Quality Improvement in Long-Term Care

New Toolkit to Measure Quality of Person-Centered Care: Development and Pilot Evaluation With Nursing Home Communities

Kimberly Van Haitsma PhD [a],[*], Scott Crespy PhD [b], Sarah Humes MA [b], Amy Elliot PhD [c], Adrienne Mihelic PhD [d], Carol Scott BS [e], Kim Curyto PhD [f], Abby Spector MMHS [g], Karen Eshraghi MSW [a], Christina Duntzee BS [a], Allison Reamy Heid PhD [a], Katherine Abbott PhD, MGS [a]

[a] Polisher Research Institute, Madlyn and Leonard Abramson Center for Jewish Life, North Wales, PA
[b] Madlyn and Leonard Abramson Center for Jewish Life, North Wales, PA
[c] Pioneer Network, Rochester, NY
[d] CFMC, Englewood, CO
[e] Advancing Excellence in America's Nursing Homes, Washington, DC
[f] VA Western New York Healthcare System, Batavia, NY
[g] Spector Consulting, Bala Cynwyd, PA

ABSTRACT

Keywords:
Person-centered care
preferences
preference congruence
measures
nursing home

Background: Increasingly, nursing home (NH) providers are adopting a person-centered care (PCC) philosophy; yet, they currently lack methods to measure their progress toward this goal. Few PCC tools meet criteria for ease of use and feasibility in NHs. The purpose of this article is to report on the development of the concept and measurement of preference congruence among NH residents (phase 1), its refinement into a set of quality indicators by Advancing Excellence in America's Nursing Homes (phase 2), and its pilot evaluation in a sample of 12 early adopting NHs prior to national rollout (phase 3). The recommended toolkit for providers to use to measure PCC consists of (1) interview materials for 16 personal care and activity preferences from Minimum Data Set 3.0, plus follow-up questions that ask residents how satisfied they are with fulfillment of important preferences; and (2) an easy to use Excel spreadsheet that calculates graphic displays of quality measures of preference congruence and care conference attendance for an individual, household or NH. Twelve NHs interviewed residents (N = 146) using the toolkit; 10 also completed a follow-up survey and 9 took part in an interview evaluating their experience.
Results: NH staff gave strong positive ratings to the toolkit. All would recommend it to other NHs. Staff reported that the toolkit helped them identify opportunities to improve PCC (100%), and found that the Excel tool was comprehensive (100%), easy to use (90%), and provided high quality information (100%). Providers anticipated using the toolkit to strengthen staff training as well as to enhance care planning, programming and quality improvement.
Conclusions: The no-cost PCC toolkit provides a new means to measure the quality of PCC delivery. As of February 2014, over 700 nursing homes have selected the Advancing Excellence in America's Nursing Homes PCC goal as a focus for quality improvement. The toolkit enables providers to incorporate quality improvement by moving beyond anecdote, and advancing more systematically toward honoring resident preferences.

© 2014 AMDA – The Society for Post-Acute and Long-Term Care Medicine.
Open access under CC BY-NC-ND license.

Person-centered care (PCC) is an approach that focuses on knowing each nursing home (NH) resident as a whole person. The goal is to customize care according to the individual's abilities, needs, and preferences. PCC approaches promote resident choice, personal continuity, meaningful activity, a homelike environment, and positive relationships with care providers.[1–3] The Centers for Medicare and

Medicaid Services, as well as a growing number of long-term care communities and stakeholder groups, endorse PCC and value it as an important part of quality care.[4–8]

Although PCC is a promising new approach, NH providers face challenges measuring their progress toward this goal. Many excellent tools exist, yet few meet criteria for ease of use and feasibility in NHs. A recent review evaluated 12 tools measuring PCC for older adults, including 8 tools intended for NH use.[9] Although they have many strengths, most tools were designed for research rather than practice; most have not been used and validated beyond the development period; and few directly engage the perspective of the resident. The need for indicators is timely because Centers for Medicare and Medicaid Services will soon require all NHs to develop performance improvement projects in areas that impact clinical care, quality of life and resident choice.[10] The Advancing Excellence in America's Nursing Homes PCC toolkit aims to give providers a practical means to collect data from the resident's point of view and incorporate it systematically to assess and improve PCC in practice settings.

Advancing Excellence PCC Toolkit

In 2013, Advancing Excellence in America's Nursing Homes (AE), a national long-term care collaborative (www.nhqualitycampaign. org), launched a PCC toolkit for providers. The AE PCC toolkit is available for free download (http://www.nhqualitycampaign.org). Communities can enter their data on a monthly basis, view graphs of their progress, and compare results with providers nationwide. The toolkit has 2 main components. The first is an interview protocol that staff, including direct care workers, can use to ask residents about their preferences for personal care and recreational activities, as well as to gauge how satisfied residents are with the way their important preferences are addressed. The interview builds on information already collected as part of the Minimum Data Set (MDS) 3.0—Section F (Preferences for Customary Routine and Activities)[11], by adding follow-up questions that ask residents how satisfied they are with fulfillment of important preferences.

The second component is a preprogrammed Excel workbook, where staff can enter information from interviews. This workbook produces color-coded graphic displays showing when a resident's preferences are being fully met (in green) and when preferences require follow-up (in yellow or red). Also, the Excel workbook can show preference gaps affecting many persons residing together in a household, floor, or unit. The output allows staff to see at a glance particular preferences that are not being met for several individuals living in a common location. Staff can use the results as the basis for discussion and problem solving during individual care planning conferences as well as to develop broader strategies for improvement.

An additional feature of the Excel workbook is that it automatically calculates 4 PCC quality indicators. One measure shows the percentage of "preference congruence"—defined as the extent to which a resident is satisfied with the way important preferences are met—for an individual, household or NH as a whole during a given month. Three other measures show the percentage of care conferences attended by residents, family or friends, and direct care workers in a 1-month period. The toolkit includes an implementation guide and background papers for communities interested in enhancing PCC practices.

The purpose of this article is to report on the development of the concept of preference congruence among NH residents (phase 1), its refinement into a set of quality indicators (phase 2), and its pilot evaluation in a sample of 12 early adopting NHs prior to national rollout (phase 3).

