A "Recipe" for Culture Change? Findings From the THRIVE Survey of Culture Change Adopters

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Purpose of the Study: Descriptions of culture change adoption are often complex and varied, creating a challenge for those seeking guidance about which of the many components of culture change to adopt and in what order and combination. **Design and Methods:** To begin to address this question, members of The Research Initiative Valuing Eldercare (THRIVE) developed and distributed an online survey to 327 known culture change adopters. Of these, 164 (50%) completed the survey. Data were analyzed to identify adopted components, co-occurrence of adopted components, and differences in these across various types of nursing home models (i.e., traditional unit, household, and small house). **Results:** Our findings support unique co-occurrence of components across nursing home models. Results also show that homes with more traditional environments have been able to implement certain culture change components without large capital investments required by renovations. **Implications:** The adoption patterns suggest that the co-occurrence of components should be considered when pursuing organizational transformations to support culture change.

Key Words: Nursing homes, Consumer-directed care, Person-centered care, Institutional care/residential care, Long-term care, Autonomy and self-efficacy, Organizational and institutional issues

Although the field of culture change has advanced in recent years, questions regarding "what" and "how" of culture change remain (Shier, Khodyakov, Cohen, Zimmerman, & Saliba, 2014). More defined models for culture change implementation, such as households or small houses, provide a framework for implementation; however, the very existence of varied programs can create questions and confusion about what structures and processes—and in what combinations—constitute an efficacious framework for culture change. For example, although some models suggest investment in structural changes to build small houses or retrofit existing units into households, others operate within more traditional environments and instead focus on organizational policy and practice-based components. Thus, the adoption of components varies widely, resulting in numerous "recipes" for culture change.

To better describe which components of culture change have actually been adopted, and in what combinations, we surveyed culture change adopters

to explore (a) what culture change components these adopters report; (b) whether the components differ by structural type (traditional, household, and small house); and (c) the extent to which components of culture change co-occur. These results may inform future efforts of adoption through descriptions of what has been feasible in practice.

Design and Methods

Survey Sample

Eligible nursing homes were identified by 12 members of the Pioneer Network Board of Directors and 13 collaborating national culture change experts including representatives from leading culture change models, consultants, and advocates. These individuals identified nursing homes that best exemplified settings engaged in sustained and systemic culture change innovation (i.e., deeply engaged in change for 2 years or more in key organizational areas of care practice, environment, and workplace). Experts were provided a specific framework for each key organizational area to assist in the identification of nursing homes and to promote consistency in choice criteria.

Noncertified nursing homes were excluded as were homes without an e-mail contact for a director of nursing (DON) or the nursing home administrator in Pioneer Network's national database, resulting in a list of 327 certified skilled nursing homes in the survey sample. Of note, within this sample were organizations with small house homes registered through THE GREEN HOUSE Project® for 2 or more years (n = 20) (see http://thegreenhouseproject.org/ for more information about Green House homes). All eligible nursing homes received a link to an online survey allowing one response per home. The invitation requested that the DON complete the survey but acknowledged that other members of staff may respond as appropriate.

Homes that did not complete the survey within 3 weeks received four reminder e-mails and two telephone calls. One-hundred sixty-four (50%) eligible homes completed the online survey. Respondents from 8 homes indicated that culture change efforts had been discontinued, and these homes are not included in results of adoption rates.

Survey Development and Measures

Based on an existing conceptual framework of culture change domains (Koren, 2010), we developed an online survey to assess implementation of components of culture change. Specifically, we reviewed six previously developed culture change implementation instruments, identified additional items consistent with our research objectives, and restructured questions to minimize social desirability bias. Following survey development, cognitive interviews were conducted with six DONs, and subsequent revisions were made to the survey based on their responses. The final survey included 63 main multiple choice questions (with sub-questions, skip patterns, and open-ended text for instances in which the response was not listed) and required an average of 20 min to complete. A subset of survey questions (20 questions) was validated against data collected onsite by research staff as part of another effort. Specifically, these validation data were collected via interviews with the administrator (for 14 questions), the direct care staff of Green House homes also known as "shahbazim" (for two questions), DONs (one question), and by direct observation (for three questions). In general, agreement was high (82%) and ranged from 43% to 100% across the validated items.

