

## Intervention Research

# Stakeholder Perspectives on the Optimizing Patient Transfers, Impacting Medical Quality, and Improving Symptoms: Transforming Institutional Care (OPTIMISTIC) Project

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## Abstract

**Background and Objectives:** The need to reduce burdensome and costly hospitalizations of frail nursing home residents is well documented. The Optimizing Patient Transfers, Impacting Medical Quality, and Improving Symptoms: Transforming Institutional Care (OPTIMISTIC) project achieved this reduction through a multicomponent collaborative care model. We conducted an implementation-focused project evaluation to describe stakeholders' perspectives on (a) the most and least effective components of the intervention; (b) barriers to implementation; and (c) program features that promoted its adoption. **Research Design and Methods:** Nineteen nursing homes participated in OPTIMISTIC. We conducted semistructured, qualitative interviews with 63 stakeholders: 23 nursing home staff and leaders, 4 primary care providers, 10 family members, and 26 OPTIMISTIC clinical staff. We used directed content analysis to analyze the data.

**Results:** We found universal endorsement of the value of in-depth advance care planning (ACP) discussions in reducing hospitalizations and improving care. Similarly, all stakeholder groups emphasized that nursing home access to specially trained, project registered nurses (RNs) and nurse practitioners (NPs) with time to focus on ACP, comprehensive resident assessment, and staff education was particularly valuable in identifying residents' goals for care. Challenges to implementation included inadequately trained facility staff and resistance to changing practice. In addition, the program sometimes failed to communicate its goals and activities clearly, leaving facilities uncertain about the OPTIMISTIC clinical staff's roles in the facilities.

**Discussion and Implications:** These findings are important for dissemination efforts related to the OPTIMISTIC care model and may be applicable to other innovations in nursing homes.

**Keywords:** Advance care planning, End-of-life care, Evaluation, Long-term care, Nursing homes, Palliative care, Qualitative analysis: content analysis, Teams/interdisciplinary/multidisciplinary

Nursing homes provide care for a significant number of older adults, where approximately 2.5% of all U.S. adults aged 65 or older and 9% of adults aged 85 or older reside.

Furthermore, the number of older Americans living in nursing homes (1.2 million in 2015) will continue to increase over the coming years ([Administration on Aging, 2016](#)).

The quality of nursing home care is an ongoing concern to consumers, advocates, health care providers, and policy makers. Key quality issues include the overuse of antipsychotic medication, falls, pressure ulcers, and inadequately managed pain (Werner & Konetzka, 2010; Werner, Konetzka, & Kim, 2013).

Hospitalizations also are increasingly recognized as a quality issue for nursing homes. Specifically, avoidable or potentially avoidable hospitalizations expose residents to risks including medication errors, burdensome treatments, pressure ulcers, and higher mortality (Boockvar et al., 2004, 2005; Fried, Gillick, & Lipsitz, 1997; Murray & Laditka, 2010). However, improving the quality of nursing home care is complicated by a lack of evidence. Even when evidence-based interventions exist, they can be difficult to implement (Ersek et al., 2016; Rantz et al., 2012).

Optimizing Patient Transfers, Impacting Medical Quality, and Improving Symptoms: Transforming Institutional Care (OPTIMISTIC) is a clinical demonstration project funded by the Center for Medicare and Medicaid Innovation (CMMI) as part of its national Initiative to Reduce Avoidable Hospitalizations among Nursing Facility Residents (Centers for Medicare and Medicaid Services, 2017). In accordance with the requirements of the Initiative, all funded projects, including OPTIMISTIC, focused on long-term care residents. The project was implemented from February 2013 to October 2016 in 19 Indiana long-term care facilities. OPTIMISTIC is a collaborative care model, providing enhanced support but not replacing facility staff or primary care providers. The project embeds RNs and nurse practitioners (NPs) at each facility. These OPTIMISTIC clinical staff are employees of the project and do not bill for their services. Primary roles for project RNs are to lead advance care planning activities, mentor nursing home staff, and implement evidence-based tools to improve care and communication. OPTIMISTIC NPs address gaps in clinical coverage by evaluating residents experiencing acute changes in condition and conducting evaluations following hospitalizations to enhance coordination of care between acute care and nursing home settings (Unroe et al., 2015).

Project activities are organized within three cores: Medical, Transitions, and Palliative Care (see Supplementary Table 1). The Medical Core is aimed at reducing hospitalizations primarily through a collaborative care review protocol in which OPTIMISTIC RNs and NPs conduct a focused interview and physical exam to identify geriatric syndromes that can lead to hospitalization. The findings are shared with primary care providers, and changes in medical orders and care are made, as needed, to prevent hospitalizations. RNs and NPs also work together to conduct detailed polypharmacy reviews and make recommendations for optimizing medication regimens.