Indicator Development

Phase 1—Validation Study to Develop and Test a Measure of Preference Congruence

In 2009, the Polisher Research Institute (PRI) team sought to develop a measure of preference congruence among NH residents. The project was based on the concept that having an accurate knowledge of resident preferences is a cornerstone of PCC. Once a person's preferences are known, it is important for a provider to understand whether these preferences are being fulfilled. Satisfaction ratings are one of the most commonly used methods of assessing perceptions of the quality of care in health care and NH settings.[12,13] Preference congruence is a measure that results from asking residents how satisfied they are in the fulfillment of preferences they have indicated are important to them.

Participants

The research team tested the preference congruence measure in a convenience sample of residents in a suburban NH in Philadelphia, PA ($n = 12$) and in a Western New York Veterans Administration Community Living Center ($n = 11$).[14] Participants had a mean age of 78.6; most were men (61%), and almost all were Caucasian (95.7%). On the Mini-Mental State Examination, they had a mean score of 24.96 (3.56 standard deviation) and a range of scores from 12 to 29, indicating that some individuals had mild to moderate levels of cognitive impairment.[15]

Procedures

Research assistants (RA) at both sites interviewed residents using the Preferences for Everyday Living Inventory (PELI). Developed and tested with home health and NH populations, the PELI elicits seniors' preferences related to 55 daily activities that fall into 5 preference domains: growth activities (eg, reading), diversionary (eg, watching TV), self-dominion (eg, choosing what to eat), social contact (eg, keeping in contact with family), and caregivers and care (eg, giving instruction to formal caregiver).[16] Several of the PELI items were subsequently selected for inclusion in the MDS 3.0, which is used in all Medicare and Medicaid certified NHs.[17]

RAs asked participants whether they liked each activity "a lot," "somewhat," or "not at all" (scale: 2 to 0). If the response was "likes a lot," researchers asked about preference satisfaction: "How satisfied were you with the fulfillment of this preference over the last 2 weeks?" Possible responses were "not at all satisfied," "somewhat satisfied," and "completely satisfied" (scale: 0 to 2). These response options were selected because cognitively impaired individuals are frequently overwhelmed by the cognitive load imposed by more options.

Results

Researchers constructed a measure of preference congruence by examining the relationship between strongly held preferences and a resident's self-report of their satisfaction with care related to those preferences. Respondents had strong preferences ("likes a lot") for a mean of 29 items (standard deviation = 10.32), with a range from 12 to 51 items for the sample. On average, respondents reported that three-fourths (75.6%) of their most strongly endorsed preferences either were "completely satisfied" (mean percent = 52.8) or "somewhat satisfied" (mean percent = 22.8). One-fourth were "not satisfied at all" (mean percent = 24.4). To account for acquiescence bias,[18] only the response, "completely satisfied," was chosen to represent preference congruence.

An Excel spreadsheet calculated a preference congruence indicator for each respondent on every item. A difference score was created by subtracting the respondent's "likes a lot" score (2) from his or her

satisfaction rating (0–2, where a higher number represents higher satisfaction). The team chose only to calculate a preference congruence score based on strongly endorsed preferences ("likes a lot"). The goal was to focus staff attention on important preferences as a first step toward individualizing care delivery.

The resulting Excel report was color-coded for easy interpretation. Red indicated a strongly held preference that a resident felt was "not satisfied at all." Yellow indicated a strongly held preference that a resident felt was "somewhat satisfied." Green indicated a strongly held preference that was "mostly or completely satisfied." This sample of NH residents showed wide variability in the number of important preferences and the extent to which they considered their care to be preference congruent.

Findings from phase 1 demonstrated that cognitively capable NH residents and those with mild cognitive impairment could report personal preferences and satisfaction with their fulfillment. In addition, a preference congruence score was calculated via an easily interpreted Excel report for NH staff. The next phase of the process entailed the adoption and scaling-up of this process by the Advancing Excellence Collaborative.

Phase 2—Development of Advancing Excellence PCC Indicators

The Advancing Excellence in America's Nursing Homes Campaign was formed in 2006 to promote clinical and organizational excellence for the residents, families and staff of NHs.[19] The campaign includes a wide range of stakeholders including providers, consumers, advocates, ombudsmen, practitioners, government agencies, and quality improvement (QI) organizations. To date, 9,545 (61%) of the nation's NHs homes have signed on to pursue 1 or more goals designated by the Campaign to strengthen NH quality. In 2012, the Campaign revised and expanded potential goals to include a total of 9 clinical and process goals, including the PCC goal. At this time, AE convened a workgroup (Appendix) to develop a measurement strategy and toolkit of resources to support NHs pursuing a data-driven QI project focusing on PCC. The workgroup chose outcome measures to capture both resident-centered decision-making processes and resident-centered care planning processes. The workgroup identified PRI's PELI, and the associated preference congruence indicator, as an evidence-based approach to measuring resident involvement in making decisions about, and provisions, for their care.

Scaling-up the original preference congruence measure

Although the original PELI research measure focuses on 55 preferences, the AE PCC narrowed the focus to 16 personal care and recreational activity items from the MDS 3.0—Section F (Figure 1). The decision to use the 16 MDS 3.0 items was made with an eye toward minimizing the burden of additional data collection, as NH staff are already familiar with these items and assess them on a regular basis. A modification to the response options was also needed because the MDS 3.0 section F items use a 5-point scale of importance instead of the 3-point scale of more colloquial "likes." Finally, in addition to the previous color coding system for reporting preference congruence levels (eg, green, yellow, red), grey was added to indicate that the resident had used the response category "important, but can't do," which requires staff, per regulation, to create a care plan. The original Excel spreadsheet created in phase 1 was modified to reflect these changes and provides information about the percent of items for which there is preference congruence for an individual, household, or NH during a given month.

Care conference attendance measures

The AE PCC toolkit also includes 3 measures showing whether (1) the NH resident, (2) family or friends, and (3) direct care workers attend care conferences. The measures reflect basic tenets of PCC: NH residents should have the chance to guide their daily life and care to the extent they desire, and they should have the choice to include others who are important to them in the care planning process.[20] During care planning conferences, NH staff can gain a common understanding of the resident's preferences, needs and abilities; customize care plans; and leave with information that all can put into practice quickly. The original Excel spreadsheet created in phase 1 was modified to track the percentage of care conferences that residents, family, and direct care workers attend in a given month.

Phase 3—Pilot Evaluation in 12 NHs

In preparation for national rollout, the AE PCC toolkit was tested in a convenience sample of mid-Atlantic NHs. Goals of the pilot evaluation were to examine ease of use and feasibility of implementation, as well as to gain a first look at the results of the 4 PCC quality indicators.

