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Improving Nursing Home Patient Safety in Maine: A Review of the AHRQ Patient Safety Culture survey Implementation Process

Andrea Fenner-Koepp
University of Southern Maine, Muskie School of Public Service

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Capstone Report

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Abstract

Background: An organization's patient safety culture has a powerful influence on the behaviors, strategies, and clinical outcomes of healthcare organizations. The Agency for Healthcare Research & Quality (AHRQ) Patient Safety Culture Survey has been deemed an effective tool for assessing patient safety culture and driving improvement initiatives. There has been little done to assess the quality of patient safety culture in long-term care facilities and, specifically, Maine has not collectively established baseline measures of patient safety culture in nursing home. This capstone reviews the implementation process of the AHRQ Patient Safety Culture Survey in five rural nursing facility pilot sites.

Methods & Results **:** The demonstration assessed the patient safety culture and reported results on the individual and aggregate level and compared scores to national benchmarks. An evaluation of the survey process was conducted and concluded that rural facilities may lack the organizational tools and fiscal resources to effectively use the survey to drive quality improvement and evaluate initiatives overtime.

Conclusions: An implementation process tool which highlights the intervention action planning process was created. In order to create formal patient safety benchmarks for nursing facilities in Maine, the Maine Health Care Association will continue this demonstration project expanding it to other nursing facilities. In addition, the development of user-groups will allow for peer communication, engagement, and learning as well as the ability for rural facilities to obtain technical assistance from stakeholders.

Introduction

Purpose

The Institute of Medicine recommends the development of patient safety culture to assist healthcare organizations in improving patient safety and clinical outcomes. As the awareness around patient safety culture continues to grow, the need for tools to assess the climate of patient safety attitudes in organizations also continues to increase outcomes (Jardali et. al, 2011). Assessments, such as the Agency for Healthcare Research and Quality (AHRQ) Survey on Patient Safety Culture, focus on key areas that affect patient safety culture such as leadership, communication, and teamwork, and assist health care organizations in the identifying areas for patient safety improvement.

The Affordable Care Act (ACA) contains provisions for establishing and implementing a Quality Assurance and Performance Improvement (QAPI) program for nursing facilities. The program includes the establishment of regulations and provides technical assistance to facilities to reach these standards. The new standards significantly expand the scope of required QAPI activities required to ensure continuous identification and correction of quality deficiencies. In addition, this new regulations require each nursing home to submit an action plan that identifies how the facility will meet new QAPI standards, meet best practice guidelines, and coordinate and implement QAPI initiatives. The new program was scheduled to begin on December 31, 2011. The level of technical assistance the program will provide to facilities is unclear. Therefore, nursing facilities should be prepared to create their own action plan and assess quality to meet new QAPI standards. The administration of the AHRQ Patient Safety Culture Assessment and the identification of improvement initiatives can assist facilities in meeting new QAPI guidelines as set forth in the ACA.

Project Goals & Objectives

In Maine, nursing homes have not collectively established baseline measures of patient safety culture within their facilities. The lack of baseline limits nursing homes from assessing and comparing quality on a facility, regional, and national level. The objective of this capstone is to effectively demonstrate the use of the AHRQ Patient Safety Culture Survey in a sample of nursing facilities. The assessment evaluates the perceived patient safety culture of the organization and helps the facility identify areas for improvement. This project will not only allow these facilities to establish internal and external benchmarks for quality and patient safety performance, but will also assist the facilities in complying with new QAPI guidelines. The final analysis will include an overview of the perceived best practices used in implementing the survey as well as an improvement tool that explains how to use the results to drive quality improvement.

Literature Review

Background

In healthcare, an organization dedicated to patient safety culture is defined as:

> "The safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization's health and safety management" (Sammer et. al 2009).

An organization's patient safety culture has a powerful influence on the behaviors, strategies, and attitudes towards medical errors and clinical outcomes of a healthcare organization (Clancy 2011). The assessment and development of a

positive patient safety culture is the first step in improving patient safety for an organization.

According to the literature, some of the major predictors of a healthy patient safety culture include communication founded on trust, accurate information flow, shared perception of the importance of safety, organizational learning, commitment from senior leadership, and a just culture environment that recognizes errors as the result of system rather than individual failure (Jardali et.al 2011). These organizational characteristics, as assessed with different tools, are most prevalent in healthcare organizations with fewer adverse events (Mardon et.al 2010).

There are a variety of tools to evaluate patient safety culture, but the Agency for Health Research and Quality (AHRQ) developed the Patient Safety Culture Survey based on evidenced-based research identifying the predictors of patient safety culture (Singala 2006). The AHRQ Patient Safety Culture Assessment survey tool uses twelve core domains and associated questions to evaluate a nursing facility's level of safety culture. Within those twelve domains, additional sub-categories and themes may be identified; such themes have been components of evidence-based demonstration programs to reduce errors and improve clinical outcomes. The assessment of patient safety culture within an organization is recognized as an important precursor to assessing and improving overall patient safety within an organization (Pronovost and Sexton, 2011). Therefore, it is important for healthcare leaders and clinicians to prioritize patient safety initiatives in association with the sub-components of the patient safety culture framework if they are looking to improve clinical outcomes.

While patient safety culture has been extensively studied in hospitals, there has been little done to assess the quality of patient safety culture in long-term care facilities. Studies indicate that nursing home patient safety culture is poorly developed and, as a result, residents of nursing homes may be at the risk of harm (Thomas et.al 2012, Wagner 2009). One of the most unique characteristics of nursing facilities is that most resident care is provided by Certified Nursing Assistants (CNA's) under the supervision of Licensed Nurse Practitioners (LPN's) and Registered Nurses (RN's). Physicians are rarely onsite in nursing facilities so communications regarding patient care are usually done via phone which significantly change the care structure resident's receive. In addition to the different care model provided in nursing homes, nursing facilities are highly regulated which creates a punitive environment for making mistakes and many facilities fear transparency (Bonner et.al 2010, Hughes & Lapane 2006). Moreover, the limited literature on the assessment of nursing home patient safety culture suggests that it is extremely difficult to implement quality improvement initiatives. This highly regulated environment that, at times, prohibits innovative process change (Hughes & Lapane 2006).

The AHRQ Nursing Home Patient Safety Culture Survey is the only survey that has been rigorously tested and contains patient safety culture domains specific to the needs of nursing homes. The survey collects the perceptions of all clinical and non-clinical staff in the nursing home. The view of the CNA is particularly important because they serve as primary care givers to residents.

The AHRQ Patient Safety Culture Survey has been used to effectively plan, implement, and evaluate quality improvement initiatives. Jones & Colleagues demonstrated the hospital survey in 24 rural critical access hospitals. The results of the survey were used

to establish baseline measures and drive interventions within the identified areas of improvement (Jones et.al 2008).

Implications of the Literature

Patient safety culture assessments are used in healthcare organizations to: 1) to identify areas for improvement and raise awareness about patient safety; 2) evaluate and track patient safety interventions; 3) conduct internal and external benchmarking; and 4) uphold regulatory requirements (Nieva & Sorra 2003). The use of patient safety culture assessments have been limited in Maine nursing facilities. This capstone and the administration of the AHRQ Patient Safety Culture Survey covers all four of the parameters indicated by Nieva & Sorra. Each nursing facility pilot site will be provided with assessment data. This data may then be used to plan and implement improvement activities to enhance patient safety culture & clinical outcomes.

Materials & Methodology

Participants

The pilot sites for the AHRQ Patient Safety Culture Assessment included nursing facilities participating in an existing research demonstration project, *Standardizing Admissions for Elderly Residents* (SAFER) at the Muskie School of Public Service. The SAFER project aims to improve the resident handoff and transfer process from the nursing home to hospital emergency room by involving all care partners including the EMS provider. There are 11 nursing facilities participating in the SAFER pilot sites. All were contacted and offered the opportunity to participate in the Nursing Home Patient Safety Culture Survey. Five out of eleven nursing facilities, all in rural communities, and ranging in size from 30 to 95 employees agreed to participate. The administrator of the nursing home served as the

contact person for each facility. In addition, the Director of Quality of the Maine Healthcare Association participated as an external stakeholder for this project and provided consulting technical assistance for those who wished to use this survey as a means to comply with QAPI guidelines.

