Published in final edited form as:

J Am Geriatr Soc. 2012 June ; 60(6): 1157–1164. doi:10.1111/j.1532-5415.2012.03939.x.

Distance Coursework and Coaching to Improve Nursing Home Incontinence Care: Lessons Learned

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Abstract

Objectives—To determine whether a distance coaching course on improving nursing home incontinence care could be replicated and brought to scale with a larger group of nursing homes without sacrificing outcomes.

Design—The study collected descriptive and comparative data.

Setting—The setting was comprised of 14 nursing homes in the original course and 34 homes in the replication course.

Participants—Participants in the study were supervisors and staff from enrolled nursing homes who completed the distance coaching courses on incontinence management.

Measures—Data for both courses were collected using a resident assessment form to evaluate implementation of new practices, pre- and post-training quizzes, a course evaluation survey, and a supervisor's report.

Results—There were few significant differences between the course groups with respect to course participation, knowledge transfer, and training program preferences. Although course 1 nursing homes reported assessing more residents on average than course 2 homes (22 residents vs. 12 residents, respectively), this difference is likely an artifact of differences in the reporting methodologies for the two courses.

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Conflict of Interest: The editor in chief has reviewed the conflict of interest checklist provided by the authors and has determined that the authors have no financial or any other kind of personal conflicts with this paper.

Author Contributions:

Dr. Rahman has full access to all of the data in the study and takes full responsibility for the integrity of the data and the accuracy of the data analysis.

Study concept and design: Rahman, Schnelle, Applebaum, Lindabury, Simmons.

Acquisition of data: Rahman, Applebaum

Analysis and Interpretation of Data: Rahman, Schnelle, Applebaum, Lindabury, Simmons Drafting of the manuscript: Rahman

Critical Revision of the manuscript for important intellectual content: Schnelle, Applebaum, Lindabury, Simmons

Statistical analysis: Rahman

Obtained funding: Rahman, Applebaum, Schnelle

Administrative, technical or material support: Rahman, Applebaum

Study supervisor: Rahman, Applebaum, Schnelle

Conclusion—This study found qualified support for using a distance coaching course to facilitate adoption of evidence-based incontinence care practices in nursing homes. The findings also underscore the challenges associated with designing dissemination/implementation programs that are both effective and feasible to implement with nursing homes. We recommend that nursing home educators consider this study's findings when designing new training programs. Outcomes may improve if some dissemination resources are diverted to distance coaching activities that support nursing home improvement efforts over extended periods.

Keywords

Nursing home; dissemination; incontinence care; translational research

INTRODUCTION

Health care studies have repeatedly reported gaps between recommended practice and usual practice in settings ranging from hospitals to nursing homes.¹ As a result, there is growing interest in dissemination research as a means for capitalizing on earlier investments in the development of evidence-based interventions.² As it pertains to nursing home care, however, this research is underdeveloped; few studies have tested or evaluated strategies for disseminating or translating research into practice in nursing homes.³

In this study, we evaluated and replicated a dissemination strategy—a long distance coaching course—aimed at helping nursing homes implement an evidence-based incontinence management program. The research goals were to determine whether the course could be replicated (with minor modifications) and brought to scale with a second, larger group of nursing homes without sacrificing outcomes. Additionally, we sought to advance translational science in long-term care by articulating lessons learned from this dissemination project.

Of particular interest in this study is the feasibility and impact of using the distance coaching course to improve nursing home care. Commonly used dissemination strategies, such as the publication of best-practice guidelines and conferences or webinars on long-term-care topics, tend to be passive and/or time-limited. While they are practical to implement and may increase awareness of recommended practices, there is little evidence that they lead to improved care.^{4,5} On the other hand, more effective translational strategies that offer interactive, long-term support to nursing homes may be expensive or impractical for other change-agent groups to replicate. For instance, a recent study reported improved resident outcomes from a two-year initiative that provided low-performing nursing homes with monthly onsite consultations by a Masters-level nurse.⁶ The drawback is that this strategy is potentially costly to sustain or simply impractical to implement if the target nursing homes are geographically widely dispersed. Reviews of translational research in related health fields have concluded that there is no single best translational strategy.⁷ Thus, it makes sense to test and evaluate the strengths and weaknesses of multiple strategies. As described below, the coaching course was designed to provide extended training and support at a minimal cost.