Participating NHs

Over 40 NHs were invited to participate in the AE pilot project. Some NHs had participated in a similar QI collaborative that sought to decrease depressive symptoms.[21] Other NHs belonged to the Pennsylvania Culture Change Coalition or had worked with members of the AE work group on QI endeavors. A total of 18 NHs responded to the invitation to participate in the 2-week toolkit pilot test. Of these, 12 NHs (66.8%) fielded the PCC tool and submitted data (Table 1 for site characteristics); within this group, 10 also completed an evaluation survey and 9 took part in a follow-up interview. Five of the 18 NHs did not participate because of insufficient time to obtain the necessary permissions from parent organizations or other limitations imposed by the short duration of the pilot test. One NH did not have the Microsoft Office Excel 2007 software necessary for the full pilot test.

Training for pilot sites

AE workgroup members offered a webinar for staff leaders at participating homes. During the sessions, AE staff and PRI researchers gave an audiovisual presentation about the new PCC toolkit and fielded participant questions. Afterward, they provided pilot sites with introductory slides, interview schedules, the Excel workbook for recording interview results and digital certificate, and an evaluation survey form for 1 staff member per NH to complete.

Selecting NH residents for the study

Participating NHs were asked to collect data using the AE PCC toolkit for 5 short-stay and 5 long-stay residents. Sites were instructed to select residents using MDS 3.0—Section F screening criteria (item F0300), which advise attempting interviews with all residents able to communicate.[22] If a resident is rarely/never understood, or has difficulty answering the questions, staff members were asked to complete the interview with a family member or significant other.

Conducting preference interviews

After identifying residents for the study, NH staff conducted interviews using the MDS 3.0—Section F. The goal was to interview newly admitted residents within 24 hours of admission. This would enable staff to address preferences from the beginning of the resident's stay. Sites were asked to interview long stay residents shortly before the individual's care planning conference.

Conducting preference satisfaction interviews

The next step was to conduct the Preference Satisfaction portion of the interview, ideally within 5 to 7 days after the initial preference

Record Interviews

Resident Name	Jeremy
Identifier	5
Resident's Household, Neighborhood or Group Name	**Training**
Date of Interview (mm-dd-yyyy)	08/06/2013
Stay Type	LONG STAY
Indicate Primary Respondent	RESIDENT

Interview Recorded At:

8/6/2013 16:16

F0400 Interview for Daily Preferences

1 Very Important
2 Somewhat Important
3 Not Very Important
4 Not Important At All
5 Important, But Can't Do or No Choice
9 No Response or Non-Responsive

1 Mostly or Completely Satisfied
2 A Little or Somewhat Satisfied
3 Not Satisfied At All
9 Not Applicable

	How important is it to you to…	Resident Response Importance		Resident Response Satisfaction	Priority
A	choose what clothes you wear?	1	As	1	GREEN
B	take care of your personal belongings?	1	Bs	1	GREEN
C	choose between a tub bath, shower, bed bath, or sponge bath?	1	Cs	3	RED
D	have snacks available between meals?	3	Ds	9	
E	choose your own bedtime?	1	Es	2	YELLOW
F	have your family or a close friend involved in discussion about your care?	1	Fs	2	YELLOW
G	be able to use the phone in private?	3	Gs	9	
H	have a place to lock your things to keep them safe?	1	Hs	1	GREEN

F0500 Interview for Activity Preferences

1 Very Important
2 Somewhat Important
3 Not Very Important
4 Not Important At All
5 Important, But Can't Do or No Choice
9 No Response or Non-Responsive

1 Mostly or Completely Satisfied
2 A Little or Somewhat Satisfied
3 Not Satisfied At All
9 Not Applicable

	How important is it to you to…	Resident Response Importance		Resident Response Satisfaction	Priority
A	have books, newspapers, and magazines to read?	5	As	2	GRAY
B	listen to music you like?	2	Bs	1	GREEN
C	be around animals such as pets?	2	Cs	1	GREEN
D	keep up with the news?	2	Ds	1	GREEN
E	do things with groups of people?	3	Es	9	
F	do your favorite activities?	5	Fs	3	GRAY
G	go outside to get fresh air when the weather is good?	2	Gs	3	RED
H	participate in religious services or practices?	3	Hs	9	

Fig. 1. Individual report. See the online version of this article at www.jamda.com for this figure in color.

Table 1
Phase 3 Advancing Excellence PCC Tool Pilot Study—Site Characteristics (n = 12) and National Nursing Home Sample Characteristics (n = 15,653)[*]

	Pilot Sample[†]	National Nursing Home Sample[27]
Number of beds		
<50	0.00% (0)	12.94% (2025)
50–99	41.67% (5)	36.83% (5765)
100–149	25.00% (3)	33.20% (5197)
150–199	8.33% (1)	10.99% (1720)
200+	25.00% (3)	6.04% (946)
Average	139.08 (beds)	106.35 (beds)
Overall star rating		
1 star	0.00% (0)	10.12% (1570)
2 stars	25.00% (3)	20.51% (3182)
3 stars	8.33% (1)	18.27% (2835)
4 stars	16.67% (2)	26.18% (4062)
5 stars	50.00% (6)	24.92% (3867)
Average	3.92 (stars)	3.35 (stars)
Ownership		
For Profit	16.67% (2)	69.42% (10,866)
Not for Profit	83.33% (10)	24.65% (3858)
Government	0.00% (0)	5.93% (929)
Average total minutes of staff time per resident per day		
Licensed nurse	98.08	97.80
RN	42.17	48.00
LPN/LVN	56.08	49.80
CNA	149.75	147.6

CNA, certified nurse assistant; LPN, licensed practical nurse; LVN, licensed vocational nurse; PCC, person-centered care; RN, registered nurse.

[*]National data derived from https://data.medicare.gov/Nursing-Home-Compare/State-Averages/xcdc-v8bm. Sample included 15,653 nursing homes for all characteristics, except overall star rating, which included 15,516 nursing homes.

[†]Twelve nursing homes participated in the pilot, one from Illinois, one from New Jersey and ten from Pennsylvania.

interview for short stay residents. Long stay resident preference and satisfaction interviews could be conducted on the same day, or 5 to 7 days apart.

