Reducing Perceived Barriers to Nursing Homes Data Entry in the Advancing Excellence Campaign: The Role of LANEs (Local Area Networks for Excellence)

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Purpose: Advancing Excellence (AE) is a coalition-based campaign concerned with how society cares for its elderly and disabled citizens. The purpose of this project was to work with a small group of volunteer nursing homes and with local quality improvement networks called LANEs (Local Area Networks for Excellence) in 6 states in a learning collaborative. The purpose of the collaborative was to determine effective ways for LANEs to address and mitigate perceived barriers to nursing home data entry in the national Advancing Excellence campaign and to test methods by which local quality improvement networks could support nursing homes as they enter data on the AE Web site.

Design and Methods: A semistructured telephone survey of nursing homes was conducted in 6 states. Participants included LANEs from California, Georgia, Massachusetts, Michigan, Oklahoma, and Washington. Facility characteristics were obtained from a series of questions during the telephone interview. Three states (GA, MA, OK) piloted a new spreadsheet and process for entering data on staff turnover, and 3 states (CA, MI, WA) piloted a new spreadsheet and process for entering data on consistent assignment.

Results: Many of the nursing homes we contacted had not entered data for organizational goals on the national Web site, but all were able to do so with telephone assistance from the LANE. Eighty-five percent of nursing homes said they would be able to collect information on advance directives if tools (eg, spreadsheets) were provided. Over 40% of nursing homes, including for-profit homes, were willing to have staff and residents/families enter satisfaction data directly on an independent Web site. Nursing homes were able to convey concerns and questions about the process of goal entry, and offer suggestions to the LANEs during semistructured telephone interviews. The 6 LANEs discussed nursing home responses on their regularly scheduled calls, and useful strategies were shared across states. Nursing homes reported that they are using Advancing Excellence target setting and goal entry to improve care, and that they would use new tools such as those for measuring satisfaction, consistent assignment, and advance directives.

Implications: Having LANE members contact nursing homes directly by telephone engaged the nursing homes in providing valuable feedback on new Advancing Excellence goals and data entry. It also provided an opportunity to clarify issues related to the campaign and ongoing quality improvement efforts, including culture change. **(J Am Med Dir Assoc 2011; 12: 508–517)**

Keywords: Quality improvement; nursing homes; employee turnover; patient satisfaction; consumer satisfaction

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Efforts to improve quality of care and quality of life in US nursing homes (NHs) have been well documented, particularly since the enactment of the Omnibus Budget and Reconciliation Act (OBRA) of 1987.[1–5] More recently, management approaches consistent with newer research on organizational culture have also been developed.[6–9]

The combination of clinical and organizational strategies to improve quality of life is part of the culture change movement, a grassroots, consumer-driven campaign to transform NH care.[10–12] Culture change promotes autonomy and quality in the daily life of older adults, persons with disabilities, and others requiring care in a group or residential setting.[13]

Advancing Excellence (AE) is a coalition-based campaign concerned with how society cares for its elderly and disabled citizens that grew out of this quality improvement and culture change work. At the national level, 28 diverse organizations from government, advocacy, NH associations, clinical professionals, consumers, foundations, and other organizations joined together to:

- Establish and support an infrastructure of local quality improvement (QI) networks called LANEs (Local Area Networks for Excellence)
- Strengthen the NH workforce
- Improve clinical and organizational outcomes

There are 49 local QI networks or LANEs that are statewide coalitions responsible for AE quality improvement efforts and are composed of long-term care stakeholders including state survey agencies, quality improvement organizations (QIOs), state NH affiliates, ombudsmen, consumers, NH practitioners, and others, similar to the national steering committee. The LANEs have 1 or 2 organizations that serve as the "convener" or facilitator; QIOs serve as the LANE convener in about 70% of states. The role of the LANE is to recruit NHs to participate in the campaign, provide educational programs and resources to participants to achieve campaign goals, and to serve as the focal point for campaign activities. As of December 2009, there were almost 7500 NHs enrolled in the campaign.

In 2008, there were 8 AE campaign goals (4 clinical and 4 organizational; see Figure 1). To participate in the campaign, NHs had to select at least 3 goals, including at least 1 clinical and 1 organizational goal, and enter data on the AE national Web site. Data on clinical goals (pressure ulcers, physical restraints, and short- or long-term pain) were automatically entered from publicly reported databases onto the campaign Web site. Organizational goals (target setting, resident/family satisfaction, turnover, and consistent assignment) were self-reported and had to be entered by NH staff. In 2009, the campaign began revising old goals and adding new goals (Figure 1) that would require an even greater amount of self-entered data.