COACHING COURSE

Innovative Features

Unlike many traditional nursing home training programs and conferences that deliver how-to instruction up front, typically over a day or two, this course used a more innovative approach in that it broke the curriculum down into a series of evidence-based steps and delivered that instruction over a period of months, one step at a time, so that participants had

time between training sessions to implement each step, using a standardized assessment or implementation tool to guide new practices. Additionally, individual coaching calls between training sessions enabled nursing supervisors to discuss facility progress and get feedback on implementation barriers. These calls also were intended to help motivate and keep nursing home participants accountable. The expectation was that participating nursing homes would have assessed and begun implementing evidence-based incontinence care practices with at least some incontinent residents by the end of the course. The course design is described in more detail below.

Course Design

The course featured six instructional teleconferences, with the first five held monthly, and a follow-up session held two months later (in month 7). Teleconference lectures, each 40 minutes long, were presented by a nationally recognized expert in nursing home incontinence management. Interactive teleconferences were conducted by phone, with PowerPoint slides emailed in advance to participating facilities.

At each participating nursing home, one nurse supervisor--the project liaison— agreed to attend all teleconferences, oversee implementation assignments, and act as the facility's champion for the new intervention. Additional staff members were encouraged to attend the teleconferences using a speaker phone. Nurses received 13 continuing education (CEs) credit hours for their participation. CEs were prorated based on teleconference attendance and evidence of field work, discussed next.

At the close of each teleconference, supervisors and their staffs were asked to jointly complete an implementation assignment before the next session. These assignments required participating staff to apply what had just been taught and begin implementing (or continue practicing) the improvement intervention step by step with at least a small group of residents. To help ensure that recommended processes were followed, the assignments were structured in that they required nursing home staff to use and complete standardized, validated assessment and implementation forms for each new step. For example, the first implementation assignment asked staff to use a previously tested 5-item interview form to assess resident preferences for incontinence care. All participants also were asked to read prior to each call written instructions that anticipated, or in some cases reinforced, the teleconference presentations. These reading assignments and all the assessment forms needed to implement the intervention were available online (for the incontinence care course materials, go to <http://www.cas.muohio.edu/bridgeproject/capta.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"). Additionally, the coach would refer back to the previous month's call if that had identified a barrier (e.g., turnover among CNAs) or an event (e.g., a visit by surveyors) that could impact progress in the current month. Aside from these general guidelines, however, coaching conversations were emergent, rather than scripted, as a means for allowing the coach to build rapport and trust with each champion, and through this relationship, help sustain the champion's efforts and motivation. In general, depending on the nursing home's needs and progress, the researcher/coach would answer questions, suggest individualized alternative strategies to overcome any identified implementation barriers, and/or acknowledge and praise improvements. The coach also elicited feedback on the course itself, especially areas where additional instruction was desired. Typically, the coach called each supervisor approximately two weeks after each teleconference, placing at least two phone calls and leaving a message each time if the

supervisor could not be reached. Participants also could request project staff assistance by phone or email at any time.

Table 1 presents the course curriculum. Table 2 lists all project-related services and products.

The Intervention

As just described, the coaching course theoretically can be used to disseminate any evidence-based nursing home improvement intervention. In this replication course, as in the original pilot course, the improvement intervention was a widely recommended but under-utilized evidence-based incontinence management strategy known as prompted-voiding.^{8–10} This intervention has been described in detail elsewhere.^{8,9} Studies show that between 25% and 40% of incontinent residents will respond to prompted-voiding, with a reduction in their incontinence frequency from three to four episodes per day to one per day.¹¹

Course Modifications—The incontinence care distance coaching course was first pilot-tested in 2007–08.¹² That course featured 8 monthly teleconferences of 60–90 minutes each. Based on feedback from participants and as noted above, we reduced the number of teleconferences to 6 and their length to 40 minutes for the replication course. All other course design features, as described earlier, remained unchanged. Additionally, the course employed the same research staff, content expert, and training materials as the pilot course. With few exceptions as noted below, both courses also used the same evaluation methods and instruments.