The Transitions Core activities focus on understanding the antecedents and consequences of potentially avoidable transfers by conducting root cause analyses on

every resident who is hospitalized. Findings from these analyses, which are performed by OPTIMISTIC RNs, are shared with facility staff and leadership. In addition, OPTIMISTIC RNs use the findings to guide quality improvement activities in each facility. Residents who transfer back after a hospitalization also receive a detailed Transition Visit from an OPTIMISTIC NP; these detailed evaluations include medication reconciliation, resident and family education, follow-up management of ongoing resident needs, and communication with facility providers and staff (Nazir, Unroe, Buente, Sachs, & Arling, 2016).

The Medical and Transitions Cores use modified versions of several INTERACT tools, which is an evidence-based quality improvement program aimed at identifying, assessing, and managing acute conditions in nursing home residents to reduce hospitalizations (Ouslander et al., 2009, 2010).

The Palliative Care Core supports systematic advance care planning (ACP) using the Respecting Choices® Last Steps model (Gundersen Health System, 2017) to facilitate the use of the Indiana Physician Orders for Scope of Treatment (POST; Hickman et al., 2016). OPTIMISTIC RNs and NPs provide high-quality palliative and end-of-life care through facility staff education and role modeling (Kelly, Ersek, Virani, Malloy, & Ferrell, 2008). Additional details about the OPTIMISTIC care model have previously been published (Unroe et al., 2015) and are available online (<http://www.optimistic-care.org/>) and in Supplementary Table 1.

OPTIMISTIC outcomes are tracked and evaluated by an external contractor who monitors hospitalizations in OPTIMISTIC nursing homes and a group of matched control nursing homes. Recent reports and publications document the project's success in reducing potentially avoidable hospitalizations. Ingber, Feng, Khatutsky, Bayliss, and colleagues (2017) and Ingber, Feng, Khatutsky, Wang, and colleagues (2017) reported that the OPTIMISTIC intervention reduced hospitalizations for diagnoses considered potentially avoidable by nearly 40% and total hospitalizations by 25%. This reduction was associated with Medicare savings of \$236 per resident in 2014 and \$408 per resident in 2015 (Ingber, Feng, Khatutsky, Wang, et al., 2017).

The success of the OPTIMISTIC program sets the stage for its wider dissemination and implementation. The OPTIMISTIC investigators conducted an evaluation to understand the implementation of program components, identify barriers, and explore the factors that promote the success of the intervention in preparation for expansion of the clinical model. The purpose of this paper is to describe the findings from group and individual semistructured, qualitative interviews with key stakeholders. Specifically, we aimed to (a) explore stakeholders' perspectives about the most and least effective OPTIMISTIC components in meeting the overall program goal of reducing hospitalizations; (b) describe barriers to implementing the program;

**Table 1.** Description of the Sample

Stakeholder (type of interview)	Total N	Number of facilities represented by stakeholder group
Family members of residents (individual interviews)	10	4
Facility primary care providers (individual interview)	4	4
Facility leadership and staff (group interviews)	Overall N = 23 RNs: 8 LPNs: 9 Nurse managers: 2 Administrator: 1 Director/Associate Directors of Nursing: 3	3
OPTIMISTIC Clinical staff (group interviews)	RNs: 19 NPs: 7	19

Note: LPNs = licensed practical nurses; NPs = nurse practitioners.

and (c) explore features of the program that facilitated its adoption.

## Methods

We conducted group interviews with 23 nursing home staff and leaders (e.g., administrators, Directors of Nursing Services) from three facilities, and five group interviews with all 26 OPTIMISTIC clinical staff ( $N = 19$  RNs and  $N = 7$  NPs). In addition, we conducted one time, semistructured qualitative interviews with four primary care providers from four facilities and 10 family members, also from four facilities. Table 1 summarizes the overall sample. All interviews and subsequent data analysis occurred in the final 12 months of the 44-month program.

Our interview guides and analysis were directed by Stetler and colleagues' framework of formative evaluation (Stetler et al., 2006), which they defined as a "rigorous assessment process designed to identify potential and actual influences on the progress and effectiveness of implementation efforts" (p. S1). The authors identified several types of formative evaluation, including two that were used in this analysis: implementation-focused and interpretive evaluation. Implementation focused-evaluation allows researchers and implementers to describe the intervention in detail, examining the degree to which components of the intervention were adopted and deemed effective by stakeholders. It also promotes the identification and evaluation of barriers to implementation. Interpretive evaluation allows implementers to explore the "black box" of the intervention, that is, factors that promote success in implementing the intervention that may not have been explicitly incorporated into the intervention design. Findings from a formative evaluation can then be used to refine the intervention to increase its effectiveness and to facilitate wider dissemination (Stetler et al., 2006).

The OPTIMISTIC clinical demonstration project is approved as an exempt study under the Indiana University/Purdue University-Indianapolis Institutional Review Board (IRB). The methods and analyses described here also were declared exempt by the IRB.

## Sample Recruitment

### Group Interviews

All OPTIMISTIC staff (19 RNs and 7 NPs) were asked to participate in one of five (four RN and one NP) semistructured, qualitative group interviews that occurred during a regularly scheduled staff meeting. Three of the 19 participating nursing homes also were invited to participate in semistructured, qualitative group interviews at each facility. This convenience sample of facilities represented diversity in ownership, size, and location. We invited a diverse group of staff from each facility, including licensed nurses, nursing assistants, administrators, Directors of Nursing, social workers, and staff educators.