Providers were given several options for the choice of interviewer for the preference and satisfaction portions of the interview. Guidelines recommended that the staff member who actually delivers the care should conduct the preference interview; however, to encourage residents to share forthright opinions, a different staff member could be assigned to ask preference satisfaction questions. Among the possible options, communities could (1) use a volunteer or personnel other than a certified nursing assistant (CNA) or activity therapist to conduct preference satisfaction interviews; (2) have the CNA and activity therapist switch interview categories (ie, CNA asks questions about activity preferences, and activity therapist asks about personal care); or (3) deploy licensed nurses or social workers from a neighboring unit or floor to conduct preference satisfaction interviews.[23]

Recording interview data and calculating PCC quality indicators

Staff from pilot sites entered responses from resident preference and satisfaction interviews into the revised Excel spreadsheet that automatically calculates a preference congruence percentage for each resident. Reports can be generated for each individual resident (for an

example, Figure 1), or in aggregate for a household of residents (Figure 2). As care planning conferences took place, staff members also noted whether the resident, family members or close friends and direct care staff, such as CNAs, attended the meetings and entered this data into the spreadsheet, which calculated participation rates. Pilot sites were asked to fax their NH's 4 aggregate quality indicator results to the research team (for an example, Figure 3). Individual resident-level information was not shared with researchers.

Evaluation of PCC feasibility

Project coordinators identified by each site were asked to complete a questionnaire (93 items) regarding staff experiences using the new toolkit. The evaluation form asked about the PCC spreadsheet's functionality and content, the webinar training experience, the resident interview process, challenges in implementing PCC, and overall satisfaction with the toolkit. Responses for most questions used a 5-point Likert scale, with a range from "completely agree" to "completely disagree." Also, several open-ended questions provided a qualitative perspective on these topics. In addition, site coordinators were asked to participate in a 30-minute telephone interview, which used a standardized protocol to learn about the experience of using the PCC toolkit for the first time.

Completion rates

The 12 participating NHs completed varying aspects of the multicomponent evaluation. All 12 submitted the overall percent of preference congruence for long-stay residents (n = 104; range: 4–35 per home), and 10 submitted the information for short-stay residents (n = 42; range: 2–5 per home). Also, 9 sites provided care conference attendance information; 10 completed an evaluation form, and 9 participated in the telephone follow-up interview.

Most sites selected cognitively capable residents to participate in the pilot study. Two homes interviewed a resident/family dyad or only a family member for a resident who was not capable of participating due to cognitive impairment.

Preference congruence

The pilot study found that preference congruence averaged 80.75% (range: 59%–96%) for long-stay residents across the 12 NHs (Tables 2 and 3). For short-stay residents, the average was 82.7% (range: 57%–98%) across 10 NHs.

Care conference attendance

Averaged across the 9 NHs that reported care conference attendance data, the project found that 82.5% (range: 0%–100%) of short-stay, and 61.67% (range: 33%–100%) of long-stay residents attended care conferences (Table 3). Close to 86% (85.63%, range: 50%–100%) of family/friends attended care conferences for short-stay residents, whereas 70.22% (range: 0%–100%) attended for long-stay residents. Percentages were lower for direct care staff; 60.0% (range: 0%–100%) attended for short-stay residents, and 64.78% (range: 0%–100%) attended for long-stay residents.

Pilot sites were most likely to use social services (3 homes) or therapeutic recreation directors (3 homes) as the lead coordinator for PCC toolkit implementation. Coordinators took part in the training

Table 2
Phase 3 Advancing Excellence PCC Tool Pilot Study—Overall Preference Congruence for Short-Stay and Long-Stay Nursing Home Residents

Resident Type	Number of Pilot Sites	Total Number of Residents Interviewed	Range of Residents Interviewed	Average Preference Congruence Per Home	SD	Preference Congruence Range
Short stay	10	42	2–5	82.70%	14.01	57%–98%
Long stay	12	104	4–35	80.75%	14.03	59%–96%

PCC, person-centered care; SD, standard deviation.
Percent of resident preferences self-reported as "Very" or "Somewhat Important" and rated by resident as "Mostly or completely satisfied."

Table 3
Phase 3 Advancing Excellence PCC Tool Pilot Study—Preference Congruence for Short-Stay and Long-Stay Nursing Home Residents by Nursing Home

Facility	Star Rating	Preference Congruence				Care Planning							
		Number of Residents Tracked		Percent of Resident Preferences "Very" or "Somewhat" Important AND "Mostly or Very Satisfied"		Number of Residents Tracked		Percent of Care Conferences With Resident Participating		Percent of Care Conferences With Family/Friends Participating		Percent of Care Conferences With Primary Caregiver Participating	
		Short Stay	Long Stay	Short Stay	Long Stay	Short Stay	Long Stay	Short Stay	Long Stay	Short Stay	Long Stay	Short Stay	Long Stay
1	4	4	6	57	59	0	0						
2	5	4	5	74	60	0	0						
3	5	5	9	87	85	4	2	100	100	75	50	0	50
4	5	0	35	0	77	0	0						
5	5	5	5	92	95	5	5	100	40	100	80	100	100
6	5	5	5	97	91	5	5	60	40	80	80	80	60
7	2	0	10	0	83	0	6		40		0		40
8	4	5	5	97	96	1	1	0	100	100	100	100	100
9	2	2	8	73	78	2	8	100	75	50	75	100	100
10	2	3	5	83	61	1	3	100	33	100	100	100	100
11	5	4	7	69	88	5	5	100	60	80	80	0	0
12	3	5	4	98	96	1	3	100	67	100	67	0	33

PCC, person-centered care.

webinar, completed the study evaluation measure, and participated in the telephone interview. Recreation, social services, and CNAs were the most common staff selected to conduct PCC interviews. NHs reported it took about 30 minutes to train staff to conduct the interviews.

Staff evaluation form responses

Results from the AE pilot test were overwhelmingly positive. In the evaluation survey and follow-up interview, site coordinators gave strong positive ratings to the toolkit's ease of use and implementation. A majority of sites gave high ratings ("agree" or "completely agree") to almost every aspect of the toolkit mentioned in the evaluation form. All found that the Excel workbook was comprehensive (100%); the information was of high quality (100%); and it was easy to use (90%). Specific spreadsheet tabs were well organized (100%) and easy to understand in most cases. All (100%) "agree" or "completely agree" that they would share the Excel workbook with a colleague.

