OHIO PERSON-CENTERED STAFF ENGAGEMENT PROJECT EVALUATION

June 2019

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EXECUTIVE SUMMARY

The Office of the State Long-Term Care Ombudsman at the Ohio Department of Aging, in partnership with B & F Consulting, implemented a two-year Person-Centered Staff Engagement Project. The goal, as described in the proposal, was to "revolutionize care in participating nursing homes through the use of foundational practices that promote learning and sharing." Some of the foundational practices focused on retention of direct care staff since "Staff stability is the root of quality care….and the foundation for resident care." State-tested nurse aide (STNA) turnover in nursing homes is an increasing problem; most facilities can benefit from a program to increase staff engagement and provide insight into what facilities can change to decrease turnover rates. This report provides information about the facilities that participated in this program, comparisons with facilities that didn't participate, and the outcomes seen in these groups of Ohio nursing homes.

The Office of the State Long-Term Care Ombudsman (OSLTCO or Ombudsman) at the Ohio Department of Aging (ODA) implemented a learning collaborative program from June 2017 through March 2019. Their aims were to activate effective and sustained performance improvement efforts, help facilities build an infrastructure that focuses on communication and teamwork to motivate staff to improve, and implement person-centered care by focusing on the residents' individual needs. B & F Consulting led the statewide learning collaborative, while an ombudsman liaison in each region led the workgroups of facilities and provided individual consultation and coaching to the facilities in their regions.

One-hundred twenty-four facilities agreed to participate in the program and provided baseline facility profiles, and Communication Infrastructure Surveys (CIS). The Project Ombudsmen collected Person-Centered Care Index (PCCI) data from the staff in each facility. Fifteen facilities did not complete the program, while five additional facilities were added after the program began. A total of 129 facilities participated in all or part of the program. Data on nursing home survey citations and ombudsmen verified complaints prior to the program and after program implementation complete the sources of information for the evaluation.

A test-retest design guided our work with the participating facilities, while administrative data on deficiencies and complaints provided both pre- and post-intervention information as well as opportunities for comparing the difference in the change between participatinng and non-participating facilities.

Our results show that proximal outcomes measured by the Communication Infrastructure Surveys and the Person-Centered Care Index both showed positive and significant changes. Real differences in practices and care were shown on these two measures. More nurses and STNAs are participating in care planning, receiving

information about new residents more quickly and in many cases receiving information about residents they had not been given before. Huddles among different groups of staff are occurring for the first time in some cases, and occurring more often and among more staff than prior to this program. And finally, quality information is communicated and used by more facilities.

Person-centered care showed a significant improvement in 14 of the 16 areas measured. Residents being able to decide when to eat, staff having time to learn the histories of the residents, having supervisors that consider their preferences when making care decisions, and having time to allow residents to do things for themselves showed the greatest improvements. The items with the best scores are staff reporting that they have a good understanding of the residents they are caring for, followed by how often they ask residents about the way they want things done. Both of these practices would indicate a basis for providing good person-centered care based on knowing their residents.

The positive results shown in these two practices measures were not mirrored in the administrative data on facility survey citations and ombudsmen verified complaints. The survey process changed while this project was going and survey citations increased among program participants as well as non-participants.

Ombudsmen verified complaints also showed changes among both the program participant and comparison facilities. Changes in the rate of complaints decreased among both groups; the difference in this change between the groups was not statistically significant.

Our results suggest that this intervention made important differences in the way staff communicate in the participating facilities. Substantive and significant changes were also observed in the person-centered care practices of facilities that participated in the intervention. However, these changes did not translate into overall facility improvements as measured by deficiencies and complaints. It is likely that the observed changes in communication and care do not affect all areas in a facility that are assessed via deficiencies and complaints. It is also possible that with a longer measurement period we might have observed larger or significant changes.

INTRODUCTION

As we grow older, the likelihood that we will need some assistance in our daily lives increases. In the U.S., families and friends provide most of the care needed by older adults, but for some people more intensive, prolonged, or complex care is often provided in a residential setting like a nursing home. Because so many of us are growing to rely on these long-term services and supports, we are seeing a greater need for paid caregivers in long-term care settings. To attract new caregivers to this growing field, and to retain those who already work in Ohio's nursing homes, strategies to create meaningful jobs for our paid caregivers (known in Ohio as state-tested nurse aides or STNAs) continue to be developed. One strategy is to provide nursing home care in a person-centered way which values and prioritizes the strong bonds that often form between residents and STNAs. These relationships make STNAs feel valued and are frequently mentioned as the reason they continue to do this important work.

The Office of the State Long-Term Ombudsman (OSLTCO or Ombudsman) at the Ohio Department of Aging, in partnership with B & F Consulting[i], implemented a two-year Person-Centered Staff Engagement Project. The goal, as described in the proposal, was to "revolutionize care in participating nursing homes through the use of foundational practices that promote learning and sharing." Some of the foundational practices focused on retention of direct care staff since "Staff stability is the root of quality care….and the foundation for resident care." STNA turnover in nursing homes is an increasing problem; most facilities can benefit from a program to increase staff engagement and provide insight into what facilities can change to decrease turnover rates. This report provides information about the facilities that participated in this program, comparisons with facilities that didn't participate, and the outcomes seen in both of these groups of Ohio nursing homes.