METHODS

We report methods and results for both the original pilot-test course (course 1) and the replication course (course 2) as a means for determining whether outcomes from course 2 replicated those from course 1. Additionally, as the coaching course represents a novel approach to translating research into practice in nursing homes, course 1 methods and results provide useful context for interpreting course 2 results.

Participants

Participating facilities in both courses were recruited by electronically disseminating a course announcement to national listservs targeting nursing homes, state organizations involved in nursing home education, and convenience samples of nursing homes. For both courses, enrollment was offered on a first-come, first-served basis, with an enrollment target of 20 nursing homes in course 1 and 50 in course 2.

A total of 21 nursing homes registered for course 1 and 52, for course 2. In both courses, a facility was counted as participating if at least one staff representative attended at least half of the teleconferences. Staff in 14 facilities (66% of participating homes) in ten states completed course 1 by attending four or more of the course's eight teleconferences; 34 facilities (65%) in 12 states completed course 2 by attending three or more of the course's six teleconferences. In course 1, four facilities dropped out due to staffing problems, and three were dropped due to lack of attendance at the teleconferences. In course 2, 11 nursing homes effectively dropped out before the course started, for they never attended any of the teleconferences; two dropped out due to staffing problems; and five were dropped due to insufficient attendance at the teleconferences.

For both courses, descriptive data for participating nursing homes was retrieved from Medicare's Nursing Home Compare Web site.¹³ The results of independent t-tests showed

no significant differences between the two groups of nursing homes that completed the courses with respect to CNA staff hours per resident per day (averages of 2.3 and 2.6, respectively); or percentage of residents with incontinence (averages of 56% and 55%, respectively); catheters (averages of 6% and 5%, respectively); or urinary tract infections (averages of 11% and 10%, respectively); however, course 1 nursing homes had significantly fewer licensed nurse staff hours per resident per day than course 2 facilities (1.3 vs. 1.5, respectively; $p < .05$). The average facility size (125 for course 1 and 98 for course 2) was not statistically different. A chi-square test for differences in ownership type showed that course 1 nursing homes were more likely than course 2 homes to be for-profit facilities (57% vs. 32%, respectively; $p < .01$).

Data Collection Instruments

Evaluation data were collected using: 1) a course evaluation; 2) a project liaison supervisor's report; 3) a resident assessment report, and 4) a pre- and post-training quiz. Response rates varied depending on the form. With respect to the first form, all staff members who regularly attended the teleconferences were invited to complete the course evaluation. In course 1, 28 staff members representing all 14 participating nursing homes submitted evaluations. In course 2, 140 staff members representing 28 participating nursing homes (82%) completed the evaluation. In both courses, the vast majority of participants submitting surveys were nurses. No CNAs in course 1 submitted evaluations; in course 2, 27 CNAs (19.3% of the 140 respondents) submitted evaluations.

The liaison supervisors' report included items that are most appropriately answered at the facility (as opposed to the individual) level, including items pertaining to prompted voiding implementation and future plans for the new program. In course 1, supervisors in 13 nursing homes (93%) reported this data. In course 2, supervisors in 20 nursing homes (59%) completed this report.

Supervisors in both courses also were asked to complete a resident assessment report that included the number of residents assessed and the number who continued to receive prompted voiding. These reports were considered evidence of completed implementation assignments. In course 1, this form, submitted at the end of the course, reported cumulative numbers for the entire project period. In course 2, supervisors were asked to submit one form for each resident as he or she was assessed; this change was intended to encourage more timely data submission and to reduce possible recall error. In courses 1 and 2, respectively, supervisors in 12 (85.7%) and 27 (77%) nursing homes submitted resident assessment data.