The online survey was deployed over a 4-month period in 2012. Respondents were directed to complete the majority of the survey questions for the unit furthest along in culture change implementation and asked to define the unit by physical structure type. For the purpose of this study, "traditional unit" is defined as an original unit without remodeling; "household" is defined as self-contained units for fewer residents, with a living room, dining room, and full kitchen; and "small house" is defined as a stand-alone house for fewer residents.

In addition to the online survey, data about non-responders and national averages were obtained from the Centers for Medicare & Medicaid Services (CMS) Five Star Quality Ratings (Medicare.gov, 2012). Briefly, the Five Star Quality Ratings include Health, Staffing, Quality, and Overall ratings ranging from 1–5, with 5 representing a nursing home that is much above average.

Data Analysis

Data were analyzed using SPSS Statistics Version 21. To analyze survey data, distributions and significant differences of components across physical structure types were examined through crosstab tables with comparisons of column proportions. Significant differences were based on two-sided chi-square tests with a significance level of $p < .05$. To better understand how components

might co-occur, we conducted a hierarchical cluster analysis (HCA) of measures reported by survey respondents. HCA is an exploratory tool for groupings and well suited to cluster a small number of objects (Anderberg, 1973).

Study Results

Characteristics of Survey Respondents

Table 1 shows a comparison of descriptive statistics for the survey sample, including respondents ($n = 164$), nonrespondents ($n = 163$), and all other CMS certified homes in the country ($n = 15,231$). No significant differences were found between sampled respondents and nonrespondents. However, sampled culture change nursing homes (respondents and nonrespondents) and all other CMS certified homes were different. Sample respondents were significantly larger (122.5 and 124.3 vs. 106.1, $p < .001$), had higher occupancy rates (90% and 88% vs. 83%, $p < .001$), were more likely to be nonprofit (67% and 65% vs. 24%, $p < .001$), and less likely to be part of a chain (38% and 49% vs. 55%, $p < .001$). These differences in organizational characteristics of homes are supported by previous studies of culture change adopters (Grabowski, Elliot, Leitzell, Cohen, & Zimmerman, 2014).

In terms of the Five Star Quality Ratings, sampled culture change nursing homes had higher ratings than other CMS certified homes. Sample respondents had higher ratings in the Overall rating (3.9 and 3.7 vs. 3.2, $p < .001$) and in the areas

of Health (3.3 and 3.2 vs. 2.8, $p < .001$) and Nurse Staffing (3.9 and 3.7 vs. 3.2, $p < .001$). The nursing homes did not significantly differ on the Quality rating, however. Definitions of these ratings are provided on the footnote to Table 1.

Adoption Rates Overall and by Physical Structure Type

Table 2 displays adoption rates both overall and by physical structure type (small houses, households, and traditional environments). Components are grouped conceptually based on culture change domains (Koren, 2010) and sorted from most to least adopted within each domain.

Least Adopted Components and Differences by Physical Structure Type.—Based on survey responses, the least reported culture change components overall were more likely to be reported by adopters of the small house model. For example, in the Staff Empowerment domain, the component "direct care workers are responsible for scheduling themselves" (last row) was adopted by only 25% of respondents overall but significantly more likely to be adopted by small houses (58%) over households (16%) and traditional units (14%), $p < .05$. In the Noncare Tasks domain, respondents of small houses reported a higher rate of direct care workers preparing meals (79%), but these were some of the least adopted practices for other adopters (22% of households and 13% of traditional units, $p < .05$). The two domains of "Home Environment" and

Table 1. Descriptive Statistics for Culture Change Respondents, Culture Change Nonrespondents, and all other CMS Certified Nursing Homes in the Country (Year 2012)

