*Practice Concepts*_____

The Coach Is In: Improving Nutritional Care in Nursing Homes

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Purpose: This article describes and evaluates a long distance coaching course aimed at improving nutritional care in nursing homes (NHs). The course was structured to provide more support than traditional training programs offer. ***Methods:*** In a series of 6 monthly teleconferences led by an expert in NH nutritional care, participating NH staff received step-by-step instructions for implementing an evidence-based nutritional management program. After each session, participants were asked to implement the care step they had just learned. Coaching calls helped facilitate implementation. Staff in 18 NHs in 12 states completed the course. Evaluation data were collected using a resident data form, pre- and post-training quizzes, a participant course evaluation survey, and a supervisor's report. ***Results:*** NH staff attended an average of 4.8 teleconferences, with 5 staff members typically attending each teleconference. Average quiz scores increased 30% ($p < .0001$) from pre- to post-training. A majority of course participants ($N = 35$) said they would participate in a similar course (82.9%) and would recommend the course (80%). Just under half preferred the coaching course to a more traditional 1- to 2-day conference. Nine of 12 reporting supervisors said their facility planned to continue the new nutritional care program. The 10 NHs that submitted resident data assessed an average of 5 residents using the recommended protocols. ***Implications:*** We recommend the coaching course format. Dissemination outcomes may improve if resources currently used for short-duration training activities are used instead on coaching activities that support NHs over extended periods.

Evidence abounds that usual practice in nursing homes (NHs) is not evidence-based practice. This gap in recommended care has been documented in numerous areas (Schnelle et al., 2003), including nutritional care (Simmons et al., 2003). The reasons for these gaps in care are many, including high staff turnover and insufficient staffing (Donoghue, 2010; Harrington et al., 2000), but another often neglected reason is a weak translational system. For the most part, we have not followed up the development of effective interventions with robust, sustainable efforts to support NH staff to adopt efficacious interventions (Grimshaw et al., 2005). Although the NH literature includes calls to strengthen translational research (Resnick, Quinn, & Baxter, 2004), few studies have tested or evaluated such strategies. Among these, some have focused on commonly used passive strategies, such as the publication of best-practice guidelines. Although these strategies may increase awareness of recommended care, there is scant evidence that they lead to improved practice (Colon-Emeric et al., 2007; Watson, Brink, Zimmer, & Mayer, 2003). The strategies that to date have worked best are the most intensive, often involving on-site visits to NHs, which can be challenging for change agents to sustain or to replicate (Baier et al., 2004; Hutt et al., 2006; Jones et al., 2004), though not impossible, as Rantz and colleagues (2003) have demonstrated. Fewer studies have examined translation strategies that use primarily telecommunications to effect behavior change in NHs (Gardner et al., 2001). These newer technologies may make intensive translation approaches more affordable and thus more sustainable.

In this study, we administered and evaluated a telecommunications-based translational strategy—a long distance coaching course—designed to promote uptake of an evidence-based nutritional care intervention. This translational strategy was previously used to improve incontinence care (Rahman, Schnelle, Yamashita, Patry, & Prasauskas, 2010). The aim of this study was to determine whether the multicomponent coaching course strategy would work in a different care area, a question that touches on the robustness of the translational strategy and its potential for wider replication.

Theoretically, the coaching course can be used to disseminate any evidence-based or recommended best practice. In this study, the intervention was a nutritional care program that has been shown to increase caloric intake among at-risk residents but has not been widely adopted by NHs.

The Nutritional Care Intervention

Unintentional weight loss is a common problem among NH residents that can lead to increases in the rates of hospitalizations and death (Liu, Bopp, Roberson, & Sullivan, 2002). Research suggests that the quality of mealtime assistance significantly influences residents' consumption (Kayser-Jones & Schell, 1997). Indeed, two recent controlled trials showed that enhancing assistance during meals and snack times increases food and fluid intake among at-risk residents (Simmons & Schnelle, 2006; Simmons et al., 2008).

The intervention starts with an assessment of residents' mealtime consumption to identify those with poor oral intake. At-risk residents are offered enhanced mealtime assistance for 2–3 days to determine whether they eat and drink more in response to this extra staff attention. The resident-centered assistance protocol includes socialization during meals, offers of alternatives to the served meal, assistance that encourages independent eating, and longer meal periods for slower eaters. About 40%–50% of nutritionally at-risk residents will eat more as a result of this mealtime intervention.