The use of human subjects in the survey process required an IRB application. An exemption for IRB review was granted and all necessary precautions were taken to protect the anonymity of the participants and facilities involved.

Survey Dissemination & Materials

The Patient Safety Culture Survey was disseminated in paper based format, as recommended by AHRQ for nursing facilities (see Appendix A). Given the rural location and limited resources of the participating facilities, using an online survey tool, such as Survey Monkey, was not an appropriate option to ensure a high response rate. In the original recruitment materials, the Muskie School indicated the project would be "no-cost" to the participating facilities and all materials would be provided.

In addition to providing all materials, a grant project provided a $100 gift certificate to each facility which was to be used as an incentive to increase employee participation in the form of a raffle. Each of the five facilities were given a survey dissemination kit that included the following: a secure collection box, pre-paid postage to mail collection box back to the Muskie School, a $100 gift card, a separate collection box for raffle tickets, a survey process guide outlining instructions (See Appendix E), and survey packets for each employee which encompassed the actual survey, a letter requesting participation (See Appendix F), a raffle ticket, and an envelope to seal the completed survey.

Data Collection

The facilities were encouraged to choose the survey distribution process that worked best for their facility. They were, however, asked to engage all employees to participate in the survey process regardless of position, length of employment, or how often they worked. In addition, administrators were advised to allow employees approximately 10 days to complete the survey, as previous survey experience has indicated 7 days to be too short and 2 weeks to be too long.

Surveys were collected in a secured box at each facility. At the end of the survey collection process, the administrator mailed the box back to the Muskie School without viewing the contents. Once the survey boxes were received they were kept in a secure location in order to maintain compliance with IRB protocol.

Survey results for each facility were entered into a database provided by AHRQ. Individual reports were created for each facility as well as aggregate results to be shared with the all pilot sites as baseline for the state of Maine. Within each report, national benchmarks were used to compare each facilities scores. These benchmarks[1] were based on the 2011 Nursing Home Survey Comparative Database Report created by AHRQ. The report provides aggregate scores for all nursing homes that chose to submit the Patient Safety Culture Survey Results.

Upon completion of the survey, each facility was given an evaluation form See Appendix B). This evaluation tool provides qualitative observations regarding the survey administration process and is an important driver to future recommendations and an improvement tool.

[1] Benchmarks used were not based on evidence based practices, rather, national aggregate Patient Safety Culture Survey results from 2011.

Findings

Aggregate Results

A total of 359 surveys were disseminated to employees of the participating nursing facilities with an overall response rate of 73%. The AHRQ 2011 comparative results response rate was 65%. While all employees were invited and encouraged to participate in the survey, the majority of respondents were Certified Nursing Assistants or Nurses Aides with a response rate of 46 %. In addition, 65% of respondents have had tenure of 3 years or more with the nursing home, and 78% of respondents worked 25 hours or more per week. The average bed size of the participating facilities was 43.

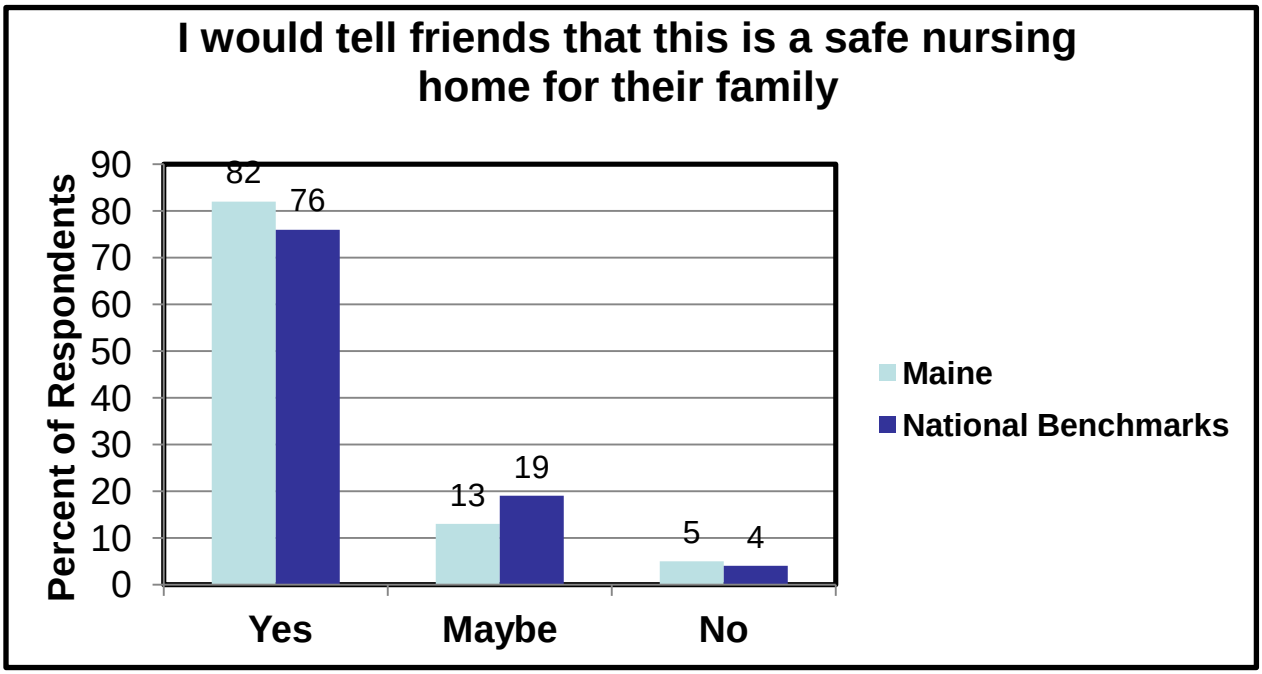
Table 1.1 compares the Maine aggregate results with the 2011 comparative database for the twelve culture domains tested in the AHRQ Patient Safety Culture Survey. The overall strengths in Maine corresponded highly strengths of the national benchmarks which include: Overall Perceptions of Resident Safety, Feedback and Communication about Incidents, and Supervisor Expectations Promoting Patient Safety. Areas for improvement for the Maine pilot sites were also consistent with the 2011national benchmarks and include Handoffs, Communication Openness, Nonpuntive Response to Mistakes, and Staffing.

The Patient Safety Culture Survey includes two questions that provide an overall rating of the facility's patient safety culture. Figure 1.1 displays the results for the question addressing the employee's willingness to recommend their facility to friends; 82% of employees who participated in the survey indicate they would recommend the facility they worked in. This ranks above the national benchmark of 76%.

Table 1.1

Patient Safety Culture Area	Maine NF Average % Positive	2011 Comparative Benchmarks: Average % Positive
1. Overall Perceptions of Resident Safety	88	86
2. Feedback and Communication About Incidents	83	84
3. Supervisor/Manager Expectations and Actions Promoting Patient Safety	76	79
4. Organizational Learning	67	72
5. Management Support for Resident Safety	64	71
6. Training and Skills	69	69
7. Compliance With Procedures	65	64
8. Teamwork	66	64
9. Handoffs	55	61
10. Communication Openness	54	56
11. Nonpunitive Response to Mistakes	58	52
12. Staffing	54	51