### Individual interviews

OPTIMISTIC RNs identified a convenience sample of eligible family members who spoke English and who had worked closely with OPTIMISTIC staff. Of the 14 family members who were approached for an interview, one refused, one stated they had no contact with the OPTIMISTIC team, and two were unable to be reached, thereby yielding a sample of 10 family members. OPTIMISTIC clinical staff and nurse managers also identified seven primary care providers who managed the care for residents at five participating nursing homes. Four providers (three physicians and one NP) who were able to be contacted agreed to participate.

## Procedures

Semistructured, qualitative group interviews lasting approximately 1 hr were conducted by one of the authors who is a doctorally prepared investigator (A. Thomas). Semistructured, qualitative individual interviews lasting 25–60 min were conducted in person or by phone by a trained research coordinator (B. Bernard) or investigator (A. Thomas). Each interview began with a standardized statement explaining the purpose of the interview and a reminder that all names would be redacted from notes and transcripts. All interviews were conducted using a semistructured interview guide that included standardized questions and follow-up prompts to address each of the study aims (Supplementary Table 2). The guides

were tailored for each stakeholder group and posed specific open-ended questions that directly addressed the study aims. For example, all stakeholder groups were asked to provide feedback about specific program components, including whether or not they were successfully implemented and effective at achieving program goals. Follow-up probes requested additional information about features of the components that facilitated or hindered their implementation. In exploring specific features that facilitated adoption, for instance, OPTIMISTIC clinical staff were asked what attributes made for a successful OPTIMISTIC RN or NP. Families were asked if they could provide an example of how the OPTIMISTIC staff had an impact on their family member's care. The interview guides were neither piloted prior to their use nor adapted in response to early interviews.

After all the interviews were completed, one of the coauthors who led the evaluation team (A. Thomas) reviewed all the transcribed interviews and field notes. She summarized the major themes from each of the stakeholder groups and presented it to the OPTIMISTIC leadership team. At that time, it was decided that additional interviews were not necessary to uncover new themes.

Group interviews for the OPTIMISTIC RNs and NPs and individual family interviews were digitally recorded and transcribed verbatim. The facility provider and staff/administrator group interviews were not recorded, but the facilitator and a research assistant took extensive notes during the interviews.

## Data Analysis

We used directed content analysis to identify stakeholders' views on the most and least effective components of the intervention, barriers to implementation, and factors that facilitated the uptake and acceptance of the overall program. In directed content analysis, investigators use existing frameworks and theories to guide the interview questions and coding. Initial coding categories are derived from key concepts and variables from the framework or theory. Data that do not fit into these preset categories are analyzed later to determine whether they represent new categories and themes or subcategories of existing themes (Hsieh & Shannon, 2005). This analytic approach was appropriate because our interview questions and coding schema followed our specific aims, which were derived from Stetler and colleagues' framework for implementation-focused and interpretive formative evaluation (Stetler et al., 2006).

The first author completed the initial coding, which consisted of reviewing all data and categorizing phrases or sentences into categories according to each of the aims. For example, there were two predetermined categories under Aim 1: "most effective program components" and "least effective program components." Subcodes for Aim 1 consisted of each program component (e.g., advance care planning, transition visits). For Aim 2, references to factors that hindered implementation were grouped under one predetermined category: "Barriers to Implementation,"

thematic analysis of these coded data revealed three subcodes. Categories and subcodes for Aim 3 were derived by identifying themes about specific characteristics of the OPTIMISTIC program or the clinical staff that facilitated implementation. We used an inductive approach for Aim 3 because there were no predetermined categories for features that promoted adoption, thereby following an interpretive approach to evaluation (Stetler et al., 2006).

After completing the initial coding, the first author developed definitions for each category and subcode, which were then shared and discussed with the two other members of the analytic team (S. Hickman and B. Bernard). Then, all transcripts and meeting notes were coded independently by a second analytic team member (either S. Hickman or B. Bernard). All disagreements in coding, as well as refinements and additions to the initial categories and subcodes, were discussed until consensus on final coding was reached. We developed an audit trail by creating detailed memos for each category that included original and revised category definitions and subcodes, outlier data, and exemplars. We managed and analyzed all data using NVivo version 11.0 qualitative analysis software.

## Results

### Stakeholders' Perspectives About the Most and Least Effective Components of the OPTIMISTIC Program

Table 2 summarizes stakeholders' comments about specific components of the program. The most frequently cited successful component was the ACP component including POST completion. This view was widely shared by OPTIMISTIC RNs, providers, families, and facility staff. As one facility physician commented, "You need to continue and enhance the end-of-life discussions. POST implementation has been very helpful and it has helped everyone understand about palliative care and hospice and how they are different."