An alternative to the mealtime intervention is a between-meal snack intervention. This intervention also includes a brief trial of consistent offers of snacks between meals coupled with staff assistance to promote consumption. Most residents are responsive to snack offers, including 80% of those unresponsive to mealtime assistance.

When the two-part intervention is considered as a whole, about 90% of nutritionally at-risk residents will significantly improve their food and fluid intake (Simmons et al., 2008). The protocol includes procedures for monitoring ongoing care. Additionally, several time-saving strategies have been identified to help NHs customize the intervention so that it is feasible to implement given their staffing resources. Instructions and recommended forms for conducting each step of the intervention are available online at http://www.vanderbiltcqa.org/Weight_Loss_Module.

Researchers have worked on-site in NHs to facilitate adoption of this evidence-based intervention.

Table 1. Curriculum for Nutritional Care Course

Meeting 1 (Month 1): Overview of weight loss prevention and mealtime assistance; assessing intake.
Assignment: Read Overview and Step 1[a], "Assess risk for weight loss." Begin assessing food and fluid intake at mealtimes.

Meeting 2 (Month 2): Mealtime intervention: Assessing resident responsiveness.
Assignment: Read Step 2, "Individualizing mealtime assistance." Begin conducting mealtime assistance trials with a sample of residents.

Meeting 3 (Month 3): Snack intervention: Assessing resident responsiveness.
Assignment: Read Step 3, "Implement staffing strategies." Begin conducting snack trials with a sample of residents; continue enhanced eating assistance at mealtimes for responsive residents.

Meeting 4 (Month 4): Staffing; peer experiences.
Assignment: Read Step 4, "Monitor quality of mealtime assistance." Continue assessing residents and maintaining responsive residents on either the mealtime or the snack intervention.

Meeting 5 (Month 5): Monitoring mealtime assistance.
Assignment: Conduct direct observations of mealtimes and snack periods; share results with certified nurse aides. Continue assessing residents and providing individualized mealtime assistance to nutritionally at-risk residents.

Meeting 6 (Month 7): Follow-up session: Progress reports by participating facilities, with Q&A session.

Note: [a]All reading assignments refer to the training manual found at http://www.cas.muohio.edu/bridgeproject.

Although this dissemination strategy is associated with long-term effectiveness, as participating NHs have achieved and sustained care improvements (Simmons & Schnelle, 2006), it has limited reach, for it is both time and labor intensive. As a result, it is impractical for most NH educator groups to replicate. In this study, we used a relatively low-cost coaching course to promote more widespread implementation of the nutritional care intervention. Of particular interest was whether this more affordable, and thus more sustainable, dissemination strategy would lead to improvements in care.

Conceptual Framework for the Coaching Course

Translational research in other disciplines suggests that slow-to-innovate target groups may benefit from more extensive support than most training programs customarily offer (Rogers, 2003). This may be especially true for NHs, where high staff turnover, understaffing, a frontline workforce with limited training, and a highly regulated environment may all combine to hamper innovation. With this in mind, the coaching course was structured to provide extended instruction and support at a reasonable cost. Additionally, it aimed to foster an interactive, systems approach to active learning while improving NH care. Reviews of the research on active learning—a process that involves students in applying and evaluating new knowledge—have concluded consistently that this approach improves learning, enhances engagement, and is generally more effective than traditional, more passive modes of teaching (Michael, 2006; Prince, 2004). A systems approach to organizational

change mirrors the active learning process in that it promotes staff engagement at all levels and decision making based on empirical data; it has been associated with improved outcomes in a wide range of fields (Deming, 1986; Institute for Healthcare Improvement, 2003). In applying principles of this dual approach, the course was organized around three core steps: (a) presentation of new information, (b) application of that information through field assignments, and (c) evaluation and discussion of the results, with the intent of refining the practice.