	Sample respondents ($n = 164$), Mean (SD) or N (%)	Sample nonrespondents ($n = 163$), Mean (SD) or N (%)	All other homes ($n = 15,231$), Mean (SD) or N (%)	p For difference between survey sample and all other homes[a]
Number of beds	122.5 (77.7)	124.3 (89.1)	106.1 (61.8)	<.001
Occupancy %	90.4 (8.5)	88.0 (21.3)	82.7 (23.7)	<.001
Nonprofit %	67.1	65.2	24.1	<.001
Chain affiliation %	38.4	49.4	55.0	<.001
Health survey rating	3.3 (1.2)	3.2 (1.3)	2.8 (1.3)	<.001
Overall rating	3.9 (1.1)	3.7 (1.1)	3.2 (1.3)	<.001
Nurse staffing rating	3.9 (0.8)	3.7 (1.1)	3.2 (1.2)	<.001
Quality rating	3.7 (1.0)	3.6 (1.1)	3.6 (1.2)	.32

Notes: Table ratings are based on the CMS Five Star Quality Ratings that include ratings of Health, based on the last 3 years of both standard and complaint-based onsite inspections; Staffing, based on acuity-adjusted care hours of registered and licensed practical/vocational nurses per resident day; Quality, based on nine different resident care areas, including pressure ulcers and mobility; and Overall, determined as a composite rating of the other three. No significant differences were found between sampled respondents and nonrespondents.

[a]The p value reflects differences between the entire sample (which includes respondents and nonrespondents) and all other homes.

Table 2. Adoption Rates by Component and Physical Structure Type

Component	Total respondents (n = 156) Total%	Small house (n = 38) Small house%	Household (n = 51) Household%	Traditional (n = 67) Traditional%
Home Environment				
Residents have access to an unlocked garden or patio	83%	*97%*[a]	*78%*	*80%*
Residents sometimes eat meals in a dining room on the unit	76%	*90%*[a]	*84%*[a]	*63%*
Overhead paging turned off or used only in emergencies	74%	*95%*[a]	*71%*	*67%*
Cooktop/oven on the unit	51%	*87%*[b]	*65%*[a]	*21%*
Residents can access a kitchen on the unit and make a snack themselves	49%	*74%*[a]	*46%*	*38%*
Nurses' station not centrally located or visible on the unit	47%	*76%*[b]	*55%*[a]	*26%*
One or more meals prepared on the unit	46%	*90%*[a]	*39%*	*27%*
Steam tables on the unit	39%	*24%*	*59%*[a]	*34%*
Medication distributed from locked cabinet or drawer (without med cart)	36%	*87%*[a]	*28%*	*14%*
Resident Directed				
Residents help to choose activities	88%	95%	88%	98%
Direct care workers can fulfill resident requests without prior approval	79%	92%	77%	77%
"I" care plans in use for some residents	79%	79%	*66%*	*91%*[a]
Residents have some choice in meal time	74%	*87%*[a]	76%	*68%*
Residents attend resident care conferences always or very often	69%	71%	69%	70%
Residents can make a snack from food kept in their rooms	53%	63%	52%	50%
Residents can get an omelet at 2 a.m.	40%	*71%*[b]	*39%*[a]	*22%*
Organizational Policy and Educational Support				
Culture change reflected in HR and hiring practices	77%	81%	74%	84%
Culture change reflected in organizational policies and procedures	76%	89%	78%	75%
Problem-solving and	decision-making training at least once a year	73%	76%	74%	78%
RN/LPN leadership training at least once a year	70%	71%	76%	74%
Noncare Tasks				
Direct care workers set tables at meal time	63%	*81%*[a]	*75%*[a]	*46%*

Table 2. (*Continued*)