Figure 1.1



Individual Facility Results

Nursing Facility 1, Bed Size: 0-49

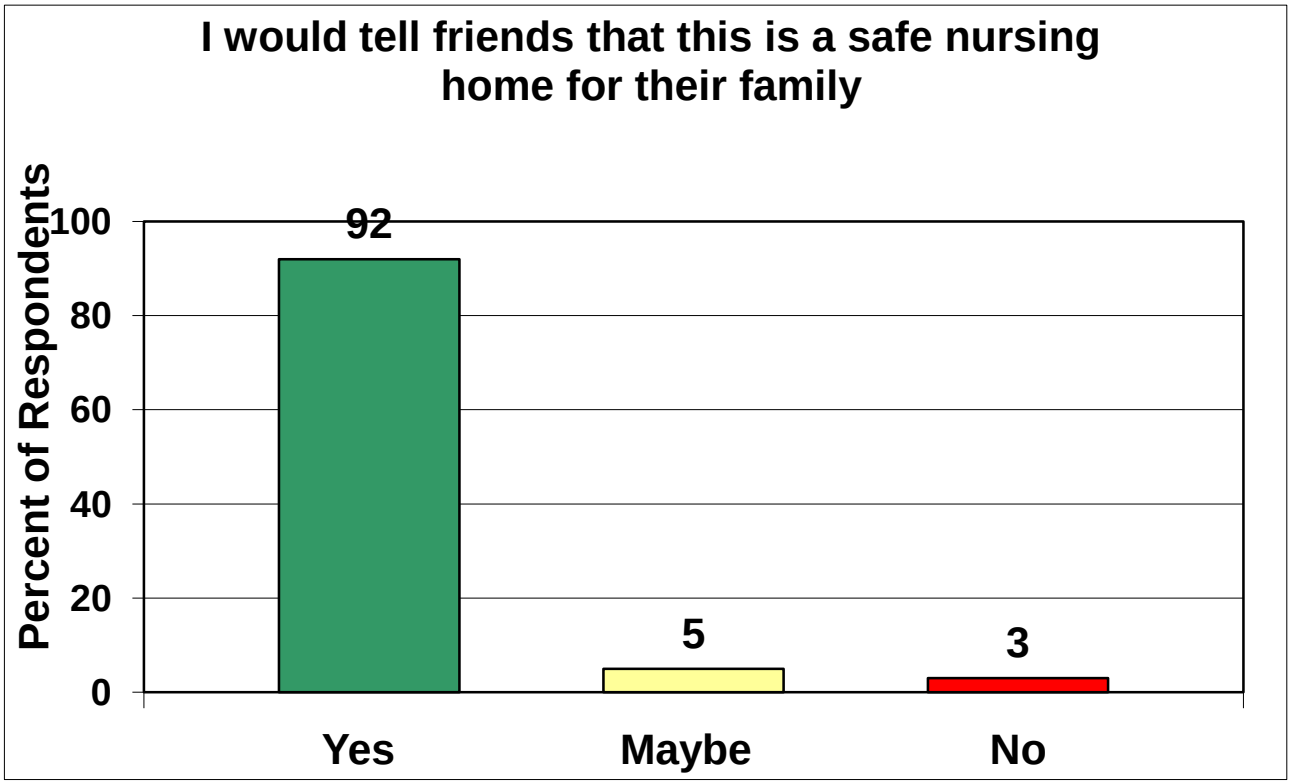
Nursing Facility 1 distributed 82 surveys to employees, with a response rate of 93%. Similar to the aggregate results, Certified Nursing Assistants and Nurses Aides accounted for the majority of survey respondents, although, they only accounted for 39% representing a more equitable distribution between other positions.

Areas of patient safety culture identified as strengths in Nursing Facility 1 were consistent with the overall strengths: Overall Perceptions of Resident Safety, Feedback and Communication about Incidents, and Manager Actions Promoting Patient Safety. In addition, Organizational Learning and Training and Skills were areas of particular strength in Nursing Facility 1 with scores slightly above the benchmarks. Areas of improvement were also consistent with the aggregate results: Communication Openness, Nonpunitve response to Mistakes, and Staffing; the exception was Handoffs which, at Nursing Facility 1, was 5 and 11 percentage points above the aggregate and national benchmarks respectively (as shown in Table 2.1). Finally, Figure 2.1 depicts the employees' of Nursing Facility 1's willingness to recommend the facility; 92% responded yes, which is more than 15 percentage points above the national benchmark.

Table 2.1

Patient Safety Culture Area	Nursing Facility 1 % Positive	Maine NF Average % Positive	2011 Comparative Benchmarks: Average % Positive
1. Overall Perceptions of Resident Safety	95	88	86
2. Feedback and Communication About Incidents	89	83	84
3. Supervisor/Manager Expectations and Actions Promoting Patient Safety	75	76	79
4. Organizational Learning	73	67	72
5. Management Support for Resident Safety	68	64	71
6. Training and Skills	73	69	69
7. Compliance With Procedures	67	65	64
8. Teamwork	65	66	64
9. Handoffs	66	55	61
10. Communication Openness	54	54	56
11. Nonpunitive Response to Mistakes	53	58	52
12. Staffing	55	54	51

Figure 2.1



Nursing Facility 2, Bed Size: 50-99 Beds

Nursing Facility 2 disseminated 82 surveys to employees with a response rate of 62 %. Over 50 % of respondents were Nursing Aids or Certified Nursing Assistants.

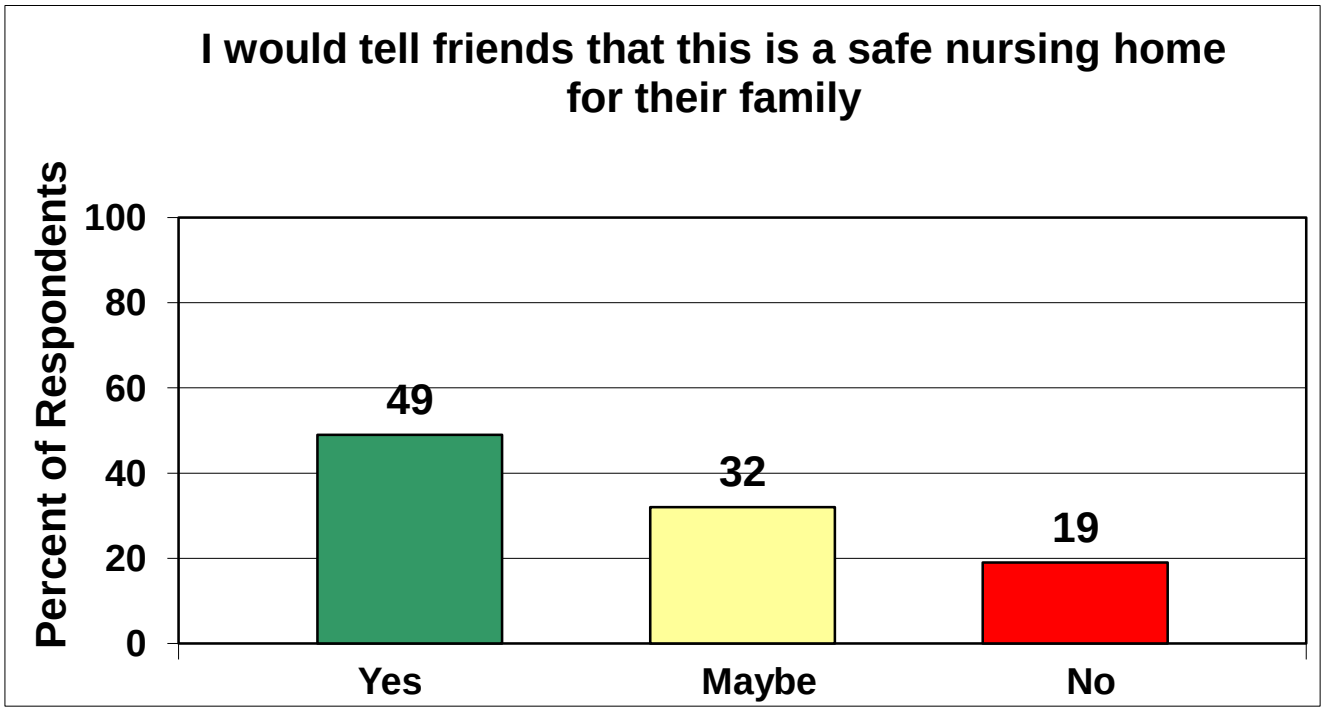
As depicted in Table 3.1, Nursing Facility 2 scored below the aggregate scores and the 2011 comparative results in every domain of patient safety culture. Although the scores were lower than national benchmarks, the domains with the highest scores included: Overall Perceptions of Resident Safety, Manager Actions Promoting Patient Safety, and Feedback & Communication about Incidents; these domain strengths was consistent with the aggregate results. Areas for improvement included Staffing, Communication Openness, Handoffs, Organizational Learning, and Management Support for Resident Safety. These domains differed from the aggregate results, as Organizational Learning & Management Support for Resident Safety were specific to Nursing Facility 2. In addition, Nonpunitive Response Mistakes, which was an area for improvement in the aggregate results, was the fourth highest positive scoring domain for Nursing Facility 2.