Finally, before and after each course, we administered the same 10-item, multiple choice quiz to test participants' knowledge of incontinence management. All participating staff members were invited to complete each quiz. Results were analyzed for respondents completing both the pre- and post-training quizzes ($N=15$ course-1 participants, and 35 course-2 participants).

Measures

Participation—For both courses, the teleconferencing provider automatically recorded the phone number of all nursing homes that joined each teleconference. Additionally, supervisors in each facility reported the number of staff members who typically attended the teleconferences and identified from a list the roles for staff who attended one or more teleconferences.

Both courses provided online access to three standardized forms for assessing residents and implementing the prompted voiding program (available from http://www.cas.muohio.edu/bridgeproject/capta_forms.htm). The forms were the same for both courses, with the exception of the toileting trial form. In course 2, this form was reformatted to enhance ease of use. Supervisors in both courses were asked to report whether the facility used each form as is, in a modified form, or did not use it at all.

Intervention Implementation—Supervisors in both courses were asked whether the residents receiving prompted voiding were drier than they were at the start of the course and whether more residents had individualized toileting plans as a result of the facility's participation in the course. Each of these measures was dichotomously coded. The supervisors also were asked whether their facility planned to expand the prompted voiding program, maintain it at its current level, or terminate it. As noted earlier, supervisors also were asked to report on a separate form the number of residents assessed and maintained on prompted voiding in the course of the project.

Training Effectiveness—We compared changes in pre- and post-training quizzes both within and across courses as a measure of knowledge transfer. To assess the instructional value of the reading assignments, we asked course 2 participants (but not course 1 participants) to rate on a 5-point scale the degree to which they concurred with the following statement: "I learned a lot from the training manual," where 1 indicated strong disagreement and 5 indicated strong agreement.

Training Program Preferences—Both course surveys asked participants for their individual opinions regarding the best: 1) length for the teleconferences; 2) the number of teleconferences to offer; and 3) the interval between teleconferences. Additionally, participants were asked whether they would participate in a similar project; would recommend the training program to colleagues; and whether they preferred the distance coaching format to more traditional one- to two-day, in-person training programs.

Course Costs—The cost to administer each course was calculated. These costs included staff salaries (i.e., limited supervisory time from the Principal Investigator plus a part-time project director) and benefits; a stipend for the lecturer (i.e., an hourly fee to present teleconferences with equal time to prepare); teleconferencing fees; a CE application fee; miscellaneous costs for postage and office supplies; and indirect costs (10%). The training manual and intervention implementation forms were developed as part of other projects. Coaching call costs were covered in staff salaries.

Analysis

Course results were compared using independent t-tests for interval and ratio level data and chi-square calculations for categorical data. If a t-test violated the equal variance assumption, the samples were compared for that item using the Wilcoxon rank sum test. If more than 20% of the expected cell frequency counts for a chi-square test were less than five, or if any one cell had a zero count, the Fisher's Exact test was used to determine statistical significance.

RESULTS

Participation

There were no statistical differences between the two groups in teleconference attendance or number of staff typically participating (Table 3). Supervisors in 7 and 9 facilities in course 1 and 2, respectively, reported that one or more CNAs attended at least some of the

teleconferences (results not shown). Most supervisors in each course reported using the three recommended forms as is or in a modified form, with no significant differences between the two course groups (Table 3).

Intervention Implementation

As shown in Table 3, the majority of reporting supervisors in both courses said that residents who received prompted voiding were drier and that more incontinent residents had individualized toileting plans as a result of course participation. Chi-square tests showed no significant differences between the two course groups. Most reporting supervisors in both courses said that their facility planned to expand the prompted voiding program; no facilities reported plans to terminate the program.