Component	Total respondents (*n* = 156)	Small house (*n* = 38)	Household (*n* = 51)	Traditional (*n* = 67)
	Total%	Small house%	Household%	Traditional%
Direct care workers clean up the kitchen	51%	**81%**[b]	**55%**[a]	**34%**
Direct care workers perform light housekeeping	49%	**76%**[a]	**59%**[a]	**28%**
Direct care workers launder clothing	44%	**78%**[a]	**35%**	**32%**
Direct care workers responsible for preparing one or more meals	32%	**79%**[a]	**22%**	**13%**
Quality Improvement				
Direct care workers record changes in residents' status or behaviors	87%	84%	94%	85%
Direct care workers receive individual shift report from nurses	81%	74%	88%	80%
Direct care workers walk rounds at shift change	72%	66%	75%	74%
Quality improvement projects in the past 24 months	69%	71%	66%	72%
Relationships				
Direct care workers consistently work with the same residents	90%	92%	88%	93%
Family members attend care conferences always or very often	83%	84%	82%	83%
Direct care workers contact family members for residents	60%	**81%**[a]	63%	**49%**
Direct care workers attend resident care conferences always or very often	52%	**76%**[a]	**43%**	**46%**
Staff Empowerment				
Direct care workers always choose care assignments	33%	**64%**[a]	**29%**	**23%**
Direct care workers are responsible for scheduling themselves	25%	**58%**[a]	**16%**	**14%**

Notes: Bold and italicized percentages indicate that the chi-square statistic is significant at the .05 level.

[a]Indicates the higher of the pairwise comparisons. For example, "Residents sometimes eat meals in a dining room on the unit" (second row) is an example of household and small house respondents reporting higher adoption rates than traditional units. "Direct care workers are responsible for scheduling themselves" (last row) is an example of small house adoption rates that are significantly higher than both households and traditional.

Small house percentages with subscript [b]indicate that all three structure types differ significantly. For example, the component "Cooktop/oven on the unit" (fourth row) is an example of significant differences between all three physical structure types.

"Noncare Tasks" differed significantly by physical structures for all components.

Most Adopted Components and Model Similarities.—The three most adopted components were associated with nonenvironmental organizational policy and practice changes. "Direct care workers consistently work with the same residents" (under Relationships) was reported by 90% of respondents; "residents helping to choose activities" (under Resident-Directed Care) was adopted by 88%; and "direct

care workers report changes in residents' status or behaviors (under Quality Improvement) was adopted by 87%. Homes reported no significant differences by physical structure type for any of the components in the two domains of "Organizational Policy and Educational Support" and "Quality Improvement."

Co-Occurrence of Culture Change Components

The results of the cluster analysis are presented in Table 3, with the bold headings indicating each of the four clusters. This analysis was conducted using the overall survey results to empirically derive the manner in which components grouped together in actual adoption. Results identified four clusters labeled conceptually as Environmental Transformations and Noncare Tasks (Cluster 1), Staff Coordination (Cluster 2) Dining on the Unit (Cluster 3), and Practice/Organizational Policy Changes (Cluster 4). The conceptual domain by which the item was originally classified (Table 2) is shown in the second column. This analysis indicates, for example, that many components otherwise considered to be diverse (see Cluster 4) are all indicative of transformations that could be adopted through practice and organizational policy shifts and that a large number of respondents were able to implement these components together across structures and domains.

Discussion

This study identified the specific components of change undertaken by 156 culture change adopters and examined how the components cluster together. Although the decision to undertake certain culture change components differed by physical structure type, the results indicate that even homes with more traditional physical environments (and presumably less capital investment in renovations) have been able to implement culture change, albeit generally with fewer components than those reported in household and small house models. For providers and policymakers, this finding denotes that culture change promoted in programs such as Nursing Home Quality Assurance & Performance Improvement (QAPI) and the CMS National Partnership to Improve Dementia Care in Nursing Homes is reasonable for homes without resources to significantly invest in their physical plant. Pay-for-performance programs can also incentivize certain culture change components without requiring that homes renovate or rebuild.

The description of co-occurring components underscores the importance of recognizing that components of culture change are not enacted in isolation. The co-occurring components (Cluster 4) of direct care workers consistently working with the same residents (reportedly practiced by 90% of the adopters) and direct care workers fulfilling requests without prior approval (reported by 79% of adopters) provide an illustration of this concept. Although each practice is often identified as core to developing relationships between residents and staff, research has yet to determine whether one practice alone is effective or if they are more, or perhaps only, effective when implemented as co-occurring components or as part of a larger cluster of practices. In another example, the ability of a resident to have an omelet at 2 a.m. (intended to represent an item suggesting wide choice in meal availability) was clustered with components from the environment and staff involvement in noncare-related tasks, all of which are more common in small households. Consequently, without staff who are empowered, willing, and trained to prepare this 2 a.m. omelet, and the physical structure to do so, this type of resident choice was less likely to be reported by adopters.