Figure 3.1 displays the results of Nursing Facility 2's employees' willingness to recommend their facility to friends. They scored substantially below the national benchmark as well as the aggregate Maine results with only 49% of employees responding "yes." Survey comments indicated there was a substantial change in staffing and administration within the last six months; this could account for the low scores within the Patient Safety Culture domains and willingness to recommend.

Table 3.1

Patient Safety Culture Area	Nursing Facility 2 % Positive	Maine NF Average % Positive	2011 Comparative Benchmarks: Average % Positive
1. Overall Perceptions of Resident Safety	60	88	86
2. Feedback and Communication About Incidents	57	83	84
3. Supervisor/Manager Expectations and Actions Promoting Patient Safety	69	76	79
4. Organizational Learning	35	67	72
5. Management Support for Resident Safety	35	64	71
6. Training and Skills	43	69	69
7. Compliance With Procedures	40	65	64
8. Teamwork	40	66	64
9. Handoffs	27	55	61
10. Communication Openness	34	54	56
11. Nonpunitive Response to Mistakes	50	58	52
12. Staffing	37	54	51

Figure 3.1



Nursing Facility 3, Bed Size: 0-49

Nursing facility 3 was the smallest of the facilities participating in the pilot sites. All surveys were disseminated to staff with a response rate of 87%. Over 80% of respondents were either Nursing Assistants (58%) or Licensed Nurses (23%).

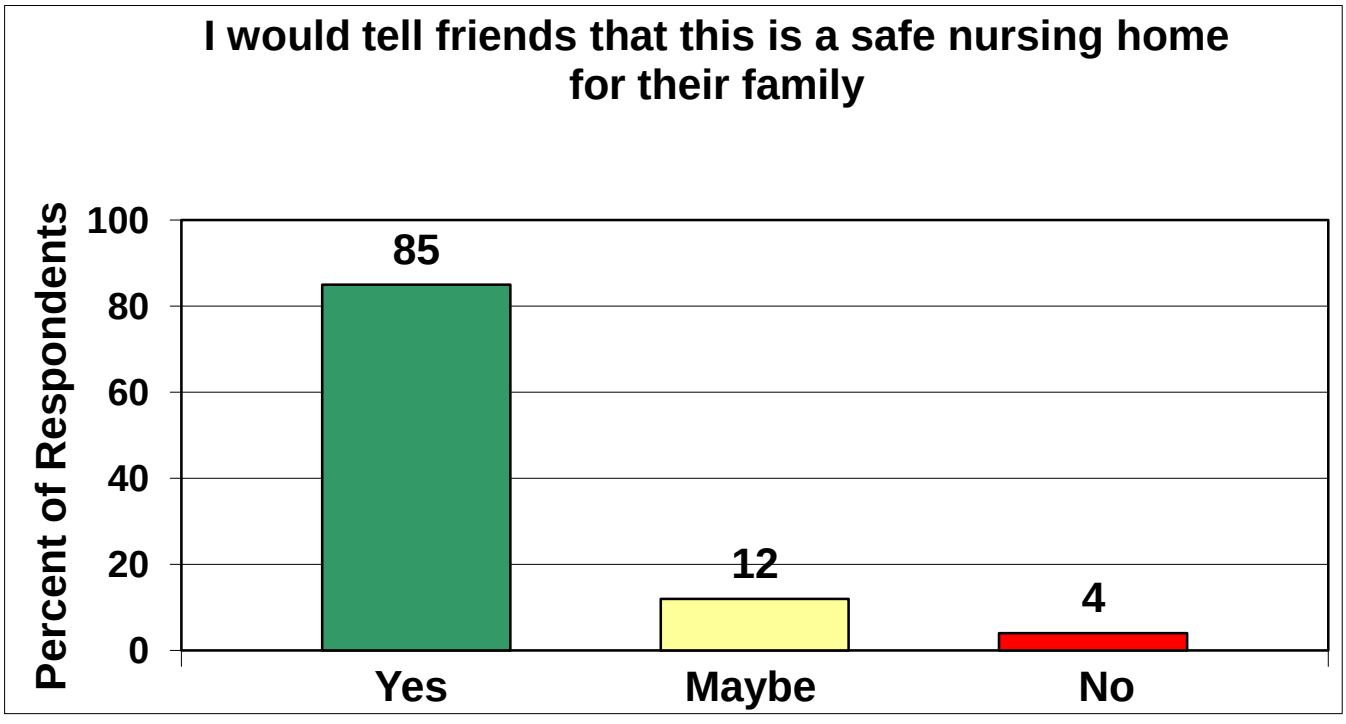
Areas of strength for Nursing Facility 3 included: Overall Perceptions of Resident Safety and Feedback and Communication About Incidents, which were consistent with the aggregate Maine results and comparable to the national benchmarks. Table 4.1 displays the strengths that were unique to Nursing Facility 3 were Training & Skills and Compliance with Procedures; Compliance with Procedures was particularly high in this facility and was not exhibited in any other pilot sites. Although below the national benchmarks and aggregate results, the areas of improvement were consistent with the other facilities and included Handoffs, Communication Openness, Nonpunitive Response to Mistakes and Staffing.

Although Nursing Facility 3 scored low in the areas for improvement, Figure 4.1 displays the staff's willingness to recommend the facility to friends: 85% responded yes to the question, which is consistent with the aggregate Maine results and above the national benchmark of 76%.

Table 4.1

Patient Safety Culture Area	Nursing Facility 3 % Positive	Maine NF Average % Positive	2011 Comparative Benchmarks: Average % Positive
1. Overall Perceptions of Resident Safety	90	88	86
2. Feedback and Communication About Incidents	87	83	84
3. Supervisor/Manager Expectations and Actions Promoting Patient Safety	60	76	79
4. Organizational Learning	63	67	72
5. Management Support for Resident Safety	60	64	71
6. Training and Skills	68	69	69
7. Compliance With Procedures	72	65	64
8. Teamwork	69	66	64
9. Handoffs	30	55	61
10. Communication Openness	42	54	56
11. Nonpunitive Response to Mistakes	47	58	52
12. Staffing	42	54	51