LANEs have experienced varying degrees of success in engaging and sustaining stakeholders in the AE campaign. Rates of participation have varied from very low (Alaska, 6.7%) to very high (Nevada, 100%). More importantly, in many cases, NHs that signed up for the campaign had not entered their data for organizational goals (resident satisfaction, staff turnover, and consistent assignment) as required in the campaign objectives. Although there have been small studies that have found that improvements in these organizational areas will improve resident outcomes, there is little national data reported in these areas, so a method to collect these data at a national level was felt to be essential to sustain QI.

The purpose of this project was twofold. First was to work with 6 state LANEs in a learning collaborative to provide an environment where novice LANEs could learn from experienced LANEs on (1) how to work more effectively with NHs, and (2) to facilitate LANE ability to get NHs that were early adopters to more consistently participate in data collection of voluntary data (organizational goals). If successful, the campaign could use the learning collaborative model in Phase 2 of the campaign.

The second purpose was to understand the barriers to data entry and to test methods for improving self-entered goal data for the new and revised AE goals such as staff turnover and consistent assignment. Lessons learned from this process would help the campaign to improve the tools and processes used in Phase 2 of the campaign.

The new 2009 goal data entry process specifically was targeted to help the AE steering committee and national leaders refine campaign processes and systems to ensure future success (see Figure 1 for 2009 goals). Questions were asked about the old goals to gain information on the perceived barriers to entering voluntary data on the Web site. As evidenced by analogous programs such as Nursing Home Quality Improvement: Setting Targets Achieving Results (NHQI-STAR),[14] the ability to identify barriers and improve data entry may translate to improved clinical and organizational outcomes for homes participating in AE.[15]

CONCEPTUAL FRAMEWORK

Based on previous studies, including one implementing clinical practice guidelines in NHs, Rogers' Diffusion of Innovation model[16] provided the framework for this project. This model categorizes stages in the adoption of the AE process for individual nursing facilities, states, or LANEs. In this framework, AE is viewed as an innovation allowing the reader to identify potential barriers and facilitators at each stage of the innovation process. Hypothesized barriers and facilitators are described in Figure 2. The team hypothesized that providing direct knowledge about the campaign and involving the NHs in the evaluation process would encourage NHs to commit to the campaign and implement changes in their NH to improve quality.

METHODS

State LANEs

The LANE composition varies in each state but is generally similar to the national steering committee. Six of 49 LANEs were approached and agreed to participate in the study. The 6 LANEs were selected either because they were successful in previous quality improvement project implementation or because they were a less-developed LANE.