Course Structure

To promote active learning and, with it, implementation of the recommended nutritional care intervention, the course featured a series of six live, interactive teleconferences, with each teleconference focused on a single implementation step or a key concept pertaining to the intervention (see Table 1). Teleconference lectures, each about 40 min long, were presented by a nationally recognized expert in NH nutritional care management and closed with an open Q&A period. To promote ease of use, teleconferences were conducted by phone, with PowerPoint slides e-mailed in advance.

At each participating NH, one supervisor, designated as the project liaison, agreed to attend all teleconferences, oversee field assignments, and act as the facility's champion for the new intervention. Additional staff members were encouraged to attend the teleconferences using a speakerphone. Nurses and dietary staff received continuing education (CE) credit hours for their participation.

Table 2. Course Products and Services

- Monthly 40-min teaching teleconferences for 5 months, with a follow-up teleconference 2 months later.
- Online access via the project's Web site (http://www.cas.muohio.edu/bridgeproject/meals.htm) to all training materials as well as the standardized assessment forms needed to institute the nutritional care intervention.
- Online access to all teleconference PowerPoint presentations and audio recordings of selected presentations. Facilities can download these tools at any time for in-house training purposes.
- Coaching calls between teleconferences, initiated by the project staff.
- Technical and implementation assistance available by phone or e-mail to nursing home providers upon their request.
- Online discussion group with all project staff, consultants, and participants.
- 12.33 contact hours for nurses who complete the project and 13 contact hours for dieticians and other dietary personnel.

At the close of each teleconference, supervisors and their staffs were asked to complete a field assignment before the next session. These assignments required participating staff to apply what had just been taught and begin implementing the improvement intervention step by step with a small group of residents, to be identified by the liaison supervisors but taking into account the expert lecturer's best practice recommendations. All participants also were assigned to read prior to each call written instructions that supplemented the teleconference presentations. These reading assignments and all assessment forms were available online (visit http://www.cas.muohio.edu/bridgeproject/meals.htm).

Between sessions, a project staff member phoned each liaison supervisor to offer coaching assistance aimed at promoting intervention implementation. The assignment each month typically provided a framework and starting point for these discussions (e.g., "Tell me how you and your staff are doing on the Step 1 assignment"). Depending on the NH's needs and progress, the researcher/coach would answer questions, suggest alternative strategies to overcome any identified implementation barriers, and/or acknowledge and praise improvements. Coaches also elicited feedback on the course itself, especially areas where additional instruction was desired. Typically, coaches called each supervisor approximately 2 weeks after each teleconference.

Course products and services are summarized in Table 2.

Innovative Features.—As just described, the coaching course can help NHs overcome common implementation barriers, particularly those related to staffing problems and intervention sustainability. For instance, by enabling multiple staff to attend teleconferences, the course design helps ensure that back-up staff are trained if turnover becomes a problem. Additionally, supervisors can access online PowerPoint presentations and audio recordings of teleconference presentations to use for training new hires. With respect to sustainability, the extended training period and coaching calls help keep NH staff accountable and motivated to routinize and maintain care improvements.

We conducted a multifaceted evaluation to assess the strengths and weaknesses of this translational approach to NH staff training.

Methods

Participants

Facilities were recruited by electronically disseminating a project announcement to state organizations involved in NH education as well as a convenience sample of individual facilities. Enrollment was offered at no cost on a first-come, first-served basis, with a cap of about 30 NHs. Above that number, NHs could enroll for $95 per facility.

A total of 37 NHs registered for the course, with 6 paying an enrollment fee. For the evaluation, a facility was counted as participating if at least one staff representative attended at least half (three) of the teleconferences. Staff in 18 facilities (49% of enrolled facilities) in 12 states completed the course. Ten NHs dropped out before the course started and nine attended fewer than three teleconferences. Of these 19 NHs, 5 reported staffing problems and 4 reported competing obligations, such as an imminent survey. Technology-related problems and falling behind in the course were less commonly cited (three NHs). Seven NHs did not respond to our request for follow-up information.