As policy and practice move in advance of a well-established evidence base, findings of co-occurrence of components that cross over conceptual domains of culture change highlight that implementation is complex, and providers should thoughtfully adopt strategies when engaging in quality improvement initiatives such as QAPI and Advancing Excellence. Policymakers should be cautious as policies such as pay-for-performance, for example, could conclude that culture change has minimal impact if single practices fail due to the absence of the necessary copractices. In addition, although some studies consider whether culture change practices in combination improve resident outcomes (Zimmerman, Sloane, Cohen, & Barrick, 2014), there is a dearth of research that employs this type of design (Shier et al., 2014). As the field advances, these findings suggest that future studies should consider evaluating culture change within a framework of co-occurring practices and environmental structures.

There are limitations to this study including a small sample size and a 50% response rate; however, the responders and nonresponders did not differ in a number of key areas (Table 1). This is also a cross-sectional, descriptive study without the ability to determine causality or estimate the impact of culture change adoption. In addition, the

Table 3. Cluster Analysis of Culture Change Components

Cluster	Original conceptual domain
Environmental Transformations and Noncare Tasks (Cluster 1)	
Residents can access a kitchen on the unit and make a snack themselves	Home Environment
Nurses' station not centrally located or visible on the unit	Home Environment
One or more meals prepared on the unit	Home Environment
Medication distributed from locked cabinet or drawer (without med cart)	Home Environment
Residents can get an omelet at 2 a.m.	Resident Directed
Direct care workers set tables at meal time	Noncare Tasks
Direct care workers clean up the kitchen	Noncare Tasks
Direct care workers perform light housekeeping	Noncare Tasks
Direct care workers launder clothing	Noncare Tasks
Direct care workers responsible for preparing one or more meals	Noncare Tasks
Staff Coordination (Cluster 2)	
Direct care workers always choose care assignments	Staff Empowerment
Direct care workers are responsible for scheduling themselves	Staff Empowerment
Dining on the Unit (Cluster 3)	
Residents sometimes eat meals in a dining room on the unit	Home Environment
Cooktop/oven on the unit	Home Environment
Steam tables on the unit	Home Environment
Practice/Organizational Policy Changes (Cluster 4)	
Overhead paging turned off or used only in emergencies	Home Environment
Residents have access to an unlocked garden or patio	Home Environment
Residents help to choose activities	Resident Directed
Direct care workers can fulfill resident requests without prior approval	Resident Directed
"I" care plans in use for some residents	Resident Directed
Residents have some choice in meal time	Resident Directed
Residents attend resident care conferences always or very often	Resident Directed
Residents can make a snack from food kept in their rooms	Resident Directed
Culture change reflected in HR and hiring practices	Policy and Education
Culture change reflected in organizational policies and procedures	Policy and Education
Problem-solving and decision-making training at least once a year	Policy and Education
RN/LPN leadership training at least once a year	Policy and Education
Direct care workers record changes in residents' status or behaviors	Quality Improvement
Direct care workers receive individual shift report from nurses	Quality Improvement
Direct care workers walk rounds at shift change	Quality Improvement
Quality improvement projects in the past 24 months	Quality Improvement
Direct care workers consistently work with the same residents	Relationships
Family members attend care conferences always or very often	Relationships
Direct care workers contact family members for residents	Relationships
Direct care workers attend resident care conferences always or very often	Relationships

Notes: To account for clusters by physical structure type, the hierarchical cluster analysis was run based on the squared Euclidean distances between variables (and not based on the cases representing the set of responses for each home). We also repeated the cluster analysis on a sample without small house responses, and the results were replicated.

survey depended on self-report although a validation of some items yielded generally good agreement. Adopters surveyed for this study were also identified as systemic adopters of culture change, which may differ from partial or later stage adopters (Miller et al., 2013). Despite these limitations, however, our findings provide concrete examples of the components of culture change across nursing homes and highlight the importance of integrating a framework of co-occurring culture change practices into practice, policy, and research.

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