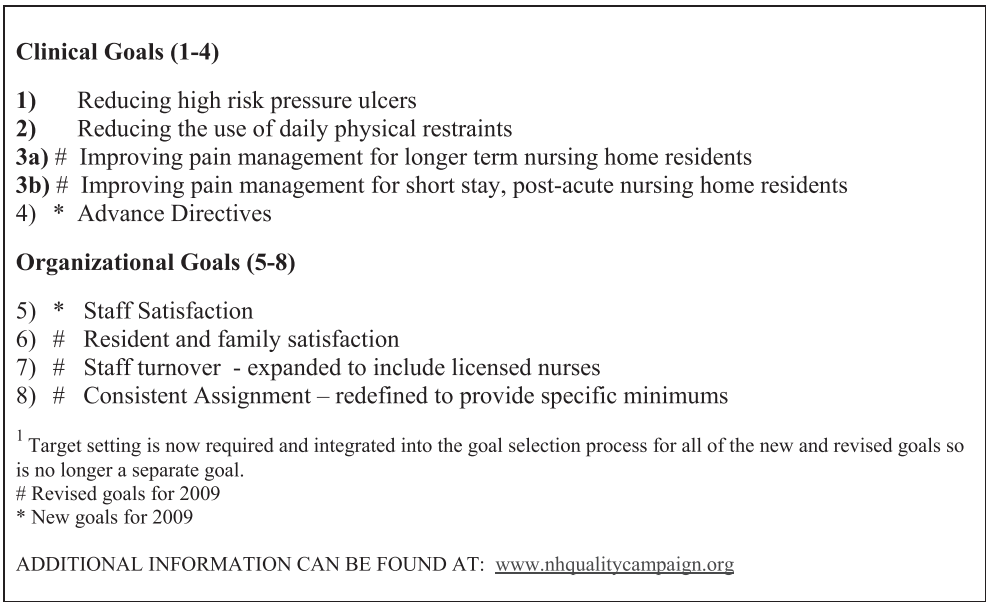

Fig. 1. *2009 advancing excellence goals*.*

The LANEs were divided into learning collaboratives with both experienced and novice LANEs in each group. The organizations serving as the LANE conveners (leaders) in the 6 states varied: in Massachusetts, it was the Massachusetts Culture Change Coalition; in California and Georgia, the QIO; in Oklahoma, the Oklahoma Health Care Association (for-profit and not-for-profit NHs); and in WA and MI, it was the state ombudsman. Key members of the LANEs were identified to lead this study on behalf of each state.

Sample

LANEs had 4 weeks to enroll 10 to 15 NHs of varying sizes and profit status from both urban and rural locations. Because one of the purposes of the project was to help LANEs develop processes to engage NHs, LANEs were allowed to choose how to enroll NHs. Two LANEs chose to do a convenience sample, generally because of lack of resources or time to randomize the sample. Four LANEs developed a random-sampling methodology from the list of NHs enrolled in the campaign in their state. The list included size, profit, and geographic location information about the homes. Most LANEs divided the NH list by those criteria and then selected every 10th (or another number) NH. LANEs were asked to develop a list of about 20 NHs to ensure they could get at least 10 NHs to complete the survey. Any NH that had been in AE for at least 1 year met inclusion criteria for the study. The final sample was 87 NHs with all but 1 LANE (MI) enrolling at least the minimum required homes.

Survey Instrument

The project team designed a semistructured telephone survey loosely based on work by the Washington State LANE convener, Qualis Health, and from a previous study. The instrument focused on a series of questions to help the campaign better understand the potential challenges and barriers to entering data using some of the new 2009 campaign goals and Web site processes. Questions were related to each of the goals that require NHs to voluntarily enter self-collected data at the NHs (staff turnover, resident and staff satisfaction, advance care planning, and consistent assignment) versus data that are automatically submitted through the minimum data set (MDS) process (pressure ulcers, pain, and restraint use). Each respondent was asked information (understanding of data entry, usefulness of the resources and tools) about each of the goals, whether they had selected the goal or not. In addition, questions were asked about NH experience in entering data on the old goals that were current at the time of the study and, if they had not entered data, the LANEs assisted them to enter the data onto the Web site and obtained feedback about that process.

Procedures

Before the start of field work, Institutional Review Board (IRB) approval was obtained. A research associate from the Massachusetts Senior Care Foundation conducted a training session with the other state LANE members. LANEs enrolled NHs that had been signed up for AE for at least 1 year in the month of March and began conducting telephone interviews in April 2009. LANEs submitted their first completed interview to the project research associate to ensure the survey was completed correctly, and feedback was provided to LANEs that had problems (most were minor).

The purpose of the interviews was twofold. LANE members assisted NHs in entering data for the old self-entered organizational goals. In addition, a semistructured interview enabled project staff to collect information from NHs related to goal data entry, and to obtain information on specific issues related to the new or revised 2009 goals such as staff satisfaction, staff turnover, and consistent assignment that had not

STAGE	FACILITATORS/BARRIERS
Knowledge – gaining awareness of the purpose and components of the innovation	Local QI Network (LANE) Support/Lack of Support Communication or lack of communication about the campaign
Persuasion – evaluating risk and value of the innovation	Interest/Non-interest in QI Improvement Perceived difficulty of participation
Decision – committing to the innovation	Corporate Support/Lack of Support Involvement/Non-involvement in Similar Campaigns Relevance of specific goals
Implementation – changing behavior and practice to support adoption	Turnover/Lack of Turnover Time/Lack of Time Communication/Lack of Communication Technology/Lack of Technology Staff Commitment/Lack of Staff Commitment Fear of direct (independent) reporting on website/No fear of direct reporting
Confirmation – the ultimate acceptance or rejection	Quality Improvement Positive/Negative Outcomes Involvement/Non-involvement in Similar Campaigns

Fig. 2. *Barriers and facilitators to Advancing Excellence goal implementation and entry in the framework of Rogers' diffusion-of-innovation model.*

been released to the general public. Facility size, profit status, rural status, chain membership, and other facility characteristics for the NHs were obtained through self-report during the telephone interview.