Descriptive data were collected from Medicare's Nursing Home Compare Web site (Center for Medicare & Medicaid Services, 2011) for all 37 participating NHs. Chi-square and Fisher exact tests showed no significant differences between facilities that completed the course and those that dropped out based on size, ownership status, staffing

Table 3. Nursing Home Characteristics

Characteristics	M Participants	M Nonparticipants	M National
Size (beds)	131.2	125.2	107.6
Not-for-profit ownership	0.44	0.57	0.62
Nursing staff hours per resident day	1.4	1.4	1.4
Certified nurse aide hours per resident per day	2.4	2.3	2.3
Percent of long-stay residents who lose too much weight	7.9	8.2	8

Note: N = 18 participating facilities and 19 nonparticipating facilities. Sources: Center for Medicare and Medicaid Services (2011), Nursing Homes Compare, 2011a (http://www.medicare.gov/NHCompare/home.asp), Jones, Dwyer, Bercovitz, and Strahan (2009), and Harrington, Carrillo, and Blank (2008).

hours, and percentage of long-stay residents with a recent weight loss (Table 3).

Data Collection Instruments

Evaluation data were collected using (a) a course evaluation, (b) a project liaison supervisor's report, (c) a resident assessment form, and (d) a pre- and post-training quiz. Response rates varied depending on the form. With respect to the first form, 35 staff members from 10 NHs (55.6% of all participating facilities) completed the course evaluation. The second form, the supervisors' report, included items most appropriately answered at the facility (as opposed to the individual) level, including items pertaining to implementation of the nutritional care intervention. Supervisors in 12 NHs (67% of the participating homes) completed this report. Supervisors also were asked to complete a resident assessment form documenting the number of residents assessed during the project. Supervisors from 10 of the 18 participating NHs (55.6% of participating facilities) reported these data. Finally, before and after each course, we administered the same 13-item, multiple-choice quiz to test participants' knowledge of nutritional care management. All participating staff members were invited to complete each quiz. Results were analyzed for the 26 respondents from 15 participating NHs who completed both the pre- and post-training quizzes.

Measures

Participation.—Our teleconferencing provider automatically recorded the phone number of all NHs that joined each teleconference, so we could track participation rates. Additionally, supervisors in each home reported the number of staff members who attended the teleconferences.

Training Outcomes.—Pre- and post-training quiz scores were compared for the 26 respondents who completed both quizzes. Additionally, the course evaluation asked whether participants had (a) "learned a lot from the teleconference lectures," (b) "learned a lot from the reading assignments," and (c) "learned a lot from the other (participants)." Responses to each item were rated on a 5-point scale (1 = *strong disagreement*, 5 = *strong agreement*). Participants were also asked to rate their engagement in the course on a 5-point scale, with 1 indicating *not at all engaged* and 5 indicating *very engaged*. Liaison supervisors were asked to rate the helpfulness of the coaching calls on a scale from 1 (*not at all helpful*) to 5 (*very helpful*).

Intervention Implementation.—The course provided online access to standardized forms for (a) assessing residents, (b) implementing the intervention, and (c) monitoring the intervention. For each of these three categories, there were two forms: one for use during meals and one for use during snack times (available from http://www.cas.muohio.edu/bridgeproject/meals_forms.htm). Thus, there were a total of six recommended standardized forms. In their reports, liaison supervisors were asked whether the facility used each form "as is," "in a modified form," or "did not use it at all." Responses by category of form are reported (i.e., assessment, implementation, monitoring), without regard to whether the form was used during meals or snack times.

Supervisors also were asked whether, as a result of the staff's participation in the course, (a) more residents at risk of unintentional weight loss were identified, (b) more mealtime assistance was provided to at-risk residents, and (c) more between-meal snacks were provided to at-risk residents. Supervisors also were asked whether their facility

Table 4. Training Effectiveness

	M	Range
Participant mean ratings (N = 35; 5-point scale with 5 = *strong agreement/very engaged*)		
I learned a lot from the teleconference lectures	3.8	2–5
I learned a lot from the training manual/reading assignments	3.5	2–5
I learned a lot from the other (participants)	3.1	1–5
Engagement in course	3.5	2–5
Supervisors' mean ratings (N = 12; 5-point scale with 5 = *very helpful*)		
Helpfulness of coaching calls	3	1–4

planned to (a) expand the program, (b) maintain the program at its present level, or (c) terminate the program. Additionally, we asked whether staff encountered "problems that made it difficult to implement the care practices recommended in the course." Supervisors who responded affirmatively to this latter question were asked to identify from a seven-item list the problems they encountered.