Figure 3.1



Nursing Facility 4, Bed Size: 0-49 Beds

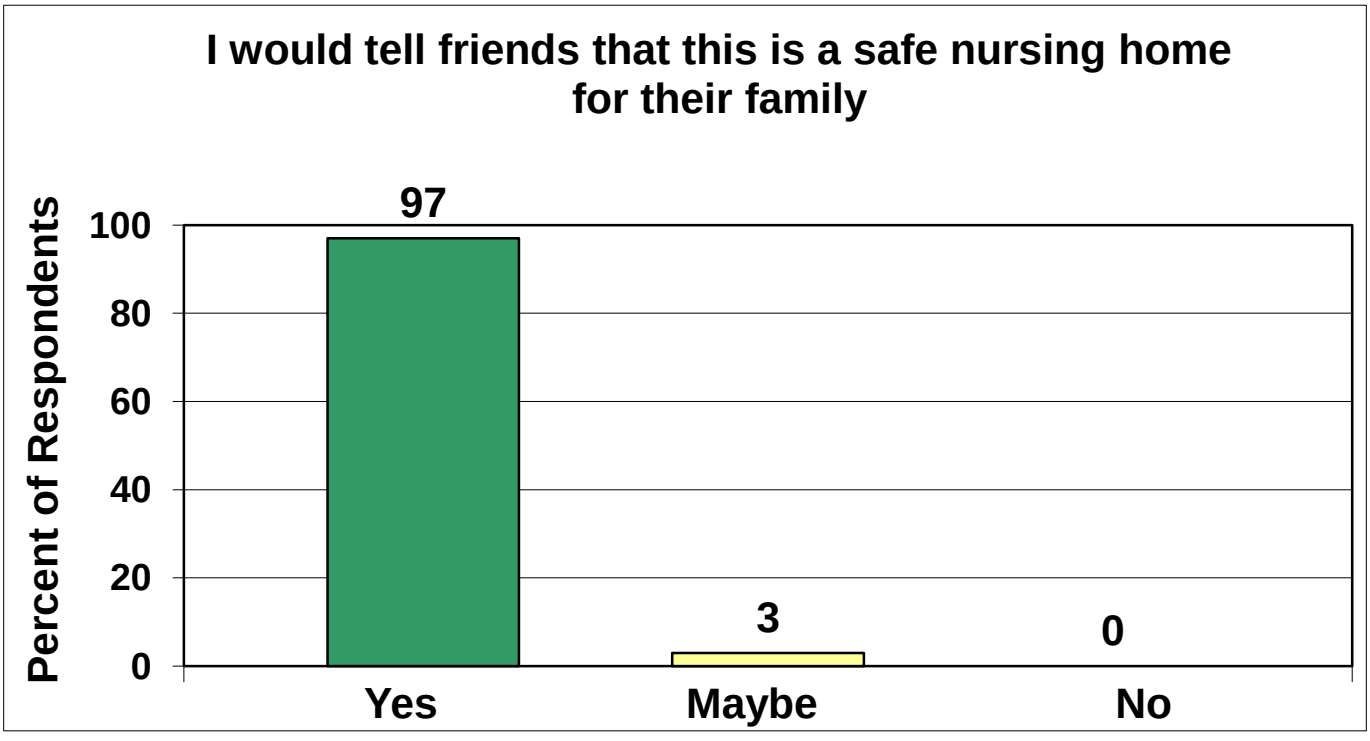
Nursing Facility 4 had the lowest response rate of 59 % out of 64 total surveys disseminated to staff. Table 5.1 displays the results for each area of patient safety culture. Similarly to the aggregate results, the strengths of Nursing Facility 4 included: Overall Perceptions of Resident Safety, Feedback & Communication about Incidents, Manager Actions Promoting Patient Safety, and unique to this facility, Teamwork emerged as strength. It is noteworthy that Nursing Facility 4 scored above the national benchmarks and aggregate Maine results in all patient safety culture domains, and received a rating of 99% positive in Overall Perceptions of Resident Safety.

Areas of improvement include: Communication Openness, Nonpunitve Response to mistakes, and Staffing, which are consistent with the Maine aggregate results. Figure 5.1 displays the overall willingness to recommend, and Nursing Facility 4 had 97% of staff members respond “yes;” these results were well above the Maine aggregate and national benchmarks.

Table 5.1

Patient Safety Culture Area	Nursing Facility 4 % Positive	Maine NF Average % Positive	2011 Comparative Benchmarks: Average % Positive
1. Overall Perceptions of Resident Safety	99	88	86
2. Feedback and Communication About Incidents	91	83	84
3. Supervisor/Manager Expectations and Actions Promoting Patient Safety	85	76	79
4. Organizational Learning	83	67	72
5. Management Support for Resident Safety	76	64	71
6. Training and Skills	80	69	69
7. Compliance With Procedures	79	65	64
8. Teamwork	88	66	64
9. Handoffs	71	55	61
10. Communication Openness	62	54	56
11. Nonpunitive Response to Mistakes	69	58	52
12. Staffing	62	54	51

Figure 5.1



Nursing Facility 5, Bed Size: 50-99

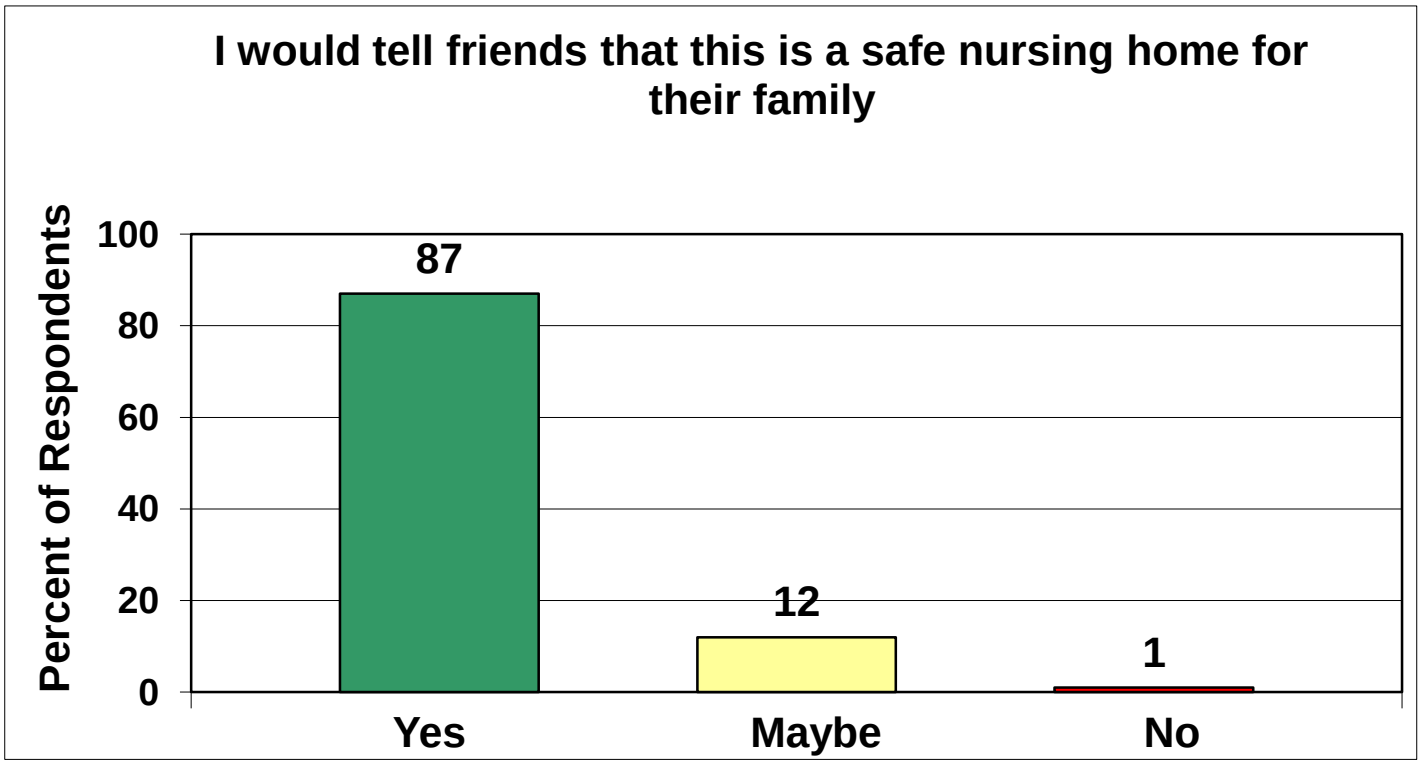
Nursing Facility 5 administered 98 surveys to all staff members and had an overall response rate of 70%. As with the other facilities, Nurses Aides/Certified Nursing Assistants accounted for the majority of survey respondents; however, the remaining respondents were fairly evenly distributed between other staff members including direct and non-direct care workers.

Similar to Nursing Facility 4, Nursing Facility 5 also scored above the Maine aggregate and national benchmarks in each patient safety culture domain. The strengths for Facility 5 (displayed in Table 6.1) include: Overall Perceptions of Resident Safety, Feedback and Communication about Incidents, and Manager Actions Promoting Patient Safety which are consistent with the Maine aggregate results, as well as Training and Skills and Organizational Learning. These domain strengths were unique to this facility. . Areas for improvement were consistent with the Maine aggregate results and included: Handoffs, Communication Openness, Nonpunitive Response to Mistakes, and Staffing. Finally, Figure 6.1 depicts the results of the employees' willingness to recommend the facility to friends; 87% responded yes, this was more than 10 percentage points above the national average.