After assisting a NH staff member with goal data entry, the LANE leaders invited the staff member to participate in an additional telephone interview about goal entry for the campaign and the new/revised 2009 goals. Interviews were documented on a data collection worksheet. Most respondents were NH administrators, followed by directors of nursing (DONs) (see Table 1).

A subset of NHs in each state were also invited to participate in a second phase of the project, to pilot either a new spreadsheet/process (data entry tool) for measuring staff turnover monthly (GA, MA, OK), or a new spreadsheet/process for measuring consistent assignment using existing staffing records (CA, MI, WA). Two or 3 NHs in each LANE were selected from the group of volunteer NHs to participate. Nine NHs tested the turnover tool and 6 NHs tested the consistent assignment tool. In each case, using a "train the trainer" approach, project staff trained LANE leaders in the use of a new spreadsheet; LANE leaders then conducted training for NHs via telephone. Nursing homes were asked to work with the tools using old data to determine if the tools were useful and easy to use. At the conclusion of the pilot, NH staff completed a survey, using the freeware mechanism "Survey Monkey," to provide feedback on their experiences using the new process and tools. All NHs completed the survey.

Data Analysis

All survey responses were either dichotomous or categorical data. Frequency distributions and chi-square analyses were run using SPSS version 15.0. Free text responses were organized by question and entered into a spreadsheet. The qualitative data were reviewed independently by the two principal investigators (co-PIs) who conducted a very basic thematic analysis based on a grounded theory approach.[17] The 2 co-PIs then compared their findings and used researcher validation to come to consensus on the major themes derived from the data. The qualitative data were used to better understand why NHs answered the questions as they did.

RESULTS

Interviews were completed with 87 (16%) of 1419 NHs enrolled in the campaign in the 6 states. The participants had been enrolled in AE between October 2006 and April 2008 and all had been in the campaign for at least 1 year.

Table 1. *Position of Respondents to the Survey*

Position of Person Answering the Survey	No. Respondents	Percent
NHA	60	71
DON	13	15
NHA and DON (or ADON)	4	5
Other (executive director, MDS coordinator, quality assurance RN, staff development coordinator, owner)	8	9
Missing	2	0

ADON, assistant director of nursing; DON, director of nursing; MDS, minimum data set; NHA, nursing home administrator; RN, registered nurse.

Table 2. *Facility Characteristics*

Characteristics	Frequency	Percent
Ownership, nonprofit	23	26.4
Ownership, for profit	64	73.6
No religious affiliation	83	95.4
Religious affiliation	4	4.6
Stand-alone facility	51	58.6
Chain member	36	41.4
Not rural home	60	69.0
Rural home	27	31.0
Bed size		
Large (>199)	4	5.1
Medium (91–199)	46	58.2
Small (<90)	29	36.7

The number of homes in each state ranged from 8 facilities in Michigan to 21 in California. (See Table 2 for facility characteristics.) In general, most respondents felt that AE had helped their facilities and intend to continue to use the goals as part of their quality process. Respondents were very positive and appreciative of the calls made to the homes by the LANEs. Nursing homes reported that LANEs could continue to assist in achieving the goals by providing regular (50 preferred monthly and 18 preferred quarterly) reminders. Most respondents (76 of 87) preferred to be contacted by e-mail and all agreed to be contacted again by the LANE in the future.

Many homes had already entered organizational goals before the telephone interview. The remaining homes were all able to enter data with project staff on the telephone call. The most common goal selected by NHs in this sample was reducing the prevalence of pressure ulcers (68%). The most common organizational goal selected was resident/family satisfaction at 49%. Table 3 contains the distribution of goal selection by state.

The relationship between the NHs and the LANEs was also of interest to see if NHs with stronger relationships with the LANE would influence the outcomes. Forty-four percent of the facilities knew (could name) their LANE convener, whereas 63% knew their QIO; however, there was considerable state-to-state variability that did not consistently show that greater LANE knowledge caused greater organizational data entry. Selected results from the survey are presented in Table 4.

Staff Turnover

Overall, 82% of respondents were willing to provide staff turnover data monthly as opposed to annually. There was some state-to-state variation, possibly reflecting states that were already measuring turnover using other methods. Overall, feedback on the staff turnover spreadsheet and process from the pilot was positive. One hundred percent of respondents (9 of 9) found the spreadsheets easy to use; 89% said that their human resources staff either had the necessary data available or could easily obtain it; 89% also stated that it would be more useful to measure staff turnover monthly for registered nurses (RNs), licensed practical nurses (LPNs), and certified nursing assistants (CNAs) using the AE tools. Most importantly, 89% of administrators and DONs articulated that they would use the data to address specific staff turnover issues, and that this would be more helpful than annual, aggregate data.