Respondents identified the comprehensiveness of the ACP discussions as critical to the program's success, as pointed out by an OPTIMISTIC RN: "I think that the advance care planning, that's been a huge success . . . I see it as something that was really not implemented prior to OPTIMISTIC other than just getting a signature on a DNR form." Family members concurred that the OPTIMISTIC program's approach to ACP was effective and helpful. In the words of one family surrogate decision maker:

I thought that [the ACP discussion] went very well. She [OPTIMISTIC RN] covered every aspect of it. She talked about the different levels of care that would be given. All of our questions were answered and yeah, I just felt really good when we came away from there with the care plan. We knew what my mother wanted and we kind of knew what we felt was best for her, but it felt really good having it actually put down in paper that there is a plan that other hospitals and nursing facilities can follow.

**Table 2.** Stakeholders' Views of the Effectiveness and Ineffectiveness of Specific Components of the OPTIMISTIC Program in Reducing Hospitalizations and Improving Care

Program component	Examples of specific stakeholder comments
<b>Effective components of the program</b>	
Advance care planning and Physicians Orders for Scope of Treatment (POST)	Advance care planning. . . . Time involved in having multiple conversations and visits with the family cannot be done by usual staff. (Facility Staff)
	The staff at the facility absolutely love this [POST] form because it has been very beneficial to the staff to know where the family stands, so they know how to proceed and what to do. They can look at one form that tells them that. (OPTIMISTIC RN)
	I have seen the biggest impact with POST. The implementation has been very helpful and it has helped everyone understand about palliative care and hospice and how they are different. It has helped family members realize you are not giving up but rather can supply good care here instead of sending patients to the hospital. (Primary Care Provider)
	Hands down . . . POST discussions have made a huge difference. . . . We need to work on code status because that drives inappropriate readmissions. That's what OPTIMISTIC has helped us with. I'd say that now 90% of the patients have an appropriate code status. It has changed our practice. (Primary Care Provider)
	Well, kind of like, I knew there was more to a DNR than the actual DNR in the sense of Do Not Resuscitate if they start tanking. But, I didn't know where to go or who to talk to on that, and that is where they turned me on to [OPTIMISTIC RN] (Family Member)
Palliative care INTERACT tool: Stop and Watch	Great with end of life care. This is a very strong point of the OPTIMISTIC RN/NP role. (Facility Staff)
	...I think that its value added with giving [positive] strokes to CNAs for their identification of issues. (OPTIMISTIC RN)
INTERACT tool: SBAR Communication	It was a really big success for us. We caught a lot of things, and now we're doing a lot of antibiotics and dressing changes that could prevent them having to be sent out. (OPTIMISTIC RN)
	They are beginning to realize that there . . . is value in completing the SBAR, every time. (OPTIMISTIC RN)
	Corporate . . . started pushing the SBAR and provided it on the computer system. Now the nursing staff knows that the facility is serious about this. . . . They do see the advantages of having it, because of the consistency between one facility and another. So, it too, is becoming something that is culture. (OPTIMISTIC RN)
Quality improvement training and root cause analysis	Having the nurses look at vital signs, what are the changes, what's happening, and being able to communicate that, I think, makes all the difference in the world, and will make a difference in hospitalizations. (OPTIMISTIC RN)
	But, when we look at transfers in our morning clinical meetings, we are looking at root cause analysis more than we did initially. We're thinking, "what could be causing this? What do we need to look at? (OPTIMISTIC RN)
Transition visits	. . . [have the greatest impact] because I don't see the primary providers having time to do a thorough evaluation. (OPTIMISTIC NP)
	I think that out of everything that we do, those have been the most effective and produced the most results in terms of avoiding future hospitalizations. (OPTIMISTIC RN)
Polypharmacy assessments	. . . reduces the use of pharmaceuticals. Families want it. Patients, residents want it. Facilities want it. Doctors want it. (OPTIMISTIC RN)
Facility-based in-services and teaching	The other big impact in my facility is education. We [OPTIMISTIC RNs] learned about the dementia . . . I created posters on different types of dementia, as well as the gems of dementia care, so, if I am out of the building, and someone needs to review it, they can pull that out. I did a validation on how to access a Port-A-Cath. I got the actual port, I got the actual needles, and we validated staff and there is a poster on that. (OPTIMISTIC RN)
	The OPTIMISTIC RN allows us to vision and dream more than usual then creates educational programs that supports what the staff want. (Facility Staff)
	The [OPTIMISTIC] RN set up in-services for the staff, particularly the port training. It was very useful and can continue to use for onboarding new employees. All the information has helped to onboard new employees so that the staff is consistent in their care. (Facility Leadership)