Table 6.1

Patient Safety Culture Area	Nursing Facility 5 % Positive	Maine NF Average % Positive	2011 Comparative Benchmarks: Average % Positive
1. Overall Perceptions of Resident Safety	95	88	86
2. Feedback and Communication About Incidents	92	83	84
3. Supervisor/Manager Expectations and Actions Promoting Patient Safety	84	76	79
4. Organizational Learning	77	67	72
5. Management Support for Resident Safety	76	64	71
6. Training and Skills	79	69	69
7. Compliance With Procedures	71	65	64
8. Teamwork	75	66	64
9. Handoffs	64	55	61
10. Communication Openness	67	54	56
11. Nonpunitive Response to Mistakes	67	58	52
12. Staffing	67	54	51

Figure 6.1



Qualitative Observations

Survey participants had the option to provide comments to expand on their answers or highlight specific strengths or weakness as it relates to patient safety culture in their facility. Of the 263 surveys that were collected, 25% of respondents provided comments. A formal qualitative analysis of the open-ended comments was not conducted, but some general themes were noted. Survey respondents expressed concerns over staffing levels, although, many acknowledged that the problem was at the state policy level. In addition, many noted their discontent with organizational communication and management not listening to front-line staff. The survey comments were given to facility administrators for the purpose of targeting potential improvement initiatives. A very small portion of survey comments needed to be removed or blinded to protect the anonymity of survey respondents and those mentioned in the comment narrative.

As indicated by the Survey Process Record (See Appendix B) each facility completed, the survey distribution process varied between locations; some chose to distribute surveys with paychecks, others chose to leave them in a central location for staff to pick-up at their own discretion, and one facility administrator hand delivered the survey to each employee. Facilities that chose to distribute surveys with pay checks or hand deliver the surveys had higher response rates than those that allowed employees to pick-up surveys.

As directed in the AHRQ Patient Safety Culture User Guide, a crucial part to the survey implementation process is communicating survey results to staff members. The evaluation process, which included a form and a formal conversation with facility administrators, was used to collect this information. Handoffs were an area for

improvement in 4 out of 5 facilities; staff were surprised by these results, as many of the facilities indicated this had been a targeted area for improvement in the past.

All facility administrators indicated that they feel the large response rate was due to an outside party coordinating the survey process. In phone conversations, administrators and Directors of Nursing expressed concern over the generalized questions of the survey and their ability to use it to drive improvement. Finally, some facilities were concerned about the financial resources they feel would be necessary to address some of the issues that may be contributing to low scores.

Discussion

Analysis

One of the most interesting findings of the survey was the identified areas for improvement. The first and only Comparative Database Report for the Nursing Home Survey on Patient Safety Culture indicated areas for improvement on a national level including Handoffs, Nonpunitive Response to Mistakes, and Staffing. Both the Maine nursing facilities' aggregate and individual facility results identified similar areas for improvement. Coincidently, these were also areas of improvement for hospitals who participated in the Hospital Patient Safety Culture Survey as indicated by the 2011 Comparative Data Base Report. This indicates that these issues, nonpunitive response to mistakes, handoffs, and staffing, are system-wide and affect all settings of healthcare.

While handoffs were an issue among most of the nursing facilities, there was one nursing home (Nursing Facility 4) that did not identify this as an area for improvement and scored 10 and 16 points higher than the Maine aggregate and national benchmarks respectively. There may be a number of reasons for these results. The first reason might be

that this nursing facility is owned by a corporate firm, which may allow the facility to have more financial resources dedicated to quality improvement. In addition, this nursing facility is directly affiliated with the local hospital; the head of Geriatrics for the hospital serves as Medical Director for the nursing home. This connection could allow for smoother transitions to and from the hospital, as well as a more cohesive flow of information across settings.

The 2011 Comparative Database Report indicated that smaller nursing facilities, with a bed size of 49 or fewer, scored above average in 10 out of 12 patient safety domains. This was true as well for the Maine aggregate results where the average bed size was 43 and the results indicated above average scores for 10 out of 12 of the patient safety culture domains; Handoffs and Communication Openness were the two areas that scored below average. Nationally, among smaller nursing facilities with 49 beds or fewer, 88% of staff would recommend the facility to a friend. The Maine aggregate results were below that average with only 83%. Individually, Nursing Facility 4 and Nursing Facility 1 scored above 88% with scores of 97 and 92% respectively. Nursing Facility 2 was the largest of the facilities (60 beds) and had the lowest scores in willingness to recommend and did not exceed the Maine aggregate or national averages in any category. These results, however, could have been a result of other influencing factors such as a recent change in administration as indicated by survey comments.

Finally, the survey evaluations and post-survey interviews revealed important information regarding staff perceptions of the survey, the results, and future improvement initiatives. Administrators and Directors of Nursing perceived that the survey asked very general questions, and they felt it may be difficult to implement improvement initiatives

based on the questions asked. In addition, there was a large concern among facilities regarding financial resources. Many felt it may be difficult to implement improvement initiatives on a limited budget, as well as continue the survey process in the future.

Implementation Barriers

There were several survey implementation barriers, and unique characteristics to be taken into consideration when replicating the survey dissemination process. One of the largest and most apparent challenges was the lack of resources these small rural facilities had at their disposal. In the initial implementation and recruitment stages, it was apparent that many of these facilities have limited internet access, and some facilities do not have company email addresses. This made the communication process extremely challenging and the inability to conduct the survey via online survey management systems extremely apparent.

The survey was conducted in a paper-based format. It was extremely important to the success and response rate of the survey to provide all survey materials to each facility. These materials included survey packets for each participant, instructions, and postage to return materials to the Muskie School of Public Service. In addition, the $100 gift card raffle at each facility contributed to the above average response rate. Previous demonstrations of the AHRQ Patient Safety Culture Survey in rural hospitals have indicated that the highest response rate was achieved when incentives or gifts were made available to participants (Klinger, et.al 2009). It is important to note that these are important drivers to receiving adequate response rates and should be continued if replicated in the future.

The small size of each facility had an effect on the break-down of the results as well as maintaining anonymity of each respondent. Survey comments indicated that many staff

members were concerned with indicating their position within the nursing facility and the shift they work; they felt it may identify them given the small staff size. As a result, many staff members did not provide demographic information which made it difficult to break results down by shift and position. The survey database will not categorize results by position, shift, or unit unless there are five respondents in a category; this is an important limitation to note for smaller facilities.

Conclusions & Future Steps

Summary

The AHRQ Nursing Home Patient Safety Culture Survey is an effective tool for assessing patient safety culture and is used to inform quality improvement initiatives. In Maine, nursing homes have not collectively established benchmark measures for patient safety culture. The implementation of this survey in five rural pilot sites was the first step in successfully establishing benchmarks. The survey yielded important information both about the survey process as well as the results.

The results from these five facilities revealed that in 10 of 12 patient safety culture domains, these Maine facilities scored above the national benchmarks. Individually, results differed slightly for each facility but overall areas of strengths and improvement were consistent with the Maine aggregate and national results. Based on the facility evaluations, it is important that management and have some clarity in how to use the survey to guide improvement initiatives. In addition to action planning for future improvement, it is important that facilities are dedicated to replicating the survey in the future to establish appropriate benchmarks on a local and individual level.

Improvement Process Tool

The survey findings and follow up discussion indicated a need for facilities, especially smaller rural facilities, to have a tool that outlines the action planning process and how to use the results to guide quality improvement. The improvement process tool (see Appendix D) incorporates the need for communicating results to staff and assuring their perceptions of the needs of the organization actually meet the current policies and procedures that are in place. Another important highlight of the improvement tool is the benefit of creating "small wins" when implementing quality improvement initiatives. For example, it is important to refine processes and educate employees before instilling new technologies, processes, or procedures. Finally, the ability to continue the process in the future and measure improvement is instrumental in benchmarking and evaluating success, especially in facilities with limited resources.

Future Steps

As noted, the lack of resources available to rural nursing facilities is a limitation to continued benchmarking throughout the state and individual facilities. The documented survey process for the Maine sites reveals that having an outside resource facilitating the survey implementation was a large contributor to the success in each facility. To ensure future success, the Nursing Home Patient Safety Culture Survey Pilot Project has been handed off to the Maine Health Care Association, the external stakeholder in the project.