Qualitative data fell into 4 themes: (1) desire for monthly turnover reports, (2) tracking with Excel is desirable, (3) turnover already tracked by DON or assistant director of nursing (ADON), and (4) tracking often done by human resources (HR) or Payroll staff. These were categorized into comments that indicated greater assistance by the campaign and feedback that many NHs already had some means of tracking turnover. In almost all cases, even the homes that were already tracking the data internally indicated they were willing to enter the data on the AE Web site.

Satisfaction

Across the polled states, 32% of respondents said they would like assistance finding a staff satisfaction survey tool; however, in CA and MI, 50% of respondents wanted assistance, again reflecting state-to-state differences (some states use commercially available interview tools extensively). In this sample, for-profit homes were more likely to support staff and resident/family satisfaction data entry directly onto the AE Web site than were not-for-profits. Ninety-nine percent of respondents stated that they make changes based on results. Qualitative results most frequently mentioned improved dining practices, investigation of lost personal items, or changes in activity schedules based on resident/family satisfaction data. Many comments described using action plans to implement improvements based on satisfaction results. An automated survey tool, comparison graphs, or benchmarking were all mentioned as potentially useful when trying to make changes based on the data.

Almost half (49%) of the for-profit homes were willing to have staff directly enter satisfaction data onto the campaign Web site as compared with 27% of the not-for-profit homes. Similarly, 47% of for-profit homes were willing to have residents or families enter data directly onto the Web site, whereas only 26% of the not-for-profit homes were willing.

Table 3. *2008 Goals Selected by Nursing Homes*

Participating NHs in State	Total NHs Enrolled in Campaign in State	Pressure Ulcer Goal, %	Restraints Goal, %	Pain in Postacute Residents Goal, %	Pain in Long-Stay Residents Goal, %	Target Setting on NHQI-STAR Goal, %	Resident and Family Satisfaction Goal, %	Staff Turnover Goal, %	Consistent Assignment Goal, %
CA (n = 21)	359	52	33	14	14	19	29	19	33
GA (n = 14)	349	93	86	21	14	7	79	14	7
MA (n = 15)	306	67	47	40	33	13	67	40	40
MI (n = 8)	183	38	13	25	13	0	13	25	13
OK (n = 14)	103	86	57	36	43	50	50	43	36
WA (n = 12)	119	67	20	47	33	33	53	47	13
Grand Total (n = 87)	1419	68	44	30	25	22	49	31	25

NH, nursing home; NHQI-STAR, nursing home quality initiative, setting targets achieving results.

Advance Care Planning

Most respondents (85%) said they would be able to collect and measure data for the new advance care planning goal with almost all respondents agreeing that staff would know where to find the information in the chart. Ninety-four percent of facilities collect more than cardiopulmonary resuscitation (CPR)/no CPR data (eg, Do Not Hospitalize or No tube feeding). Because this is a new goal for the AE campaign, the steering committee was interested in knowing what is currently working for reporting Advance Directives in the different homes; therefore, the LANEs asked a question about the Physician Orders for Life-Sustaining Treatment (POLST) form (see www.POLST.org). There are many states that are already using or promoting POLST to indicate residents' preference for care at end of life including CA and WA, so it is not surprising that 90% to 100% of respondents had heard of POLST or were using POLST in those states. In other states (MA, OK) rates were considerably lower (7%–8%). Knowledge of POLST did not make a difference in NH opinion on the advance care planning goal overall.

Based on the qualitative data, many facilities indicated that social workers (or designee) or nurses would be best suited to collect advance care planning data and were the staff most associated with completion of advance directives currently in their NH. There was a common perception that practitioners (MDs, nurse practitioners [NPs], and physician assistants [PAs]) spent little or no time discussing or documenting advance directives while visiting residents. The costs of in-service and time needed to complete forms were reported as potential barriers.