**Table 2.** *Continued*

Program component	Examples of specific stakeholder comments
Collaborative care review (CCRs)	Helps with change in conditions and provides a second set of eyes by digging into charts, confirming the data, reporting back to the staff about what has been found and what is still missing. (Facility Leadership)
<b>Ineffective or less effective components of the program</b>	
INTERACT tool: Stop and Watch	There was too much turnover to keep it going to keep people educated on it. (OPTIMISTIC RN) Concept is good but it stinks to implement. Takes too much time, not relevant, too much paperwork . . . more forms with little emphasis on how this really impacts the patient. We want to take care of people, not computers and paper. (Facility Staff) At first, we had a big success with Stop and Watch. Then like, we'd be there for a little while and come back and, of course, it had pretty much stopped and it's very difficult to get it going again once they stop. (OPTIMISTIC RN)
INTERACT tool: SBAR Communication	SBAR hasn't taken off. . . . Staff is too task oriented. . . . Physicians want to direct care and it isn't nurse driven. . . . the physician isn't there most of the time. (Facility Leadership) Not convinced SBAR and other "extra" forms are worthwhile. Takes too much time to complete them and we don't see any benefit to our efforts. (Facility Staff)
INTERACT tool: Care Paths	They [staff] don't use the Pathways even though I have copied them, laminated them, attached them to each medical cart throughout the facility and done one-on-one training with nurses about how to use them and what to use. (OPTIMISTIC RN)
In-services/teaching	I like the in-services for the staff but is that part of their job? Is it working? What do we need to do better? (Primary Care Provider)

Note: NPs = nurse practitioners; SBAR, Situation, Background, Assessment, Recommendation.

Other effective components were identified, though mostly by OPTIMISTIC staff and sometimes by facility staff. These features included palliative care more broadly (i.e., beyond ACP), collaborative care reviews, and facility-based in-services that covered a broad range of topics. Two OPTIMISTIC NPs mentioned the value of the transition visits.

Respondents also identified components that they felt were less impactful. Most comments came from nursing home staff and OPTIMISTIC RNs and involved INTERACT tools and processes. Specifically, some thought that the Stop and Watch tool, which guides nursing assistants' observations and communication about changes in residents' condition, was too time-consuming. Others thought that the Care Pathways for assessing and managing acute conditions such as fever were too complex. Some respondents saw the Situation, Background, Assessment, Recommendation (SBAR) tool for nursing evaluation and reporting of acute changes as highly effective. In contrast, others believed that overworked nursing staff were too task oriented and reliant on physicians to use a tool that required time and critical thinking. In addition to the modified INTERACT tools, one facility primary care provider questioned the effectiveness of the in-services provided by OPTIMISTIC RNs, wondering whether or not the educational offerings actually changed clinical practice.

## Barriers to Implementation

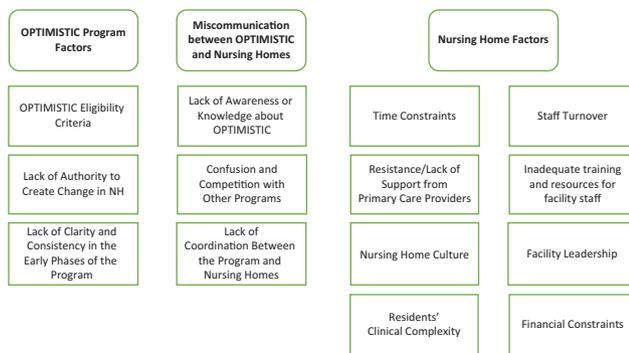
We identified 14 barriers to implementation, which were grouped under three subthemes: (a) OPTIMISTIC program factors, (b) miscommunication between OPTIMISTIC and nursing homes, and (c) nursing home environment factors (Figure 1).

### OPTIMISTIC Program-Related Barriers

Some challenges to implementation involved characteristics of the OPTIMISTIC program that hindered its adoption. These features included eligibility criteria, lack of authority to promote changes in the nursing home, and lack of clarity and consistency in the early implementation phases.

Two OPTIMISTIC staff commented that the exclusion of short-stay nursing home patients was a hindrance to its success, as many of these patients eventually move from short-stay to long-term care; moreover, these patients were more likely to be rehospitalized. This theme was echoed by nursing home staff, as reflected in this nurse's comment, ". . . not including rehab patients is a barrier. We move a lot of patients from rehab to long-term care so need help with the transitions."

Another barrier was that OPTIMISTIC NPs and RNs felt that they lacked the authority to promote change in their facilities. The NPs elaborated on this issue, stating that because they were not employees of the facility, many of them were unable to write orders. The project RNs also stated that



**Figure 1.** Barriers to implementation.

they did not have sufficient power to influence practices. As one commented: “at [facility name], they like things we have to offer, but they don’t want us to overstep our bounds.”

A final challenge was early missteps in rolling out the program. Although program activities and clinical staff roles were developed as part of the grant, there was some lack of clarity regarding exactly how the project RNs and NPs would implement the OPTIMISTIC components. As a result, there were inconsistencies in how much emphasis was placed on particular components and roles. For example, some OPTIMISTIC RNs focused on advance care planning, whereas others devoted much of their time to teaching and supporting nursing home staff. While some variation was intended as a way to tailor the program to the specific needs of each nursing home, these differences in implementation sometimes led to confusion and uncertainty, both among the participating facilities and among OPTIMISTIC staff. As one project RN commented, it sometimes seemed as though “there were nineteen OPTIMISTIC programs.”

### Miscommunication Between the OPTIMISTIC Program and the Participating Nursing Homes

Another major hindrance to adoption involved inadequate communication. The source of the miscommunication was not always clear (i.e., whether the problem originated with the program or with the facilities). Nonetheless, it led to confusion and lack of coordination in providing care.