All sites reported that implementing the PCC goal and using the Excel workbook helped them identify more opportunities to improve PCC. Most found that it was "easy to incorporate the goal at our nursing home" (90%); the process helped to provide better PCC (88%); and the NH will maintain or expand the goal (89%). Some NHs reported that lack of staff time (55%), staff resistance (44%), or staff turnover (11%) were challenges but only 11% reported significant implementation problems. None cited a lack of administrative support. All sites reported they were satisfied with the AE materials, training and support, and all (100%) said they would recommend the PCC goal and materials to other NHs.

Staff reported that it took an average of 15 minutes (range: 5–30 minutes) to complete resident interviews. They indicated that most residents did not have trouble answering questions, although some needed reassurance that NHs wanted to hear residents' candid feedback.

Comments from interviews

In telephone follow-up interviews, site coordinators touched on the value of the interview for residents. They reported that residents felt "validated by being asked questions about their preferences" and "comforted because they felt they were heard and able to make choices." Sites also discussed benefits of using the PCC toolkit to enhance care planning, communication, staff development, and QI. In terms of individual care planning, providers commented that the

toolkit "gives… each person a voice or control over their daily care" and "helps us update preferences as a person improves or declines to what is important at that time in their lives. It has made us more aware that preferences change, sometimes daily." Most sites reported that they had the same person conduct the preference and satisfaction portions of the interview, but upon reflection some said they would choose to use a different person for each component in the future.

Sites noted that the AE PCC toolkit is useful as a training tool—"it provides an example of what PCC looks like in action"—as well as to strengthen teamwork. It offers a "resource to bridge the communication gap about resident preferences, which are known by one staff member but not another on a different shift or when a staff person is filling in for another." Sites also remarked on the value for CNAs: "Traditionally, our CNAs are not involved in identifying resident preferences, and preference information was not always relayed to them … CNAs liked getting to know resident preferences before providing care and found it helpful. We had a lot of positive feedback from them."

Finally, providers underscored the benefits for QI. One coordinator said, "The tool takes the anecdotal slant out of the equation when determining the degree to which a facility has infused PCC into their approaches." Another commented, "This toolkit gives me a great way to measure and track my facility's ability to uphold resident preferences. By allowing the resident to rate their satisfaction, it allows me to focus in on the weak points of my facility's care." A third coordinator remarked that the tool provides "an opportunity to benchmark internally… as well as with other facilities."

Discussion

PCC remains a challenging, though highly desirable, goal for long-term care providers. A central task is to develop a means to measure the quality of PCC delivery in a way that is concrete, feasible, and provides immediate, actionable, and up-to-date information about quality to providers. The AE PCC quality indicators are the first of their kind to address this measurement challenge. Twelve NHs tested the PCC toolkit and found it easy to implement in short and long stay settings. All pilot sites stated that they would participate in the AE national roll out of the PCC indicators and they would recommend the toolkit to others.

Pilot sites highlighted several strengths of the toolkit. First, the interviews are readily acceptable to consumers. Sites reported that
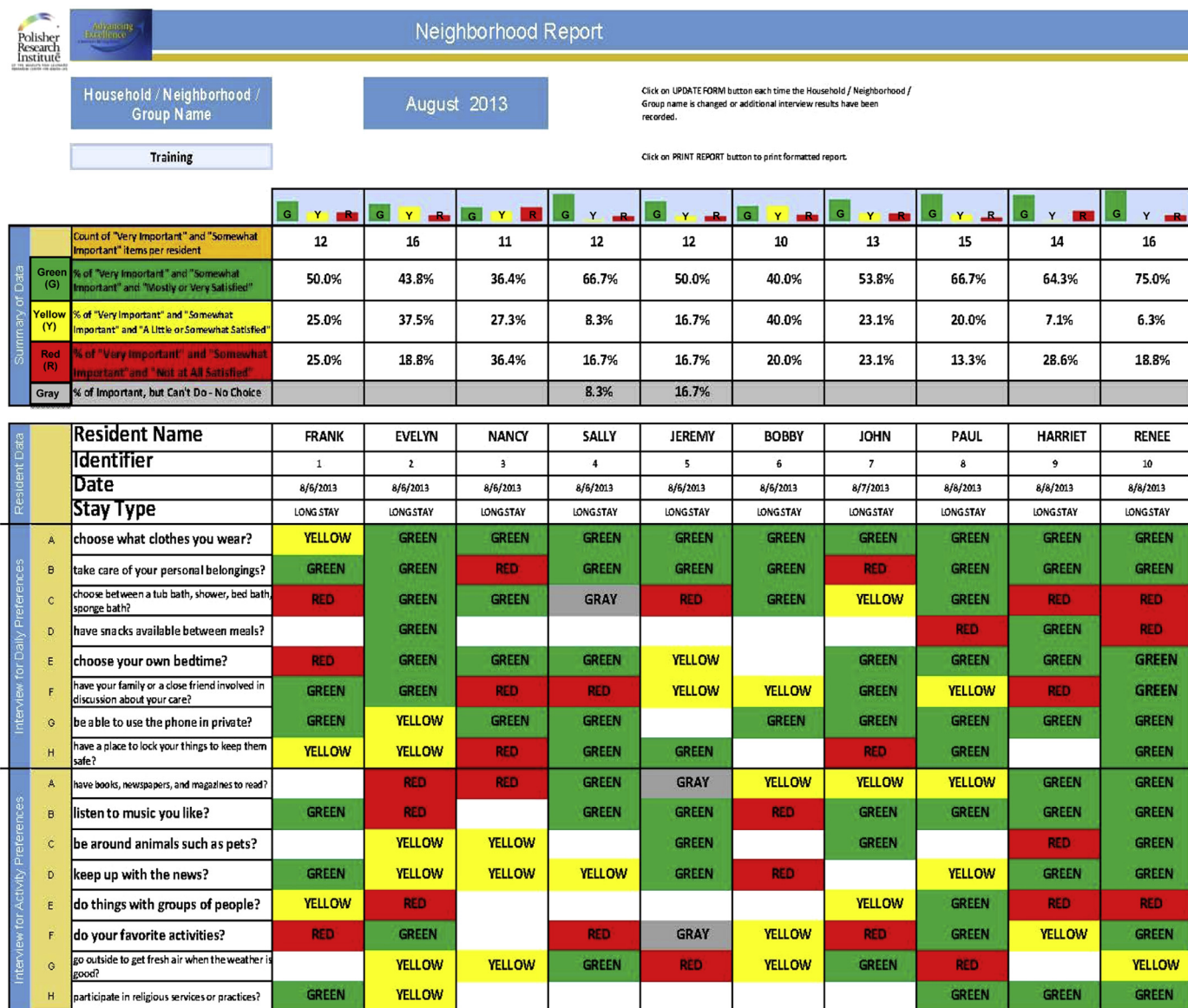
Neighborhood Report

Polisher Research Institute | Advancing Excellence

Household / Neighborhood / Group Name	August 2013	Click on UPDATE FORM button each time the Household / Neighborhood / Group name is changed or additional interview results have been recorded.
Training		Click on PRINT REPORT button to print formatted report.