Consistent Assignment

Many NHs stated they had already implemented consistent assignment but agreed that they were not necessarily using the AE campaign definition. Of the 6 NHs that pilot tested the consistent assignment spreadsheet, half found it to be too time-consuming, whereas 1 NH asked permission to implement it immediately. Most NH staff did not have the expertise with Excel that was required to effectively use the tool. Large amounts of data (staffing records, resident lists) had to be initially imported into the spreadsheet for the consistent assignment calculations to be performed. Qualitative feedback from respondents suggested that if the program could combine the consistent assignment calculation with generating a daily staffing census sheet or integrate the short- and long-stay residents into 1 list, it would be more useful.

Target Setting

In Phase 1 of the campaign, *target setting* was one of the AE goals and results had shown that NHs that set targets improved faster and to a greater degree than NHs that did not set targets.[15] Based on these results, there was significant interest in the number of NHs that used the NHQI-STAR Web site where they could enter targets for each of their goals. Overall, 61% of this sample entered targets on the Web site and a greater number of those who used target setting also had worked with their state QIO.

Table 4. *Selected Results from the Telephone Survey*

Category	Total n = 87	Percentage of Respondents
Nursing homes that set targets through NHQI-STAR Web site either currently or in the past	79	55
Willing to provide monthly data for turnover measure	79	82
Willing to report percentage of families recommending the facility	85	93
Respondents who know the LANE Convener	87	56
Respondents who either currently or previously worked with their LANE	87	72
Willing to report satisfaction data to the LANE	78	93
Number of NHs that felt monthly reminders helpful	71	92
AE constructed spreadsheets would facilitate data entry	71	70
Willing to have NH staff enter data directly on AE Web site	83	43
Willing to have residents/families enter data directly	82	43
Able to track advance directives using a chart review system*	87	85

AE, Advancing Excellence; LANE, Local Area Network for Excellence; NH, nursing home; NHQI-STAR, nursing home quality initiative, setting targets achieving results.

* Most agreed a spreadsheet or similar method provided by AE would be useful.

DISCUSSION

This is the second in a series of 3 projects related to developing a better understanding of how NHs are using Advancing Excellence goals to improve quality. This project collected data from 16% of NHs enrolled in the campaign in 6 states, as well as from the LANE leaders in those states. A number of modifications to the AE Web site and to the tools have already been implemented, based on feedback from respondents about Web site functionality and use of the tools.

The results from this project provide useful direction to the national campaign, state LANEs, and facility medical directors and other leadership in a number of areas. (See Figure 3 for suggestions on how medical directors can promote quality improvement through AE.) First, NHs appear willing to use tools and resources both to improve quality and to measure performance; however, they often need help to get started. The AE campaign can provide that help via concrete management aids such as simple spreadsheets, audit tools, and step-by-step instructions on quality improvement processes. Second, to access tools and information on the AE Web site, LANEs must reach out to NHs repeatedly to reinforce the availability of information and to facilitate the process of getting started. Leadership turnover is a major barrier to ensuring that NHs have access to the AE materials through typical e-mail communications. The AE campaign needs to make updating of NH contact information a priority. Results in this pilot suggest that most NHs prefer to be contacted via e-mail (not newsletters), and that monthly contact is the preferred frequency.

As expected, most (91%) AE contacts were NH administrators, DONs, or both, raising the concern that staff not in leadership positions may not be aware of the campaign. High rates of turnover in leadership positions may also be contributing to the lack of consistency in data entry, as most contacts are DONs or administrators. AE should collect at least 3 contacts from each NH to ensure that contact can be maintained. Greater knowledge of the campaign by all staff associated with NHs should enhance goal improvements. Efforts are under way at the national level through the staff involvement and consumer workgroups to promote the campaign among consumers and frontline staff. Medical directors and other NH leaders can play a key role in speaking with residents, families, and frontline staff about the benefits of the campaign.

Staff turnover has been associated with quality of NH care in numerous studies.[18,19] Results here suggest that NH leaders are willing to measure turnover monthly and for separate job categories (RN, LPN, CNA), and to use the data to make changes in workplace and HR practices. This is encouraging; whereas no regulatory national measure of turnover currently exists, AE will begin the process of collecting the data, testing the process, and reporting these data nationally. Based on those results, the potential to have NHs provide turnover data to the federal government, possibly through the Online Survey and Certification and Reporting (OSCAR) system could be considered.

Nursing homes in this sample appear to be using resident/family and staff satisfaction survey results to improve care. Administrators gave many examples of changes in dining practices, activities, and scheduling that resulted from satisfaction surveys. Although many states did not require assistance in finding and conducting satisfaction surveys, in others half of facilities asked for assistance. This reveals significant state-to-state differences and suggests that NH leadership and medical directors may benefit from access to tools and resources through AE in some states. It may be that the states that reported high usage may have a state requirement to conduct satisfaction surveys.