The Director of Quality of the Maine Health Care Association has been actively involved in the project and will work to guide improvement initiatives at each facility. Within the next two months a users-group workshop will be available for the participating facilities. The users-group workshop will include an opportunity for each facility to share

with the other facilities improvement initiatives they are doing in their organization. This transparency of results and sharing of information will allow rural facilities with limited resources the opportunity to learn from each other and discuss similar problems. In addition to sharing improvement ideas, the Maine Health Care Association will provide resources and training on how to improve areas that consistently score low in the patient safety culture survey, such as Handoffs, Communication Openness, Staffing, and Nonpunitive Response to Mistakes. User-groups have been a critical component of patient safety culture demonstration projects and have provided an effective format for rural facilities to report results, communicate and engage peers, and obtain technical assistance from stakeholders (Tupper et.al 2008).

In addition to providing an immediate action planning workshop, a preliminary action plan that facilitates the continuation of measuring patient safety culture for individual facility and local benchmarking purposes has also been established. The Patient Safety Culture Pilot Project will be turned into a three year demonstration project with the first year just having been completed. The second year will include the facilitation of the AHRQ Patient Safety Culture Survey through the assistance of the Maine Health Care Association, and an additional component will include teaching the facilities how to facilitate and manage the survey process. The aim of the third year will include the implementation of the AHRQ Patient Safety Culture Survey solely by the individual facilities with the supervision of the Maine Health Care Association. The purpose of this strategy is to not only initially provide these facilities with the resources to administer to the survey, but to teach them how to administer the survey and embed this survey tool into their annual quality improvement strategic plan.

The initial purpose of the Maine Nursing Home Patient Safety Culture Project was to begin to establish patient safety culture benchmarks in Maine. The project was conducted in 5 pilot sites, all small rural facilities. The continuation of this project by the Maine Health Care Association creates an opportunity to gradually add more facilities to the project over time. Formal benchmarks for the state as well as regions within Maine can be established as the number of participating facilities increases. It is the ultimate goal to use the results of this project as a guide for refining the survey process as it is implemented in all nursing facilities throughout the state. Finally, the ability to create a user-group where nursing facilities can meet and learn from their peers and promote patient safety culture would inform quality improvement for nursing homes in Maine.

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Appendix A:

Nursing Home Survey on Patient Safety

In this survey, **"resident safety"** means preventing resident injuries, incidents, and harm to residents in the nursing home.

This survey asks for your opinions about resident safety issues in your nursing home. It will take about 15 minutes to complete.

To mark your answer, just put an X or a √ in the box: [x] or [√].

If a question does not apply to your job or you do not know the answer, please mark the box in the last column. If you do not wish to answer a question, you may leave your answer blank.

SECTION A: Working in This Nursing Home

How much do you agree or disagree with the following statements?	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1. Staff in this nursing home treat each other with respect	☐1	☐2	☐3	☐4	☐5	☐9
2. Staff support one another in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9
3. We have enough staff to handle the workload	☐1	☐2	☐3	☐4	☐5	☐9
4. Staff follow standard procedures to care for residents	☐1	☐2	☐3	☐4	☐5	☐9
5. Staff feel like they are part of a team	☐1	☐2	☐3	☐4	☐5	☐9
6. Staff use shortcuts to get their work done faster	☐1	☐2	☐3	☐4	☐5	☐9
7. Staff get the training they need in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9
8. Staff have to hurry because they have too much work to do	☐1	☐2	☐3	☐4	☐5	☐9
9. When someone gets really busy in this nursing home, other staff help out	☐1	☐2	☐3	☐4	☐5	☐9
10. Staff are blamed when a resident is harmed	☐1	☐2	☐3	☐4	☐5	☐9

SECTION A: Working in This Nursing Home (continued)

	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
11. Staff have enough training on how to handle difficult residents	☐1	☐2	☐3	☐4	☐5	☐9
12. Staff are afraid to report their mistakes	☐1	☐2	☐3	☐4	☐5	☐9
13. Staff understand the training they get in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9
14. To make work easier, staff often ignore procedures	☐1	☐2	☐3	☐4	☐5	☐9
15. Staff are treated fairly when they make mistakes	☐1	☐2	☐3	☐4	☐5	☐9
16. Residents' needs are met during shift changes	☐1	☐2	☐3	☐4	☐5	☐9
17. It is hard to keep residents safe here because so many staff quit their jobs	☐1	☐2	☐3	☐4	☐5	☐9
18. Staff feel safe reporting their mistakes	☐1	☐2	☐3	☐4	☐5	☐9

SECTION B: Communications

How often do the following things happen in your nursing home?	Never ▼	Rarely ▼	Some-times ▼	Most of the time ▼	Always ▼	Does Not Apply or Don't Know ▼
1. Staff are told what they need to know before taking care of a resident for the first time	☐1	☐2	☐3	☐4	☐5	☐9
2. Staff are told right away when there is a change in a resident's care plan	☐1	☐2	☐3	☐4	☐5	☐9
3. We have all the information we need when residents are transferred from the hospital	☐1	☐2	☐3	☐4	☐5	☐9
4. When staff report something that could harm a resident, someone takes care of it	☐1	☐2	☐3	☐4	☐5	☐9
5. In this nursing home, we talk about ways to keep incidents from happening again	☐1	☐2	☐3	☐4	☐5	☐9

SECTION B: Communications (continued)

		Never ▼	Rarely ▼	Some-times ▼	Most of the time ▼	Always ▼	Does Not Apply or Don't Know ▼
6.	Staff tell someone if they see something that might harm a resident	☐1	☐2	☐3	☐4	☐5	☐9
7.	Staff ideas and suggestions are valued in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9
8.	In this nursing home, we discuss ways to keep residents safe from harm	☐1	☐2	☐3	☐4	☐5	☐9
9.	Staff opinions are ignored in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9
10.	Staff are given all the information they need to care for residents	☐1	☐2	☐3	☐4	☐5	☐9
11.	It is easy for staff to speak up about problems in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9

SECTION C: Your Supervisor

How much do you agree or disagree with the following statements?		Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1.	My supervisor listens to staff ideas and suggestions about resident safety	☐1	☐2	☐3	☐4	☐5	☐9
2.	My supervisor says a good word to staff who follow the right procedures	☐1	☐2	☐3	☐4	☐5	☐9
3.	My supervisor pays attention to resident safety problems in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9

SECTION D: Your Nursing Home

How much do you agree or disagree with the following statements?		Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1.	Residents are well cared for in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9
2.	Management asks staff how the nursing home can improve resident safety	☐1	☐2	☐3	☐4	☐5	☐9

3. This nursing home lets the same mistakes happen again and again	☐1	☐2	☐3	☐4	☐5	☐9

SECTION D: Your Nursing Home (continued)

	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know
4. It is easy to make changes to improve resident safety in this nursing home.....	☐1	☐2	☐3	☐4	☐5	☐9
5. This nursing home is always doing things to improve resident safety	☐1	☐2	☐3	☐4	☐5	☐9
6. This nursing home does a good job keeping residents safe.....	☐1	☐2	☐3	☐4	☐5	☐9
7. Management listens to staff ideas and suggestions to improve resident safety	☐1	☐2	☐3	☐4	☐5	☐9
8. This nursing home is a safe place for residents	☐1	☐2	☐3	☐4	☐5	☐9
9. Management often walks around the nursing home to check on resident care	☐1	☐2	☐3	☐4	☐5	☐9
10. When this nursing home makes changes to improve resident safety, it checks to see if the changes worked.....	☐1	☐2	☐3	☐4	☐5	☐9

SECTION E: Overall Ratings

1. I would tell friends that this is a safe nursing home for their family.

   ☐ a. Yes

   ☐ b. Maybe

   ☐ c. No

2. Please give this nursing home an overall rating on resident safety.

Poor ▼	Fair ▼	Good ▼	Very good ▼	Excellent ▼
☐1	☐2	☐3	☐4	☐5

SECTION F: Background Information

1. What is your job in this nursing home? Check ONE box that best applies to your job. If more than one category applies, check the highest level job.