		FRANK	EVELYN	NANCY	SALLY	JEREMY	BOBBY	JOHN	PAUL	HARRIET	RENEE
Summary of Data	Count of "Very Important" and "Somewhat Important" items per resident	12	16	11	12	12	10	13	15	14	16
	Green (G) — % of "Very Important" and "Somewhat Important" and "Mostly or Very Satisfied"	50.0%	43.8%	36.4%	66.7%	50.0%	40.0%	53.8%	66.7%	64.3%	75.0%
	Yellow (Y) — % of "Very Important" and "Somewhat Important" and "A Little or Somewhat Satisfied"	25.0%	37.5%	27.3%	8.3%	16.7%	40.0%	23.1%	20.0%	7.1%	6.3%
	Red (R) — % of "Very Important" and "Somewhat Important" and "Not at All Satisfied"	25.0%	18.8%	36.4%	16.7%	16.7%	20.0%	23.1%	13.3%	28.6%	18.8%
	Gray — % of Important, but Can't Do - No Choice				8.3%	16.7%					

		FRANK	EVELYN	NANCY	SALLY	JEREMY	BOBBY	JOHN	PAUL	HARRIET	RENEE
Resident Data	Resident Name	FRANK	EVELYN	NANCY	SALLY	JEREMY	BOBBY	JOHN	PAUL	HARRIET	RENEE
	Identifier	1	2	3	4	5	6	7	8	9	10
	Date	8/6/2013	8/6/2013	8/6/2013	8/6/2013	8/6/2013	8/6/2013	8/7/2013	8/8/2013	8/8/2013	8/8/2013
	Stay Type	LONG STAY	LONG STAY	LONG STAY	LONG STAY	LONG STAY	LONG STAY	LONG STAY	LONG STAY	LONG STAY	LONG STAY

Interview for Daily Preferences

	Question	FRANK	EVELYN	NANCY	SALLY	JEREMY	BOBBY	JOHN	PAUL	HARRIET	RENEE
A	choose what clothes you wear?	YELLOW	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN
B	take care of your personal belongings?	GREEN	GREEN	RED	GREEN	GREEN	GREEN	RED	GREEN	GREEN	GREEN
C	choose between a tub bath, shower, bed bath, sponge bath?	RED	GREEN	GREEN	GRAY	RED	GREEN	YELLOW	GREEN	RED	RED
D	have snacks available between meals?		GREEN						RED	GREEN	RED
E	choose your own bedtime?	RED	GREEN	GREEN	GREEN	YELLOW		GREEN	GREEN	GREEN	GREEN
F	have your family or a close friend involved in discussion about your care?	GREEN	GREEN	RED	RED	YELLOW	YELLOW	GREEN	YELLOW	RED	GREEN
G	be able to use the phone in private?	GREEN	YELLOW	GREEN	GREEN		GREEN	GREEN	GREEN	GREEN	GREEN
H	have a place to lock your things to keep them safe?	YELLOW	YELLOW	RED	GREEN	GREEN		RED	GREEN		GREEN

Interview for Activity Preferences

	Question	FRANK	EVELYN	NANCY	SALLY	JEREMY	BOBBY	JOHN	PAUL	HARRIET	RENEE
A	have books, newspapers, and magazines to read?		RED	RED	GREEN	GRAY	YELLOW	YELLOW	YELLOW	GREEN	GREEN
B	listen to music you like?	GREEN	RED		GREEN	GREEN	RED	GREEN	GREEN	GREEN	GREEN
C	be around animals such as pets?		YELLOW	YELLOW		GREEN		GREEN		RED	GREEN
D	keep up with the news?	GREEN	YELLOW	YELLOW	YELLOW	GREEN	RED		YELLOW	GREEN	GREEN
E	do things with groups of people?	YELLOW	RED					YELLOW	GREEN	RED	RED
F	do your favorite activities?	RED	GREEN		RED	GRAY	YELLOW	RED	GREEN	YELLOW	GREEN
G	go outside to get fresh air when the weather is good?		YELLOW	YELLOW	GREEN	RED	YELLOW	GREEN	RED		YELLOW
H	participate in religious services or practices?	GREEN	YELLOW						GREEN	GREEN	GREEN

Fig. 2. Household report. See the online version of this article at www.jamda.com for this figure in color.

the questions were easy for residents to understand and that residents were able to identify what was important to them. Families were impressed with the NH's implicit commitment to quality of care, as evidenced by asking questions about a loved one's preferences. Staff members, too, received the toolkit well. Social workers, recreation staff, nurses, and direct care workers were able to interview residents and enter data into the Excel spreadsheet. Several sites commented on the value of involving CNAs in the preference interview process, especially as it related to personal care questions.

For the pilot study, sites were given several different options for the choice of interviewer for the preference and satisfaction portions of the interview. A majority opted to have the same person conduct both components, which may have led to some bias. In the future, it would be prudent to have different individuals conduct each part of the interview; as noted in the AE PCC implementation guide, residents are more likely to give forthright answers if the preference satisfaction interviewer is not directly involved in the resident's care.[23] The literature suggests that the choice of interviewer is an important one. A recent study[24] found that Veterans Administration NH residents were most comfortable discussing the quality of their care with licensed nursing staff, followed by physicians, family/friends, social workers and administrators. Residents were least comfortable talking with nurse aides. The authors suggest that residents may hesitate to tell a direct caregiver that they are dissatisfied with their care, and they may see licensed nurses as having the greatest influence on quality. The study recommends that licensed nurses and primary care professionals should routinely ask residents about their quality of care, an option that is possible with the AE PCC toolkit.