The most widely endorsed communication problem, one voiced by every respondent group, was the lack of knowledge or awareness about the OPTIMISTIC program. A few respondents suggested that they were unsure what the OPTIMISTIC program was and how they were expected to interact with program staff. As one physician commented:

... there needs to be a better communication path to the staff so we all know what to expect of the different providers on the team. As a physician, I am aware of some higher level issues than the CNAs, nurses, and activity director. I don’t know if they understand any of this. Can the OPTIMISTIC RN/NP sit in on meetings and case reviews? If so, what do they contribute and how do we use their information?

Lack of communication also resulted in confusion among nursing home staff and primary care providers about how OPTIMISTIC differed from the attending primary care providers’ roles and managed-care partnerships that sent NPs into the facility to coordinate care. The project NPs also felt that there may be some competition between them and these other groups, as reflected in the comment: “we [OPTIMISTIC NPs] are limited as to what we can do because [Director of Nursing] is trying to get [managed care provider group] in there.”

Another problem was inadequate communication between the program and the nursing home providers and staff. As one family member commented, “I’m not sure that the facility understands what OPTIMISTIC is there for. Because it seems like – at least the nurses on the floor – or the aides – don’t ever seem to interact with [the OPTIMISTIC RN].” Project NPs and RNs added that there needed to be established lines of communication between program and facility providers and staff; without these changes, there would be no assurance that the recommendations of the OPTIMISTIC staff were integrated into residents’ care.

### Nursing Home Factors

For the third subtheme, we identified eight nursing home factors that affected facilities’ ability to implement the OPTIMISTIC program. Some of these factors existed to some extent in every facility. For example, time constraints and staff turnover were major barriers to having an adequately trained nursing home team that could use the program tools such as SBAR. Heavy workloads prevented staff from attending in-services and financial constraints hindered the nursing home from being able to pay staff to attend educational offerings outside of regular work hours. Respondents also recognized that nursing home staff often lacked the time, education, and resources to identify acute changes and intervene promptly, especially given the complex health care needs of frail residents. As one OPTIMISTIC RN stated, “the higher acuity level that we are seeing in all of our facilities, does not allow those nurses the time to do what the OPTIMISTIC nurse can do.” Another common factor that stymied progress was what OPTIMISTIC staff referred to as traditional “nursing home culture.” They described this culture as one in which staff and providers are most concerned about completing tasks and are resistant to change. As one project RN put it, “It’s all so task-oriented. My task today is to pass a pill. And if I’ve passed this pill to this patient, my job is done.” Finally, nurses also talked about the punitive nature of the nursing home environment, where mistakes are met with rebuke and staff are afraid to ask questions for fear of being labeled incompetent.

Some of the implementation challenges resulted from lack of support and/or conflicts with facility leadership or primary care providers. Two OPTIMISTIC NPs and one RN commented that facility physicians routinely disregarded their clinical recommendations. Nursing home

leadership also could be a major hindrance to the program. Sometimes, OPTIMISTIC staff described open opposition: “She [Director of Nursing Services] felt we were being literally jammed down her throat. And she didn’t want us there.” In other cases, leadership was simply too distracted or absent to provide the support necessary for successful implementation. All respondents agreed, however, that buy-in and active, ongoing support from nursing home administrators was critical. OPTIMISTIC staff also believed that success could be enhanced if the facilities “had more skin in the game.” As one project RN commented, “I guess I felt like they [the facility] needed to have an investment or accountability” in supporting OPTIMISTIC’s efforts.

### Facilitators to Adoption

Three themes emerged from our analysis to identify factors that stakeholders viewed as important for program adoption: “providing an extra set of hands,” “fostering relationships and communication,” and “what makes an effective OPTIMISTIC nurse” (Table 3).

Across all respondent groups, OPTIMISTIC RNs and NPs were seen as providing “an extra set of hands” to help facility staff and primary care providers manage their heavy workloads. Because they were not in traditional staff

positions, OPTIMISTIC clinical staff had time to address a myriad of diverse needs and undertake time-consuming but important tasks. These responsibilities included engaging in robust ACP discussions, conducting a thorough assessment of residents who were experiencing acute problems, and providing in-services as well as one-on-one training and mentoring. Although time was one resource, OPTIMISTIC clinical staff also had ready access to computers, educational materials, clinical expertise, and hospital medical records that facility staff lacked.

Another critical piece to program adoption concerned relationship building and communication. The clinical staff, in particular the OPTIMISTIC RN, was seen as a trusted role model and mentor to facility staff. Because the OPTIMISTIC RNs were not employees of the nursing home, the project RNs were seen as a “safe” source of information and support. This sense of trustworthiness extended to family members. Although families were unable to explicitly describe the OPTIMISTIC program or its components, all identified the importance of the OPTIMISTIC RN in facilitating communication of critical clinical information to nursing home staff and providers, contacting family members to alert them of changes or following up when concerns arose, advocating for the resident, and supporting nursing home staff in delivering high-quality, coordinated