Based on resident assessment reports, course 1 nursing homes assessed more residents on average than course 2 homes (22 residents, with a range of 6–60 vs. 12 residents, with a range of 3–52). While this difference is statistically significant ($p < .05$), we view it as an artifact of a change in our data collection procedures, rather than an actual outcome change (see “Discussion”). In course 1, of 261 residents assessed across all nursing homes, supervisors reported that 117 (45%) were continued on prompted voiding. In course 2, of 328 residents assessed, supervisors reported that 113 (34.5%) continued to receive prompted voiding (results not shown).

Training Effectiveness

In both courses, quiz scores for participants who completed both the pre- and post-training quizzes improved significantly. Scores for course 1 participants ($N=15$) increased from 57% to 73% ($p < .05$) while scores for course 2 participants ($N=35$) increased from 57% to 85% ($p < .0001$). The difference in the magnitude of the increases between the two course groups was not statistically significant. Course 2 participants rated the instructional value of the training manual 3.7 on average (range=1/5; mode=4).

Training Program Preferences

Course 2 participants were significantly more likely than course 1 participants to say that the number and length of teleconferences were just right. As a reminder, course 1 featured eight teleconferences, each 60–90 minutes in length, while course 2 featured six teleconferences, each 40 minutes in length. The course 2 schedule was elected based on feedback from course 1 participants. In both courses, about three out of four participants said monthly teleconferences were just right.

The majority of participants in both courses said they would recommend the course and take a similar course again; there no significant differences between the two groups on these item (results not shown). Nearly two out of three participants in each course said they preferred the coaching course to a more traditional 1–2 day conference held in a single location.

Consensus Report

Data from both courses were combined for those evaluation items reported above to which at least a majority of supervisors or participants responded similarly. The frequencies for these 10 items (Table 4) represent consensus measures based on a larger pooled sample. Overall, two-thirds of supervisors reported using the project forms, having more drier residents, and more individualized care plans. Virtually all of the supervisors reported an interest in continuing the program.

Cost

Total administrative costs for course 1 were \$26,510, or \$1894 per participating facility, and \$17,464, or \$514 per participating facility, for course 2, with the project director's salary the largest driver of cost for both courses.

DISCUSSION

This study found qualified support for using a distance coaching course to facilitate adoption of evidence-based incontinence care practices in nursing homes. The course performed much like the pilot course it replicated: While the course's enrollment target was met, about a third of the nursing homes dropped out either before or soon after the course started. In the remaining facilities, multiple staff members regularly attended monthly teleconferences while facility supervisors also participated in between-session coaching calls. Participant knowledge of recommended care practices improved over the course. Moreover, using implementation assignments to guide new care practices, most supervisors reported evidence that their staffs had assessed at least some residents using the recommended procedures and used the results to inform care plans. Overall, 6 out of 10 participants said they preferred the coaching course format to a more traditional 1–2 day offsite conference. With an enrollment more than twice that of the pilot course, the replication course's administration costs dropped considerably, by 75%.

These findings are promising, but also raise questions that warrant thoughtful consideration. New translational strategies, like all new interventions, should be evaluated both for effectiveness—do they result in real change?—and for feasibility; if they are too cumbersome, too selective, or too expensive for others to replicate, then their reach may be limited. This coaching course replication underscores the challenges in meeting these objectives. Of particular interest are findings pertaining to intervention implementation, drop-out rates, and cost.

Intervention Implementation

Findings from this evaluation confirm reports by others that nursing homes benefit from extended support to implement improvement interventions.^{6,14} In this study's replication course, most supervisors (77%) submitted some evidence that their staffs had begun to implement the recommended prompted voiding procedures. They also, however, reported plans to expand the new program; in other words, implementation was incomplete 7 to 8 months after the improvement initiative was launched. This study did not reassess implementation at later points, but such an assessment is recommended for future studies. Previous research has found that nursing homes often revert to earlier practices once research support for new interventions is withdrawn.¹⁵ The more support nursing homes need from change agents to establish new practices, the more costly, and potentially less sustainable, the translational strategy becomes.