Pilot communities reported the PCC toolkit's graphic displays and outputs provided a useful visual resource to help communities know "what we are doing well and what we need to keep working on." As a result of using the toolkit, staff identified previously unknown specific areas of preference incongruence at the resident level (eg, desire for a tub bath vs shower) and household level (eg, residents in 1 household were dissatisfied with access to the outdoors in good weather). The findings led providers to engage in problem solving to bring care into alignment with resident preferences. The AE PCC
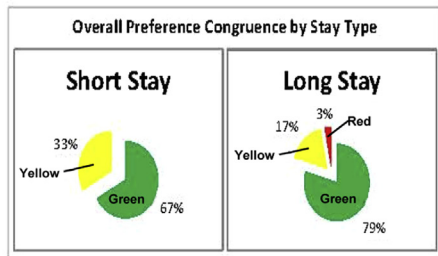
Fig. 3. Overview of preference congruence. See the online version of this article at www.jamda.com for this figure in color.

toolkit recommends that clinical and management teams use root-cause analysis to explore barriers to preference satisfaction.[25] At the individual level, the care team might ask whether a preference is offered frequently enough, and in a way that allows the resident to participate successfully. If not, the team can collaborate to provide the preferred activity more frequently, or tailor it to the resident's cognitive, physical, social and emotional strengths and environment so as to create the opportunity for more enjoyment. At the neighborhood or community level, staff can look for patterns to identify areas of low preference congruence that affect a group of residents. For example, if the data reveal low preference congruence for snacks between meals, the NH can adjust snack service delivery as desired. Identifying items that involve an easy system or policy change can yield quick success and generate staff momentum to address more challenging items.

Sites placed great importance on having "concrete, measurable data we can use as part of quality improvement." The toolkit facilitates compliance with QAPI guidelines, which require NHs to demonstrate the use of data to guide and monitor their QI projects.[10] Using the AE PCC toolkit, NHs can track rates of preference congruence, as well as care conference attendance by key participants. The information provides the basis for problem identification, improvement strategies, and further study to see if changes better satisfy residents. A benefit is that the toolkit requires only minimal new data collection since it relies in large part on the already mandated MDS 3.0.

Preference Congruence Rates

The study provides a first look at preference congruence rates among NH residents. Findings in phase 1 and phase 3 are strikingly similar. In the validation study, on average residents reported that 75.6% of their most strongly endorsed preferences were completely or somewhat satisfied; in the AE PCC toolkit pilot, the rate of preference congruence was 80.75% for long-stay residents. In the phase 1 validation study, RAs administered the preference satisfaction interview, whereas in the phase 3 AE pilot, NH staff—including CNAs, social workers, and recreation therapists—asked the questions. The consistent findings suggest that NHs can use a variety of different staff members or volunteers to complete questionnaires with residents. This aspect of the study is in line with recommended principles of translational research.[26] Twelve NHs with diverse characteristics tested the utility and acceptance of preference congruence, a research-based quality indicator, in real-world settings. The finding that a variety of staff can administer interviews and use the associated tools successfully points to the potential for long-term sustainability.

Care Conference Attendance

This study provides interesting evidence about rates of care conference participation by residents, family and friends, and direct care

providers, an area that has been understudied in the literature. At 1 home, staff members remarked that they were surprised by how few direct care staff attended care conferences. Findings on care conference attendance can lead to an exploration of ways to improve participation within individual NHs, and present an opportunity for benchmarking across homes nationwide.

Study Limitations

The phase 1 and phase 3 data collection took place with a convenience sample of NHs, and therefore the findings cannot be considered to represent homes overall. However, professional and paraprofessional staffing at the phase 3 pilot sites was remarkably similar to national levels. Pilot sites generally were high performing (4–5 stars) and some already had participated in QI initiatives. This group may be more likely than the norm to adopt PCC measurement tools and methods. NHs with a low rating are more likely to focus on basic quality of care than PCC improvement. Also, in phase 3, most sites chose to interview NH residents who were cognitively capable and able to speak. Although the phase 1 validation study tested the concept of preference congruence with residents with some degree of cognitive impairment, the AE phase 3 pilot did not focus on this population.

A further limitation is that the phase 3 pilot study reflected a 2-week timeframe. More data are needed over a longer period to see whether staff engage in interviews and use PCC information to improve daily care practices consistently. One pilot community intends to use positive feedback from the toolkit to reinforce staff efforts, celebrate successes, and motivate further engagement in QI. In terms of timing, the PCC toolkit recommends interviewing residents upon admission and before care conferences as a way to keep up with changes in preferences over time.

An additional limitation is that the pilot study did not measure resident satisfaction with preference fulfillment prior to implementing preference congruence interviews. A future study will begin with this step in order to gain insight on pre- and post-satisfaction levels.

The AE PCC project is the first initiative to collect data from NHs nationwide regarding resident-centered care planning and resident satisfaction with 16 elements of PCC. Over time, the project expects to develop a rich database that can be used for benchmarking on these key indicators. However, PCC is a broad concept that encompasses many more dimensions of NH life that could also become the focus for benchmarking. These include the presence of a homelike environment; choice and self-determination for residents; flexible schedules for residents; meaningful activity and socialization opportunities; high quality interaction with staff; and workforce policies that support PCC (eg, staff training in PCC practices, consistent staffing assignments) as well as other indicators.[1,2]

Next Steps

Future studies should examine provider experience using the toolkit in a larger, more diverse sample of NHs and postacute settings. Exploring the toolkit's usefulness and feasibility with a wider range of older adults, including those with varying levels of cognitive and functional ability, is also an important next step. Studies can examine resident and family feedback on the interviews; stability of preferences and satisfaction over time; inter-rater reliability when different types of staff administer interviews; trends in NH performance; factors leading to success; and best practices to improve PCC care delivery. As of February 5, 2014, over 700 NH s have selected the AE PCC goal as a focus for quality improvement. They and other new adopters' experiences will provide important insights about the toolkit's applicability.

Conclusions

Results from these pilot studies suggest that the AE PCC toolkit can be used successfully to assess person-centered care. Staff at diverse NHs found the toolkit easy to use and directly relevant to resident care and QI activities. The toolkit enables providers to move beyond anecdote and to systematically track whether residents' important preferences for daily living are satisfied. Also, the toolkit's online features provide opportunities to benchmark results and share best practices in order to enhance PCC for NH residents nationwide.