**Table 3.** Facilitators to Program Adoption

#### Providing “an extra set of hands” and much-needed resources

- OPTIMISTIC RNs and NPs are “outsiders” with flexibility and freedom from facility responsibilities
- OPTIMISTIC RNs and NPs have the time to do things that facility staff do not have time for, including engaging in ACP conversations; teaching staff, residents, and families; communicating with families; problem solving; evaluating changes in residents’ condition and care
- OPTIMISTIC RNs and NPs are proactive in identifying and ensuring that residents’ and families’ needs are met
- OPTIMISTIC RNs and NPs have access to resources that are not otherwise available to facility staff, including access to hospital electronic medical records

#### Fostering relationships and communication

- RNs are role models and nonjudgmental teachers who consistently provide relevant, evidence-based education to empower staff
- RNs are a safe and helpful constant within a constantly changing environment. As a result, they are trusted by staff and family members
- OPTIMISTIC RNs and NPs improve communication with residents, family members, providers, and staff by providing information, serving as a liaison between nursing staff and providers and ensuring timely follow-up to clinical issues
- OPTIMISTIC RNs and NPs improve relationships with resident and family through advocacy, regular communication, and support

#### What makes an effective OPTIMISTIC nurse

- Have a wide range of work experiences
  - Setting: acute care, long-term care, hospice
  - General experience as a nurse: this is not a role for a new graduate
- Possessing strong clinical skills
  - Assessment skills to identify acute changes in a resident’s condition and intervene quickly
  - Ability to communicate clearly around clinical problems
  - Technical skills, e.g., starting IVs
  - Ability to assess the “culture” of the building and adapt to meet the needs of that particular setting
- Being knowledgeable about the OPTIMISTIC program
  - Understand all the components and how they fit together
  - Ability to present the program to residents, families, staff, and providers
  - Ability to role model and teach clinical and organizational skills needed to implement the program

Note: ACP = advance care planning; IVs = intravenous lines; NPs = nurse practitioners.

care. As one family member commented, “I’ll get information from the nurses, like “Your mothers had a fall,” but as far as knowing somebody is following up and really trying to do something about that, I feel really good having OPTIMISTIC RN involved with her case.”

Finally, many respondents described critical attributes, knowledge, and experiences that enabled OPTIMISTIC staff to be valuable resources. For example, OPTIMISTIC RNs spoke at length about how important it was for them to have experience and expertise in hospice/palliative care, acute care, and long-term care. Moreover, successful OPTIMISTIC RNs needed clinical skills in assessment and management of a broad range of acute and chronic geriatric conditions, as well as competence in technical skills such as starting IVs. As key ambassadors and implementers, these OPTIMISTIC RNs needed to know each program component and be able to role model the behavior, practice the skills, and teach others how to use the information in a patient and nonthreatening manner.

## Discussion

The OPTIMISTIC project has demonstrated success in the reduction of all-cause and potentially avoidable hospitalizations (Ingber, Feng, Khatutsky, Wang, et al., 2017). We used formative evaluation to examine the views of diverse stakeholders regarding the effectiveness of specific program components as well as the barriers and facilitators to implementing this large, complex project in nursing homes. The lessons learned are important for dissemination efforts related to the OPTIMISTIC care model and may be applicable to other innovations in the nursing home setting.

Some of the implementation barriers that stakeholders described are common issues in nursing homes. For example, limited resources; overworked, inadequately trained staff; and high staff turnover conspire against making positive changes in this environment. These challenges have stymied the efforts of other investigators who have sought to change nursing home practices to enhance care and outcomes (Ersek & Jablonski, 2014; Jones et al., 2004; Ploeg, Davies, Edwards, Gifford, & Miller, 2007; Rantz et al., 2012). Although the OPTIMISTIC program could not address all of these problems, it was clear that one of its most valuable contributions was to bring much-needed human resources to the facilities. The OPTIMISTIC clinical model created novel RN and NP roles in the nursing home setting. Integrating skilled RNs and NPs who are free from the day-to-day clinical tasks that overwhelm nursing home staff and primary care providers—including facilitation of high-quality ACP discussions, early identification and management of acute problems, and investigation of the root causes for potentially avoidable hospitalizations—was critical to the program’s success.

Other barriers and challenges were modifiable. As a result of our evaluation, the OPTIMISTIC program subsequently underwent changes to address some barriers and weaknesses. For example, every stakeholder group mentioned

that the initial lack of clarity and communication about the program goals and structure hindered its effectiveness. This barrier was addressed through several strategies. For example, OPTIMISTIC developed and launched a website that describes the program, its mission and vision, evidence for its effectiveness and a full calendar of educational offerings for participating nursing home staff, primary care providers, and leadership. The OPTIMISTIC RNs now wear branded scrubs and OPTIMISTIC NPs wear branded lab coats to ensure that facility personnel, residents, families, and others readily identify them as OPTIMISTIC staff. To address the issue of unwanted variation in implementation, detailed job descriptions, performance benchmarks, and protocols were developed for OPTIMISTIC RNs and NPs. In recognition that the RN role, in particular, required a wide range of knowledge and skills, the program now requires all OPTIMISTIC RNs to receive standardized didactic and skills training. These changes underscore the value of formative evaluation as a means to “optimize the likelihood of affecting change by resolving actionable barriers, enhancing identified levers of change and refining components of the intervention. . .” (Stetler et al., 2006, p. S4).