In this sample, over 40% of both for-profit and not-for-profit homes stated that they would be willing to use an independent Web site, such as AE, to enter both staff and resident satisfaction data. This suggests that facilities recognize the benefits of independent satisfaction data in enabling their organization to make improvements and measure progress. It was of interest that more for-profit homes were willing to allow residents and staff to independently enter data than not-for-profit homes. This may be partially because of the significant involvement of the national and state for-profit provider organizations, although there is significant support by the not-for-profit provider organizations as well. Medical directors and providers may benefit from reviewing both staff

How Medical Directors Can Promote Quality Improvement through Advancing Excellence

1. Ask facility leadership (Administrator, DON) whether the facility is enrolled in AE and encourage data entry for organizational goals. Ask frontline staff whether they are aware of the AE campaign and what AE goals the facility is working on.

2. Review AE data with nursing home leadership team periodically and identify actionable items for quality improvement. Identify any barriers to setting targets or achieving AE goals. Suggest that facility may contact LANE for assistance.

3. If leadership turnover occurs, remind new leaders about AE campaign (they may not be aware of the campaign, and will likely need a new password to access the website).

4. Consider conducting an audit of advance directives documentation in your facility (audit tool will be available on AE website at www.nhqualitycampaign.org.) Ask nursing and social work staff what they think providers are doing about discussing and documenting advance directives; ask providers how they think nurses and social workers are engaged during the admission process.

5. Review staff and resident/family satisfaction data with team when available.

6. Ask administrator whether turnover is being measured monthly and for individual disciplines (RN, LPN, CNA). Ask how turnover data is used to make changes in the organization (strategies to reduce staff turnover).

Sign up for AE as a provider at www.nhqualitycampagn.org. Join your state LANE!

Fig. 3. *How Medical Directors can promote quality improvement.*

and resident satisfaction survey results, as important practice implications for quality of care and quality of life may be revealed in the data.

Most NHs were willing to collect data on documentation of advance directives and almost all already document information beyond "CPR/no CPR." Of particular interest to medical directors is that most facilities were unable to answer questions related to the advance care planning activities of the physicians or nurse practitioners, which suggests a potential communication issue between the facility-based team and the primary provider teams. The perception expressed by several facilities was that physicians and nurse practitioners may not spend much time on advance directives; this may or may not be factual and more likely indicates the lack of communication between clinical providers and NH staff on this issue. Medical directors and primary care providers should strengthen their documentation of advance care planning discussions in the medical records and communicate the discussion with staff. Future studies should examine how the interdisciplinary team (IDT) functions around advance care planning, and in particular how the medical providers are integrated by the social workers and nurses into discussions/documentation of resident or family wishes that most often occur during the admission process. Medical directors and primary care providers may want to do a point prevalence survey in certain facilities periodically to determine whether advance directives are being addressed, how they are being documented, and the information shared across disciplines. The AE campaign is currently working on clarifying the taxonomy for terms such as advance directives, advance care planning, and others. AE may want to develop straightforward documentation and communication tools for use by clinicians and NH staff.

Although many NHs reported they used consistent or permanent assignment, most did not define the variable in measureable terms. The AE campaign has a measureable definition and tool that will provide a standardized measure, but it will be important that the measurement tool be modified so that it can be easily implemented by NHs.

NHs in this sample were interested in using QI tools such as target setting. Medical directors and primary care providers should be aware that facilities often need assistance and support in initiating quality improvement projects, locating appropriate resources, and sustaining progress. With their free public access Web site and LANE outreach, AE can be an effective resource for nursing facilities and medical directors in their efforts to improve quality. Many of the tools and resources can be used by staff to report data at the quarterly quality assurance meetings. Linking to related initiatives, such as American Medical Directors Association Clinical Practice Guidelines, QIO resources and others may enable leadership teams to leverage and align other quality improvement programs as well.

Many NHs that have signed on to the AE campaign represent innovators or early adopters of innovation. This may be particularly true of the sample of volunteer homes in this project. Rogers' Diffusion of Innovation model provides a useful framework for identifying early innovators as well as categorizing and recognizing barriers to the adoption of innovations such as greater IDT communication around advance care planning, measuring turnover and consistent assignment, and other quality improvements in NHs. NHs will be able

to indicate their volunteer to participate in future pilot projects on the Web site that will further develop resources.