A related concern is the measures used to assess implementation. We as well as other researchers have reported errors in nursing homes' medical chart and resident assessment data.^{16,17} Consequently, direct observations of care and resident interviews have been recommended as alternative strategies for measuring process and outcome improvements.¹⁸ These evaluation methods, however, can be prohibitively expensive when translational strategies, such as the coaching course, target geographically dispersed nursing homes. In this evaluation, we used intervention-related process measures reported by participating supervisors to assess implementation results. As a result, however, our findings may be biased and must be viewed cautiously. An alternative strategy is to ask supervisors to de-identify and submit the completed forms used to assess residents. Not only might this data

be more reliable, it might also be more useful from a quality improvement standpoint, for it allows coaches or consultants to provide feedback from a primary data source. The caveat is that Institutional Review Boards may not approve this protocol unless the research team and nursing home providers can ensure the data's security.

The importance of measurement in evaluation is underscored in this replication study by the noteworthy difference in the average number of assessed residents (22 in course 1 vs. 12 in course 2). The most plausible explanation is that this difference is an artifact of the differences in reporting methods. In course 1, supervisors reported their cumulative assessment count only once, at the end of the eight-month course. To the extent that they relied on recall, their reports may have over-estimated the numbers of assessed residents and residents maintained on prompted voiding. By contrast, course 2 supervisors completed and faxed to us one assessment report per resident. This strategy was intended to reduce recall error; however, it also increased paperwork, which in turn may have created a barrier to submitting assessment reports. In any case, both strategies demonstrate the limitations of using self-reported data. That said, of the two reporting methods, the course 2 strategy seems likely to be the more accurate. Indeed, 8 of the 27 course 2 nursing homes that submitted assessment reports erroneously also faxed to us copies of the actual, de-identified assessment forms. Additionally, some supervisors wrote notes explaining their care decisions in the margins of the resident reports. Across all course 2 nursing homes, the reported percentage of "responsive" residents who continued to receive prompted voided (35%) was within the range that previous studies that have used research staff to implement prompted voiding and direct observational data to demonstrate responsiveness have projected (Schnelle); however, the samples were very small in many NHs and implementation was incomplete in most facilities, so this rate must be viewed cautiously.

Drop-out Rates

In both the pilot and replication courses, about a third of initially enrolled nursing homes dropped out, typically either before the course started or soon afterward. While not unexpected, this attrition rate requires attention.

Some drop-out can be expected from all translational strategies that target nursing homes. Indeed, other nursing homes studies have reported drop-out rates similar to this study's.^{6,14} Then, too, distance learning courses tend to have higher drop-out rates than traditional courses.¹⁹ In this study's coaching courses, by design, there were few barriers to enrollment and virtually no disincentive for dropping out. While recognizing that drop-out was likely to occur, we eschewed a more selective enrollment strategy in favor of an open enrollment policy. Our consistent results across two courses suggest that this run-in approach works effectively and efficiently to identify nursing homes capable of completing the course: Nursing homes that dropped out did so early on; staff in the remaining facilities attended nearly all teleconferences. These results suggest that administrators of future, similar courses can anticipate comparable drop-out rates. They also suggest that administrators may be able to increase completion rates by reaching out to and fostering engagement among enrolled nursing homes whose staff members miss the first few teleconferences.

Of concern is that the nursing homes that dropped out may have been the most in need of assistance. While a diverse range of facilities were able to complete one or the other coaching course, drop-out or a failure to engage in improvement interventions is a widely recognized concern in translational science generally. Studies have shown that the most innovative members of a target group—arguably those least in need of help—are also the most likely to seek support from outside change agents.²⁰ Future research should consider whether more intensive translational strategies are needed to engage the lowest performing nursing homes. Alternatively, it can be argued that one cannot teach providers to do

something new if they do not want to be taught. The recruitment procedure used in this study is a low cost way to identify learners who are most receptive and able to change.