Finally, as noted earlier, supervisors were asked to report the number of residents assessed during the project. Each resident could receive one or more of three separate assessments for (a) nutritional intake, (b) responsiveness to enhanced meal-time assistance, and (c) responsiveness to enhanced snack-time assistance. Supervisors were encouraged to submit these data on an ongoing basis throughout the 7-month project period.

Training Program Preferences and Future Considerations.—Course survey respondents were asked for their opinion regarding the best (a) length for the teleconferences, (b) number of teleconferences, and (c) interval between teleconferences. Additionally, participants were asked whether they would participate in a similar project, would recommend the course to colleagues, and whether they preferred the coaching course to a more traditional 1- to 2-day, in-person training program.

Course Costs.—We report our total cost to administer the course. This includes staff salaries and benefits, a stipend for the course lecturer, teleconferencing fees, a CE application fee, miscellaneous costs for postage and office supplies, and indirect costs calculated at 10%.

Results

Participation

Staff at participating NHs attended an average of 4.8 sessions or 80% of the six teleconferences (Mode 6). Reporting supervisors estimated that five staff members per facility typically attended the teleconferences (range: 1–23). Of the 35 participants who submitted course evaluations, most (20) were nursing staff, including 3 directors of nursing, or dietary personnel (7). The remaining participants were administrators (two), nurse aides (three), and other staff (three).

Training Outcomes

Scores for participants who completed both assessment quizzes (N = 26) increased from 45% to 75% from pre- to post-training, $p < .0001$, $t(25) = -8.15$. As shown in Table 4, participants' ratings of the teleconferences were generally positive. Self-rated engagement was 3.5 on average. Supervisors rated coaching call helpfulness 3, on average.

Intervention Implementation

Table 5 presents intervention implementation results. Of the 12 supervisors who submitted a liaison's report, most reported using the recommended forms "as is" or "in a modified form." To varying degrees, most also reported improved resident outcomes from the intervention. Nine of these 12 supervisors reported plans to expand or maintain the program. No facilities reported plans to terminate the intervention. Three supervisors skipped this item.

As a reminder, 10 NHs submitted resident assessment reports. On average, these facilities each assessed five residents (range: 3–10). Each resident received one to three separate assessments for (a) nutritional intake (41 residents), (b) responsiveness to enhanced mealtime assistance (31 residents), and (c) responsiveness to enhanced snack-time assistance (40 residents). Altogether, these NHs conducted a total of 112 separate resident assessments.

Ten supervisors reported implementation problems, most of them staffing related.

Table 5. Intervention Implementation

Supervisors (*N* = 12) reporting that	% (*N*)
Resident assessment form(s) used as is or with modifications	91.7 (11)
Implementation form(s) used as is or with modifications	83.3 (10)
Monitoring form(s) used as is or with modifications	66.7 (8)
More at-risk residents were identified	66.7 (8)
More at-risk residents received mealtime assistance	58.3 (7)
More at-risk residents received snack-time assistance	41.7 (5)
Their facility would expand the program	50 (6)
Their facility would maintain the program at its present level	25 (3)
Their facility would terminate the program	0
Problems with intervention implementation	83.3 (10)

Reported implementation problems	Number
With turnover	4
Staff resistance to changing routines	3
Absenteeism	3
Lack of staff or staff time	4
Insufficient support from administrators	2
Policies already in place	2
Residents resisted the new routines	1
Training level was too advanced	0
Total number of[a]	
Residents assessed	52
Nutritional intake assessments	41
Assessments of responsiveness to mealtime assistance	31
Assessment of responsiveness to snack-time assistance	40
All assessments combined	112

Note: [a]Based on reports from 10 supervisors.

Table 6. Training Program Preferences and Future Considerations

Participant reports (*N* = 35)	% (*N*)
Training program preferences	
Number of teleconferences was just right	62.8 (22)
Length of each teleconference was just right	77.1 (27)
Preference for monthly teleconferences	64.7 (23)
Would recommend the course to colleagues	80 (28)
Would enroll in a similar course again	82.9 (29)
Preference for coaching course model	45.7 (16)

Discussion

Our findings show promise for using the coaching course to enhance nutritional care in NHs at the same time as they reveal challenges associated with this translational strategy.