☐ a. **Administrator/Manager**

Executive Director/Administrator
Medical Director
Director of Nursing/Nursing Supervisor
Department Head
Unit Manager/Charge Nurse
Assistant Director/Assistant Manager
Minimum Data Set (MDS) Coordinator/ Resident Nurse Assessment Coordinator (RNAC)

☐ b. **Physician (MD, DO)**

☐ c. **Other Provider**

Nurse Practitioner
Clinical Nurse Specialist
Physician Assistant

☐ d. **Licensed Nurse**

Registered Nurse (RN)
Licensed Practical Nurse (LPN)
Wound Care Nurse

☐ e. **Nursing Assistant/Aide**

Certified Nursing Assistant (CNA)
Geriatric Nursing Assistant (GNA)
Nursing Aide/Nursing Assistant

☐ f. **Direct Care Staff**

Activities Staff Member
Dietitian/Nutritionist
Medication Technician
Pastoral Care/Chaplain
Pharmacist
Physical/Occupational/Speech/Respiratory Therapist
Podiatrist
Social Worker

☐ g. **Administrative Support Staff**

Administrative Assistant
Admissions
Billing/Insurance
Secretary
Human Resources
Medical Records

☐ h. **Support Staff**

Drivers
Food Service/Dietary
Housekeeping
Laundry Service
Maintenance
Security

☐ i. **Other** (Please write the title of your job):

_____

2. How long have you worked in this nursing home?

☐ a. Less than 2 months
☐ b. 2 to 11 months
☐ c. 1 to 2 years
☐ d. 3 to 5 years
☐ e. 6 to 10 years
☐ f. 11 years or more

3. How many hours per week do you usually work <u>in this nursing home</u>?

☐ a. 15 or fewer hours per week
☐ b. 16 to 24 hours per week
☐ c. 25 to 40 hours per week
☐ d. More than 40 hours per week

SECTION F: Background Information (continued)

4. When do you work most often? Check ONE answer.
   - ☐ a. Days
   - ☐ b. Evenings
   - ☐ c. Nights

5. Are you paid by a staffing agency when you work for this nursing home?
   - ☐ a. Yes
   - ☐ b. No

6. In your job in this nursing home, do you work directly with residents most of the time? Check ONE answer.
   - ☐ a. YES, I work directly with residents most of the time.
   - ☐ b. NO, I do NOT work directly with residents most of the time.

7. In this nursing home, where do you spend most of your time working? Check ONE answer.
   - ☐ a. Many different areas or units in this nursing home / No specific area or unit
   - ☐ b. Alzheimer's / Dementia unit
   - ☐ c. Rehab unit
   - ☐ d. Skilled nursing unit
   - ☐ e. Other area or unit (Please specify): _____

SECTION G: Your Comments

Please feel free to write any comments about resident care and safety in this nursing home.

THANK YOU FOR COMPLETING THIS SURVEY.

Appendix B:

AHRQ Patient Safety Culture Assessment

Project Evaluation Form

This form is to be completed after the results have been communicated and shared with staff members. Please return form no later than April 25th. Forms can be scanned & emailed to [redacted] *or faxed to* [redacted]

Facility Name: _____

1) **How did your facility disseminate the results of the AHRQ Patient Safety Culture Assessment to staff members?**

2) **What were the reactions of staff members? Were there any surprising reactions? Were they consistent with the results of the survey?**

3) **How does your facility plan to use these results to guide improvement initiatives?**

4) **Please provide feedback on the entire survey process. What went well? What was difficult? Did you need any additional resources that were not provided?**

Appendix C:

Patient Safety Culture Survey Process Record

Date:

Nursing Facility Name:

Contact Person:

Date of Survey Dissemination:

Number of Surveys Disseminated:

How Surveys Disseminated:

Collection Site:

Methods of Encouraging Participation:

Number of Surveys Returned to Research Team (to be filled out by Muskie):

Appendix D:

Nursing Home Patient Safety Culture Improvement Process Tool

Step 1: Communicate

Communicate the results of the survey to all staff members and integrate the survey results into the current staff knowledge.

Step 2: Assess

Assess whether or not the results of the survey match actual environment and attitudes of staff.

Example: Survey results indicated that staff are not compliant with procedures; is this result of there not being an adequate policy & procedure manual or is there a lack of knowledge of an existing manual?

Step 3: Prioritize

Prioritize items from the survey in relation to the overall organizational goals. Make sure to first choose items with a high probability of success. Look at survey domains, specific survey questions, or survey comments, to understand the needs of staff and drive quality improvement strategy.

Note: It is important to create "small wins" for the organization to boost morale and create gradual change over time.

Step 4: Action

Actions create culture. Develop an action plan outlining interventions that can be tested with a change cycle tools such as PDSA.

Note: Start by addressing issues related to communication and education first, then tackle interventions involving new processes and technology.

Step 5: Execute

Execute the intervention throughout the organization and determine the best way to measure results and structure accountability throughout the organization.

Note: If dealing with a large organization, it may be best to try an intervention in one unit or shift before implementing throughout the entire system.

Step 6: Sustain

Create a strategy to keep change moving forward and sustain success over time

Appendix E:

Survey on Patient Safety Culture Process Guide

1) Send total number of employees and mailing address to Andrea Fenner-Koepp ([redacted]).

2) Pre-survey discussion – decide on distribution process (payroll, leave in break-room, etc)

3) Announcement of survey dates to staff – (payroll, flyers, staff meetings, etc)
   - **a.** Survey end date: February 9th
   - **b.** Survey start date: flexible (what works best for your facility – please allow at least 10 days for completion)

4) Placing of collection box

5) Distribute packets (assembled by Muskie) to include:
   - **a.** Survey
   - **b.** Letter to employee
   - **c.** Plain envelop for survey return with label that indicates drop box location and due date
   - **d.** Raffle ticket as an incentive (prize will be gift-certificate to Wal-Mart)

6) Reminders through the survey week

7) Send entire collection box (sealed) to Muskie

Appendix F:

Dear Employee,

The Patient Safety Culture Survey is part of an effort to improve patient safety and quality in health care. This questionnaire is designed to gather information about your feelings and attitudes concerning patient safety at the nursing facility in which you work. Completion of this survey is voluntary and you may choose not to participate. Results will be kept confidential. Your decision whether or not to participate will have no affect on your employment standing within the organization. There is minimal risk to you if you choose to participate in this survey and the appropriate safeguards have been put into place throughout the collection process to minimize the potential breach of confidentiality. Completed surveys in sealed envelopes will be mailed to our research partners at the University of Southern Maine and the nursing facility administration will not have access to individual results.

The research staff from the University of Southern Maine will be compiling results and preparing reports for the project. This demonstration will be used to guide a research project at the University of Southern Maine which looks to develop a toolkit/manual for nursing facilities. This toolkit/manual will provide a thorough understanding of ways in which the AHRQ Patient Safety Culture Assessment can be used to guide improvement initiatives. We ask that you do not put your name or any other identifying information on this survey. This survey is designed to be anonymous. If you have any questions about this research project, you may contact _____ at your facility, or Andrea Fenner-Koepp, Project Manager, University of Southern Maine at [redacted].

The enclosed survey is part of our nursing home's efforts to better address patient safety. The survey is being distributed to all employees. It will take about 10 to 15 minutes to complete and your individuals responses will be kept confidential. Final reports will not include any information that will make it possible to identify individuals who participated, and these reports will be made available to you once they are completed. The results will not be individually identifiable, and findings will not be attributed to a particular group or job code. Only group statistics will be prepared from the survey results.

Please complete your survey, place in the enclosed envelope, and return the sealed envelope to the collection box at _____ within the next 10 days. In addition, as an appreciation for your participation, those who complete the survey may also place the enclosed raffle ticket in the container located next to the drop box for a chance to win a $100 gift-certificate that has been supplied by the University of Southern Maine.

I understand the above description of the research and the risks and benefits associated with my participation as a research subject. I understand that by proceeding with this survey I agree to take part in this research and do so voluntarily.

Thank you in advance for considering to participate in this important effort.

Sincerely,

(Nursing Facility Name) Administration