Qualitative data from both the original project[20] and the current project reflect a significant shift in NHs toward understanding and appreciating quality improvement methods such as target setting and tracking and trending data. Administrators from multiple facilities in each of these pilot projects expressed a desire to engage in these activities and asked for resources to help with their efforts. Although individual providers can sign up to participate in Advancing Excellence, few physicians or nurse practitioners have taken advantage of this opportunity to date. Improving care in NHs will require effort by every member of the IDT, consumers, government agencies, and others. The encouraging results from this small pilot suggest that individuals can work through AE and state LANEs to collaborate with nursing facilities on quality improvement and performance measurement. Most facilities seem to appreciate such teamwork, and appear ready and willing to use the data to enhance care.

Programs such as NHQI-STAR have been successful[7] and most facilities used NHQI-STAR to set targets and enter data in this sample. Baier et al (2009) have reported data from Phase 1 of the campaign showing that those NHs that joined the campaign and set targets had greater improvements in all of the clinical goals. In response to these data, the NHQI-STAR and AE Web sites will be merged in an attempt to align programs and reduce reporting burden on NHs. In Phase 2 of the campaign, target setting will be required for all goals. The AE Steering Committee is also currently examining definitions from multiple national QI programs to streamline reporting requirements and avoid duplication.

STRENGTHS AND LIMITATIONS

This project has several strengths. First, the opportunity to engage NH staff directly provided rich, qualitative data that revealed informative attitudes and beliefs about continuous quality improvement and NH quality, as well as specific feedback on the new 2009 AE goals. Second, the sample included representation from not-for-profit and for-profit NHs; chain and nonchain homes; small, medium, and large homes; and homes from rural and nonrural regions, enhancing generalizability to other states. Finally, both qualitative and quantitative feedback from this quality improvement project was able to inform the national campaign so that changes can be made to the Web site, tools, and resources to clarify certain features based on our findings.

There are also several limitations. The small sample included 87 homes that were not all randomly selected to participate in the project from 6 states that volunteered to participate. The LANEs were specifically chosen based on their previous experience or lack thereof. It may be that homes with more barriers to engaging in quality improvement might have been underrepresented in the sample. The methods of sample selection along with the small sample size limit the generalizability of the results of the study. In addition, there were multiple people who had to be trained on the survey instrument. Although the survey instrument was fairly straightforward and we conducted 2 study sessions, we did not test for inter-rater reliability, which may reduce the validity of the results. Despite this, post interview discussions with the interviewers were conducted and revealed no major differences in their processes except where indicated.

FUTURE RESEARCH AND POLICY IMPLICATIONS

AE appears to be moving NHs and states in the right direction toward performance measurement and quality improvement, national and state benchmarks, and regional learning collaboratives. This framework is supported by the previous 2 projects, and will now be applied to critical access (resource-challenged) NHs in the next Commonwealth Fund initiative.

Nursing homes and corporations that have not signed on with AE, or have not entered organizational goals, should be contacted and offered technical assistance. In many cases, leadership may have changed and simply providing access to the resources on the AE Web site may be enough to prompt NHs to enter goals. Another strategy would be to engage state departments of public health and suggest that they inquire about AE during the state survey process. This could encourage more NHs to participate in the campaign.

The AE campaign should continue to provide guidance on how to measure and track staff turnover, staff and resident/family satisfaction, advance directives, and consistent assignment. Tools and resources should be straightforward and easy to use. As the campaign introduces new goals and requires NHs to measure these goals using more detailed NH-specific data, the role of the LANEs in supporting NHs will become increasingly important in sustaining improvements. Clinical expertise at the LANE level will be highly beneficial to NHs.

Conclusions

Nursing homes appear able and willing to access a user-friendly Web site; therefore, Web site design and functionality is important to the success of quality improvement efforts in NHs. Clinical and organizational outcomes, as well as processes, should be measured, analyzed, and used to inform future campaign goals and strategies. A significant number of NHs report wanting to benchmark data and to participate in a quality campaign; therefore, efforts such as Advancing Excellence should be sustained and enhanced. The Advancing Excellence campaign has compiled significant data in the 8 different goal areas during Phase 1. This study contributes considerably to the campaign by providing clues to how NHs are entering self-collected data and how they perceive the new goal areas.

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