Stakeholders had differing perspectives about the effectiveness of certain program components and features. For example, the SBAR communication tool was seen as an ineffective tool by some stakeholders because it added unnecessary paperwork whereas others believed that the SBAR was effective in identifying and managing acute changes in a resident’s condition early, thereby avoiding unnecessary hospitalizations. The difference appeared to be, in part, attributable to how it was implemented. In one facility, corporate leadership communicated the value of the tool and integrated the SBAR into the electronic medical record, making it easier to use. When nurses observed for themselves how the SBAR helped facilitate effective assessment and communication, they used it more consistently. This finding suggests that implementation strategies that are effective in one facility or setting can be used in other settings to promote adoption of certain practices.

One component that all stakeholders identified as highly effective was advance care planning, especially POST implementation, a finding that also was reported in the external evaluation of OPTIMISTIC (Ingber, Feng, Khatutsky, Bayliss, et al., 2017). The POST (also called POLST: Physicians’ Orders for Life-Sustaining Treatments in other states) program is well established in most states and is particularly effective in ensuring that nursing home residents receive appropriate care that is concordant with their preferences (Hickman et al., 2011, 2016; Kim, Ersek, Bradway, & Hickman, 2015). In addition to honoring residents’ preferences for care, ACP discussions and POST completion may decrease unnecessary hospitalizations because many long-stay nursing home residents choose comfort care over aggressive, potentially burdensome treatments (Hickman et al., 2010; Rahman, Bressette, Gassoumis, & Enguidanos, 2016). Many participants in our study attributed the success

of ACP and POST to the availability of OPTIMISTIC RNs to conduct in-depth discussions with residents and their families about goals of care and life-sustaining treatment choices. This success, however, was not easy to achieve even with dedicated staff—specialized training and consistent monitoring of results is necessary (Hickman et al., 2016).

Our findings also highlight the importance of building relationships between the program team and facility staff. Several OPTIMISTIC RNs spoke about earning the trust of the nursing home staff, primary care providers, administrators, residents, and families by demonstrating clinical competence, providing critical follow-up, collaborating, and offering support and education in a nonjudgmental manner. They emphasized that fostering trust required time and persistence. Facility staff and families echoed the belief that personal relationships and trust in the skill and integrity of the OPTIMISTIC RN were cornerstones to program success. Similarly, Ingber, Feng, Khatutsky, Bayliss, and colleagues (2017) reported that relationship building was an essential feature of all the CMMI-funded programs to reduce avoidable hospitalizations in nursing home residents. Thus, any efforts to enhance the quality of care in nursing homes must be attentive to this need. Ingber, Feng, Khatutsky, Bayliss, and colleagues' (2017) findings also echo another theme that we saw in our data, that is, the availability of skilled, project clinicians who are embedded at the facility and have sufficient time to focus on ACP, comprehensive resident assessment, and facility staff education is particularly valuable in achieving positive outcomes.

Limitations of this study include use of convenience samples for all but the OPTIMISTIC clinical staff stakeholder groups. Although we sought diversity among the family, facility staff, and primary care provider respondents, it is possible that we did not capture the full range of experiences, particularly because our primary care provider and family member samples were quite small. However, in analyzing the data, we found considerable consistency in responses within each group and do not believe additional interviews would have yielded new themes. Another possible limitation is that we used semi-structured guides for each type of individual and group interview but may have failed to ask critical questions. We also did not audio-record the facility staff group or the provider interviews. Although both the interviewer and a trained staff person took extensive notes during these interviews that were used in the analysis, it is possible that we did not capture the full range of responses. This paper reports on the evaluation of an intervention that was implemented in a limited number of nursing homes in one geographic area; thus, our findings may not be generalizable to other nursing homes or to other implementation projects. Finally, our study used qualitative methods and thus, we were unable to examine associations between stakeholders' perspectives and actual changes in hospitalization rates. However, our goal was to better understand how the program was implemented and explore barriers and facilitators to implementation rather than to establish causal relationships among variables and outcomes.

## Conclusion

Our study adds to the extant literature by integrating systematic feedback from multiple sources to identify strengths, challenges, and avenues for enhancing the implementation of complex interventions in nursing homes. Our evaluation uncovered significant challenges to implementation. We found that many barriers to integrating the OPTIMISTIC program are common to health care settings, especially nursing homes. Other barriers reflected areas for improvement within the program itself. Nonetheless, the program was able to overcome some barriers through persistence and building relationships and trust over time, flexibility, and offering valued resources. The multicomponent initiative succeeded in its primary goal of reducing potentially avoidable hospitalizations (Ingber, Feng, Khatutsky, Bayliss, et al., 2017), which was likely due to the value of having embedded, project RNs and NPs with the skills and time to support high-quality care. Additional changes that were made as a result of the evaluation offer promise for even greater effectiveness in the future.

## Supplementary Material

Supplementary data is available at *The Gerontologist* online.

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## Conflict of Interest

None reported.

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