Promising Results

This demonstration provides preliminary evidence that the coaching course model is flexible and robust enough to translate a range of daily care interventions into NH care practice. As with the incontinence care course upon which it was modeled (Rahman et al., 2010), this course worked as expected in that multiple staff members in each participating facility were able to attend monthly teleconferences that not only improved their knowledge of recommended care practices but also provided a structure and extended support for implementing those practices. This course design stands in contrast to more traditional NH staff training programs, which typically confine training to 1 or 2 days, often off-site, making it difficult for NHs to send multiple staff members and providing no regular, ongoing assistance to support the implementation of new practices.

Ten of 18 supervisors submitted some documentation that the recommended care practices were being implemented. These findings must be viewed cautiously, for they are based on self-reports that we could not independently verify. Still, they are encouraging, for to date, similar implementation results have been achieved only by placing research teams in NHs to work alongside the staff to improve care (Simmons & Schnelle, 2006). This labor-intensive dissemination strategy is considerably more expensive to administer than the coaching course reported on here.

Of interest is that care improvements were implemented despite the fact that almost all reporting supervisors said they encountered barriers to

Training Program Preferences and Future Considerations

The majority of participants said that the total number, length, and spacing of the teleconferences were "just right" (Table 6). Majorities also said they would recommend the course to colleagues (80.0%) and would take a similar course again (82.9%). Just under half of the participants (16 of 35) said they preferred the coaching course, 15 said they preferred a more traditional 1- to 2-day conference held in a single location, and 4 expressed no opinion.

Costs

The course's total administrative and research costs were $17,464 or about $970 per participating NH.

change. Most barriers centered on staffing problems that have been well-documented in other studies (Donoghue, 2010; Harrington et al., 2000; Jones et al., 2004). Our research contributes to this literature, for its findings suggest that one way staffing problems contribute to poor care is by impeding improvement efforts. At first glance, this observation may appear to suggest that staffing problems should be addressed before other improvement efforts are undertaken. But one could argue that the implementation of evidence-based practices, which have been shown to measurably improve care and which often work by empowering nurse aides and flattening staff hierarchies (Simmons & Schnelle, 2006), could improve worker satisfaction and thus mitigate problems with turnover and absenteeism. In any case, it seems unreasonable—and this study's findings suggest it is unnecessary—to postpone care improvement initiatives.

The study also found participant support for the coaching course, with a majority of participants reporting that they would recommend the course and take a similar course again. Additionally, just under half of the participants (46%) said they preferred the coaching course model to a more conventional training program. This is an encouraging yet more qualified endorsement than the incontinence care group gave to the coaching course, which 63% of the participants preferred (Rahman et al., 2010). Still, these overall evaluation results provide reason for other NH educator groups to consider adopting the coaching course model. Presently our research team is using the model to conduct another NH course on a different topic.

Administrative and evaluation costs for the course were reasonable for a pilot study. The research-associated costs would not accrue if a course were offered by a professional organization. The "per-facility cost" could be further reduced by enrolling more facilities. In our course, most costs (e.g., salaries) were fixed. The teleconferencing charge was less than $20 per NH for the entire six-session course. Nothing in our evaluation findings suggests that outcomes would suffer if more NHs enrolled.

Challenges and Barriers

Dropout Rates.—Although dropout rates for distance learning programs are often higher than for in-person programs, this course's 51% dropout rate exceeded the 33%–34% dropout rate for the similarly designed incontinence care courses (Rahman et al., 2010). All facilities that dropped out did so before or soon after the course started, often for reasons that other studies have documented as barriers to improvement, including staffing problems and competing obligations, which imply a time-strapped staff. These challenges to retention may prove difficult to resolve as long as underlying staffing problems persist in NHs.

Noted here is that we provided incentives to enroll (e.g., CEs) and few disincentives for dropping out. The alternative—more rigorously pre-screening applicants to identify the most qualified—risks excluding poor performing NHs, which may arguably need the assistance more. Instead, we recommend that course administrators ask interested NHs to complete an application whose items prompt the staff to plan ahead for their participation (e.g., identify the implementation team). Administrators should also reach out to enrolled facilities that miss the first or second teleconference, for they may successfully engage in the course with a little extra help. In this course, a modest enrollment fee was insufficient to deter dropping out, as three of the six NHs that paid this fee failed to complete the course. Consideration also should be given to testing more intensive translation strategies, perhaps featuring on-site visits, for NHs facing especially serious staffing problems or other barriers to innovation (Rantz et al., 2009).