Program Costs

Cost can determine a translational program's feasibility: Is it affordable? In the replication course, we reduced the cost per participating facility considerably, largely by enrolling more nursing homes and possibly through time efficiencies gained from previous experience administering the course. Offering fewer and briefer teleconferences helped, but resulted in minor savings because teleconferencing rates (at about \$17 per nursing home) were already low. Conducting coaching calls for more nursing homes increased costs, but not substantially (coaching calls for 35 facilities required an estimated 6–8 hours in each of five months). As noted earlier, however, we cannot determine from our data whether the replication course offered enough support to ensure facility-wide implementation and maintenance of prompted voiding in participating nursing homes. If more support (e.g., teleconferences and coaching calls) were needed, costs would rise. Similarly, if more nursing homes were enrolled, costs would increase, possibly substantially if another staff member were hired to help with coaching and administration.

We do not have data that allows us to compare our cost to the cost of administering a one-day single-site course or, alternatively, a more intensive onsite consultation program. A reasonable expectation is that the replication course cost is comparable to or slightly more expensive than the first and less expensive than the second (consider that in the Rantz et al. consultation program, nurses drove 3 hours round trip to spend an average of 2 hours consulting at some nursing homes). Comparative effectiveness studies are needed to identify the strengths and weaknesses, including those related to cost, of different translational strategies. Ultimately the challenge may be identifying which nursing homes will improve most using what strategy or combination of strategies. Given the diversity among nursing homes, facilities are likely to vary in how much support they need to achieve measurable improvements in care.

Limitations

Our findings cannot be generalized to all nursing homes, as both courses enrolled small samples of nursing homes that volunteered to participate and a third of enrolled nursing homes dropped out of each course. Thus, the penetrance and uptake of the intervention appeared to be limited at the participating nursing homes under this model. Future work would be required to find ways to improve uptake and adherence. Also, as noted earlier, our implementation findings must be viewed cautiously, for both courses relied on process measures self-reported by supervisors. Related to this is that 41% of course 2 supervisors failed to submit their liaison reports and about 23% did not submit any resident assessment reports. This missing data, coupled with small sample sizes for some analyses, limits our ability to make definite conclusions about the course's outcomes. That said, the resident assessment reports submitted by supervisors provided limited evidence that most nursing homes had implemented the recommended incontinence care practices with at least some residents by the end of the course. Follow-up research would be needed to assess whether the new practices were extended to all eligible residents and maintained over time. Finally, it should be noted that, in both courses, one of the nation's foremost experts on nursing home incontinence care delivered the teleconference lectures. Courses featuring lectures by professionals with less expertise may not achieve the same outcomes. On the other hand, the course structure could facilitate involvement by recognized experts because they need not travel to participate.

CONCLUSION

This study found qualified support for using a distance coaching course to facilitate adoption of an evidence-based incontinence care intervention in nursing homes. We recommend that state Quality Improvement Organizations and other groups involved in nursing home education consider this study's findings when designing new training programs. Our results suggest that outcomes may improve if some dissemination resources are diverted to distance coaching activities that engage and support nursing homes in improvement activities over extended periods.

Acknowledgments

We want to thank the nursing home staffs that participated in this course and took time from their busy schedules to submit evaluation information. We learned as much from them as we hope they learned from us. We also want to thank Suzanne Kunkel, Rebecca Luzadis, Kathryn McGrew, and Jane Straker for their helpful feedback on an earlier draft of this manuscript.

This study was funded by the Retirement Research Foundation of Chicago. Support for Dr. Rahman was provided by a grant from the National Institute on Aging (T32AG000037).

Sponsor's Role: The funding agency did not influence the research in any way.

