clinics to know if they wanted to implement the toolkit?
 - a. Clarifier to the respondent: These could be lessons learned about best practices in using the toolkit.
18. What, if any, feedback on the toolkit did you receive from patients and their care partners?
19. Do you have any additional thoughts about the toolkit?

These were all the questions for today. Thank you for your time.



AHRQ Pub. No. 18-0008-1-EF
December 2017

www.ahrq.gov