More Time to Institute Practice Changes.—Organizational change, even under the most favorable conditions, takes time (Senge et al., 1999). Our findings suggest that NHs might benefit and evaluation results would be more meaningful if training and evaluation time were extended. The nutritional care course allotted time enough only to teach all the intervention steps, with a month between sessions to practice each new step. At the end of 7 months, half of the 12 reporting supervisors said their facility planned to expand the program; in other words, implementation in these NHs was incomplete. Future courses should extend support so that NHs have more time to routinize new interventions. Any course expansion, however, should take into consideration that most course participants viewed six teleconferences as "just right." Although additional formal instruction may be unnecessary, extended support could take other forms, including an implementation

support group that meets periodically by teleconference to discuss progress. Business leaders report that such work groups facilitate innovation by depersonalizing the change process and creating a culture in which it is safe to experiment and learn from each other (Delbecq, 2010).

Peer Sharing.—Peers can powerfully influence implementation decisions (Rogers, 2003). Webinar platforms, which enable instant messaging and the use of online polls and quizzes, can increase personal interactions across long distances. In this course, however, participants eschewed an offer to join the teleconferences via an interactive webinar platform in favor of simply calling by phone. Undoubtedly, NHs will become more technologically savvy over time. Meanwhile, coaching course administrators should experiment with strategies to increase peer sharing. In the nutritional care course, for instance, we at times left phones unmuted, solicited questions in advance, invited experienced NH staff to report on their implementation of the intervention, and seeded discussions with questions.

Study Limitations and Next Steps

This observational study relied on self-reported implementation outcomes, which may have been over- or underestimated. A more rigorous design is recommended, specifically a randomized controlled trial that uses independent observational audits to confirm reported outcomes. Such a design was not financially feasible in this study because the participants were so geographically dispersed.

Our ability to make definite conclusions about the course's outcomes also was constrained due to missing data and small sample sizes for some analyses. These limitations could be addressed in part by enrolling more NHs. We also recommend that course administrators ask NHs to deidentify and then submit the actual resident assessment forms used in new interventions; this change may produce more complete, accurate, and timely reporting. Administrators should also consider offering a stipend or another incentive for participants to submit data for research purposes. In this study, despite missing data, the reporting supervisors' data provide sufficient evidence to conclude that at least some NHs had begun to implement recommended nutritional care practices by the end of the course, a claim that short-term training programs by their design cannot make.

In introducing new evidence-based interventions in NHs, a focus on care processes rather than outcomes can be expedient and motivating for the adopting facilities. Improvements in care processes are often detected more readily in NHs than the clinical outcomes they are expected to produce, for these can take time to measurably manifest themselves, especially given most residents' comorbidities (Lynn et al., 2007). Once new interventions are routinized, outcome measurement can be emphasized. The nutritional care intervention, for instance, has been shown to promote weight gain or prevent further weight loss among nutritionally at-risk residents (Simmons et al., 2008).

Conclusion

Progress in one area can reveal unanticipated shortcomings in another. In recent years, researchers have developed a number of intervention protocols that have led to improved resident outcomes. One of them is the evidenced-based nutritional care intervention described in this paper (Simmons et al., 2008). These developments, however, raise a new question: How do we translate recommended interventions into daily practice? This study found support for using a long distance coaching course to prompt NHs to adopt the nutritional care intervention. The model was designed to provide more support over a longer period of time than most traditional, single-site training programs provide. It also sought to reach more NHs at a lower cost per facility than the labor- and time-intensive practice of paying expert consultants to work on-site. In this evaluation, the model earned generally positive reviews, was associated with improved knowledge transfer, and appeared to drive care improvements in some NHs. At the same time, the course evaluation revealed areas for improvement. The insights offered are intended to help revitalize interest in NH translation strategies, a field of study that, with thoughtful attention, could speed the adoption of evidence-based practice in long-term care.

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