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Table 1**Incontinence Care Course Curriculum**

<p>Meeting 1 (month 1): Overview of Incontinence Management; Assessing Resident Preferences. <i>Attendance by nurse aides strongly recommended.</i></p> <p><u>Assignment:</u> Read Overview and Step 1. * “Conduct a basic resident evaluation;” interview incontinent residents to assess toileting preferences using the online standardized interview form.</p> <p>Meeting 2 (month 2): Prompted Voiding Procedure and Assessment Trial. <i>Attendance by nurse aides strongly recommended.</i></p> <p><u>Assignment:</u> Read Step 2, “Assess resident responsiveness to prompted voiding;” begin conducting toileting trials with a sample of residents using the online standardizing prompted voiding trial form.</p> <p>Meeting 3 (month 3): Staffing for Incontinence Management; Peer Experiences.</p> <p><u>Assignment:</u> Read Step 3, “Implement time-saving strategies to maintain prompted voiding.” Continue assessing incontinent residents and maintaining responsive residents on prompted voiding.</p> <p>Meeting 4 (month 4): The Survey Process and Incontinence Management.</p> <p><u>Assignment:</u> Read Step 4, “Conduct periodic wet checks to maintain incontinence care quality.” Continue assessing residents and maintaining responsive residents on prompted voiding.</p> <p>Meeting 5 (month 5): Monitoring Incontinence Care. <i>Attendance by quality improvement nurses strongly recommended.</i></p> <p><u>Assignment:</u> Read section on FAQs. Conduct wet checks with prompted voiding participants using the online standardized wet-check form; share results with CNAs. Continue assessing residents and maintaining responsive residents on prompted voiding.</p> <p>Meeting 6 (month 7): Follow-up Session.</p> <p>Progress reports by participating facilities, with Q&A session.</p>
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* All reading assignments refer to the training manual found at <http://www.cas.muohio.edu/bridgeproject>.

Table 2**Course Products and Services**

- Monthly 40-minute teaching teleconferences for five months, with a follow-up teleconference two months later
- Online access via the project's Web site (<http://www.cas.muohio.edu/bridgeproject/meals.htm>) to the training manual (reading assignments) as well as the standardized assessment forms needed to institute the incontinence care intervention
- Online access to all teleconference PowerPoint presentations and audio-recordings of selected presentations. Facilities could 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 email to nursing home providers upon their request
- 13 contact hours for nurses, prorated depending on participation

Table 3

Facility-level Outcomes/Reports of Participation and Intervention Implementation

	Course 1		Course 2	
	% Reporting (N)	Mean	% Reporting (N)	Mean
<i>Teleconference Attendance</i>				
Teleconferences attended		6.5 (82.3%)		5.2 (86.8%)
<i>Supervisors' Reports: Participation</i>				
Number of staff typically attending teleconferences		3		5
Resident interview form used as is or with modifications	100 (13)		90 (18)	
Resident assessment form used as is or with modifications	84.6 (11)		95 (19)	
Monitoring form used as is or with modifications	84.6 (11)		80 (16)	
<i>Supervisors' Reports: Intervention Implementation</i>				
Incontinent residents are drier	76.9 (10)		55 (11)	
More incontinent residents have individualized plans	76.9 (10)		60 (12)	
Facility plans to expand	69.2 (9)		80 (16)	
Facility plans to maintain present program	23.1 (3)		20 (4)	
<i>Resident Assessment Reports Submitted</i>				
Residents assessed per nursing home *		22		12

*
p<.05

Notes: Reporting supervisors = 13 for course 1, and 20 for course 2. Nursing homes submitting resident assessment reports = 12 for course 1, and 27 for course 2.

Table 4

Frequencies for Both Courses Combined

	<u>Percent (N)</u>
<i>Supervisors Reporting:</i>	
Use of resident interview form as is or with modifications	93.9 (31)
Use of resident assessment form as is or with modifications	90.9 (30)
Use of program monitoring form as is or with modifications	81.8 (27)
Incontinent residents are drier	63.6 (21)
More incontinent residents have individualized care plans	66.7 (22)
Plans to expand or maintain program	100 (33)
<i>Teleconference Participants Reporting:</i>	
Monthly teleconferences are just right	73.8 (124)
They would take a similar course again	86.9 (146)
They would recommend the course to colleagues	80.9 (136)
They prefer the distance learning format to a 1–2 day conference	60.1 (101)

Note: Reporting supervisors = 33 for both courses; reporting participants = 168 for both courses.