Acknowledgments

References

1. Edvardsson D, Winblad B, Sandman P. Person-centered care of people with severe Alzheimer's disease: Current status and ways forward. Lancet Neurol 2008;7:362–367.
2. Koren MJ. Person-centered care for nursing home residents: The culture-change movement. Health Aff 2010;29:312–317.
3. Rosemond C, Hanson L, Ennettt S, et al. Implementing person-centered care in nursing homes. Health Care Manage Rev 2012;37:257–266.
4. Centers for Medicare and Medicaid Services Office of Clinical Standards and Quality. CMS 2012 nursing home action plan: Action plan for further improvement of nursing home quality. Available at: http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/CertificationandComplianc/Downloads/2012-Nursing-Home-Action-Plan.pdf. Accessed October 2, 2013.
5. National Center for Assisted Living. NCAL's guiding principles for quality in assisted living. 2008. Available at: http://www.ahcancal.org/ncal/about/Documents/GPQualityinAssistedLiving.pdf. Accessed September 20, 2013.
6. AHCA. AHCA lauds congressional movement towards person-centered care (7/23/08). Available at: http://www.ahcancal.org/News/news_releases/Pages/23Jul2008b.aspx. Accessed October 2, 2013.
7. Network Pioneer. Mission, vision and values. Available at. Accessed, http://www.pioneernetwork.net/AboutUs/Values/; September 22, 2013.
8. Commission on Accreditation of Rehabilitation Facilities. Person-centered care: Setting the standard in long-term care. Accessed, http://www.carf.org/WorkArea/DownloadAsset.aspx?id=22430; October 2, 2013.
9. Edvardsson D, Innes A. Measuring person-centered care: A critical comparative review of published tools. Gerontologist 2010;50:834–846.
10. Centers for Medicare and Medicaid Services, University of Minnesota, Stratis Health. QAPI at a glance: A step by step guide to implementing quality assurance and performance improvement (QAPI) in your nursing home. Available at: http://www.cms.gov/Medicare/Provider-Enrollment-andCertification/QAPI/Downloads/QAPIAtaGlance.pdf. Accessed October 2, 2013.
11. Centers for Medicare and Medicaid Services. (2011). Minimum data set (MDS)–version 3.0. Resident assessment and care screening all item listing. Available at: http://www.cms.gov/NursingHomeQualityInits/30_NHQIMDS30Technical Information.asp#TopOfPage/. Accessed September 26, 2013.
12. Sitzia J. How valid and reliable are patient satisfaction data? An analysis of 195 studies. Int J Qual in Health Care 1999;11:319–328.
13. Arling G, Kane R, Lewis T, Mueller C. Future development of nursing home quality indicators. Gerontologist 2005;45:147–156.
14. Van Haitsma K, Curyto K, Towsley G, Kleban M. Exploring preference fulfillment in a nursing home sample. Presented at the 62nd annual meeting of the Gerontological Society of America meeting, Atlanta, 2009.
15. Folstein MF, Folstein SE, McHugh PR. "Mini-Mental State": A practical method for grading the cognitive state of patients for the clinician. J Psychiatr Res 1975; 12:189–198.
16. Van Haitsma K, Curyto K, Spector A, et al. The preferences for everyday living inventory: Scale development and description of psychosocial preferences responses in community dwelling elders. Gerontologist 2012;53:582–595.
17. Housen P, Shannon GR, Simon B, et al. Why not just ask the resident? J Gerontol Nurs 2009;35:40–49.
18. Rahman A, Schnelle J. The nursing home culture-change movement: Recent past, present and future directions for research. Gerontologist 2008;48:142–148.
19. Advancing Excellence in America's Nursing Homes. Available at. Accessed, http://www.nhqualitycampaign.org/star_index.aspx?controls=nursing_homes; October 2, 2013.

20. Edvardsson D, Fetherstonhaugh D, Nay R. Promoting a continuation of self and normality: Person-centered care as described by people with dementia, their family members and aged care staff. J Clin Nurs 2010;19:2611–2618.
21. Crespy S, Van Haitsma K, Payne D, et al. Managing depression. Provider 2008; 34:51–52. 54.
22. Centers for Medicare and Medicaid Services. MDS 3.0 Item Listing-Version 1.00.2 10/01/2010. Available at: https://www.pioneernetwork.net/Data/Documents/MDS3%200_C_F.pdf. Accessed on October 2, 2013.
23. Advancing Excellence. Person-Centered Care Quality Indicator Implementation Toolkit for Preference Congruence Measure, 4/29/13(5–6). Available at: http://www.nhqualitycampaign.org/star_index.aspx?controls=PersonCenteredCare Improve. Accessed February 6, 2014.
24. Durkin D, Umayam S, Sims N, et al. Whom do veteran nursing home residents prefer to talk to about satisfaction with care?: Implications for nursing staff. J Gerontol Nurs 2012;38:38–45.
25. Advancing Excellence. Person-Centered Care Quality Indicator Implementation Toolkit for Preference Congruence Measure, 4/29/13(9–12). Available at: http://www.nhqualitycampaign.org/star_index.aspx?controls=PersonCentered CareImprove. Accessed February 6, 2014.
26. Rahman A, Applebaum R, Schnelle J, Simmons S. Translating research into practice in nursing homes: Can we close the gap? Gerontologist 2012;52:597–606.
27. Data. Medicare. Gov. Nursing Home Compare: State Averages. Available at: https://data.medicare.gov/Nursing-Home-Compare/State-Averages/xcdc-v8bm. Accessed February 6, 2014.

Appendix

Members of the Advancing Excellence Campaign PCC Work Group are Amy Elliot, Chair, Pioneer Network; Chris Condeelis, Chair, American Health Care Association; Bev Laubert, Ohio State Long-Term Care Ombudsman; Judy Sangl, Agency for Healthcare Research and Quality; Donna Adair and Lori Porter, National Association of Health Care Assistants; Beth Barba and Susan Letvak, University of North Carolina Greensboro School of Nursing; Carol Scott, Advancing Excellence; Sophia Kosmetatos, American Health Quality Association; Denise Boudreau-Scott, Catalyst for Change; Peter Reed, Pioneer Network; Howard Degenholtz, University of Pittsburgh; Kris Mattivi and Adrienne Mihelic, CFMC; Urvi Shah, American Health Care Association; Kimberly Van Haitsma, Scott Crespy, Sarah Humes, Susanne Morganstein, Madlyn and Leonard Abramson Center for Jewish Life.