BACKGROUND

Average turnover rates of STNAs in a sample of nearly 600 Ohio nursing homes were greater than 80% in 2017.[1] High turnover often leads to short-staffing and vacant positions. While there are no minimum standards for the number of STNAs that must be present in a nursing home, having enough staff is critical to providing high quality care. Nationally, STNAs provide an average of two hours and 18 minutes of care per resident each day. In Ohio, that number is lower by 11 minutes per resident, per day.[2] When shifts are under-staffed the STNAs on the job feel stressed and hurried and care is likely

[i] B & F consulting is comprised of Cathie Brady and Barbara Frank. Their work is dedicated to helping long-term care providers make changes in practice and manage change in nursing home life. www.bandfconsulting.com.

to be compromised. Without time to provide good care, these paid caregivers do not reap any of the intrinsic benefits of care work.

Job satisfaction is probably the most widely cited factor related to whether paid caregivers intend to or actually do leave their jobs.[3] In their meta-analysis of factors influencing job satisfaction among paid caregivers found that staff empowerment and autonomy, workloads and facility resources were significant predictors of satisfaction across multiple studies.[4] They also noted that qualitative studies identified relationships with residents, the nature of the work, and opportunities for learning and advancement as other important factors.

Staff empowerment and autonomy and positive relationships with residents are increased when STNAs are consistently assigned to the same residents. Consistent assignment increases STNA confidence in their ability to make appropriate care decisions because they have knowledge about the residents to whom they are assigned.[5] Nursing home residents prefer to receive care from the individuals who know them and understand their needs and preferences. Residents have reported more positive health outcomes and less depressive symptoms if they know who is caring for them and they have developed a relationship with the staff member.[6]

APPROACH

This two-year project built on the *Engaging Staff in Individualizing Care* starter toolkit, a product of the Pioneer Network's National Learning Collaborative webinar series on *Using the MDS as an Engine for High Quality Individualized Care.* In the Pioneer Network project, forty-nine nursing homes participated in learning collaboratives to develop effective staff practices. They found that daily huddles[ii] and consistent assignment of staff to residents improved outcomes and made it easier to adapt care to residents' preferred routines. The homes found that incorporating these two practices accelerated improvement in clinical, human resource, and organizational outcomes.

The Long-Term Care Ombudsman Program at the Ohio Department of Aging (ODA) implemented a similar program from June 2017 through March 2019. Their aims were to activate effective and sustained performance improvement efforts, help facilities build an infrastructure that focuses on communication and teamwork to motivate staff, and implement person-centered care by focusing on the residents' individual needs. By increasing consistent assignment and communication among staff members, resident care can provide a better experience for the older adult. Staff engagement is an

[ii] Daily huddles, also called "stand-ups" usually last 15 minutes or less and involve staff communications about current and new residents, as well as anything of note that happened on the previous shift or is planned for the day. The huddles provide real-time information about current needs and activities.

important—if not the most important—factor when implementing person-centered care. If staff members are not motivated, do not feel respected, or do not know the residents personally, they will not be able to stay engaged and provide the care needed for the resident to thrive. Cathie Brady led the statewide learning collaborative, while an ombudsman liaison in each region led workgroups of facilities and provided individual consultation and coaching to the facilities in their regions. The statewide collaboratives met semi-annually during the project while the regional workgroups met quarterly. Statewide meetings included training from B & F consultants and others to provide educational information upon which organizational changes were developed and implemented. Facilities chose a key area to focus their efforts each quarter such as huddles, consistent assignment, including STNAs in care plan meetings or other action plans.

PROJECT EVALUATION

METHODS

Scripps Gerontology Center served as the program evaluator. The evaluation was designed to rely primarily on quantitative data, collected from both administrative data and new data sources. The Scripps Gerontology Center, ODA, and B & F Consulting collaborated to determine materials and information needed for original data collection to supplement existing administrative outcome data.

The proposal for this project suggested four targeted outcomes as indicators of program success:

1) A 10% reduction in ombudsman verified complaints in participating nursing homes;
2) A 10% reduction in citations issued by the Ohio Department of Health (ODH);
3) A 10% improvement in staff stability;
4) A 20% improvement between the Quick Organizational Self-Assessment pre- and post-project results.

As planning for the intervention got underway, the evaluation team and the consultants suggested some modifications to the third and fourth indicators. Data for staff stability at baseline was problematic since some facilities had not tracked this information and were unable to accurately report it. As will be shown in the Results section, over 25% of facilities needed to develop an action plan to begin tracking this information. Also, the Quick Organizational Self-Assessment was determined to be limited in the information that it provided to facilities. This tool was replaced by two tools, a Communication Infrastructure Survey (CIS) developed by B & F Consulting and a Person-Centered Care Index (PCCI) developed by Scripps Gerontology Center. The CIS tracks the timing

and methods of information exchange among the staff. The PCCI provides information about care practices in the facility. Both tools are included in Appendix A.

ODA also created a facility enrollment packet. This included some descriptive information about the facility, tenure of administrative staff, and their past participation in quality improvement activities.

Existing data sources include:

Ombudsman verified complaints. These are annual counts of verified complaints for each facility in 2017 and again in 2018. This information was provided from the Ombudsman Data Information System (ODIS). A 10% reduction in the number of complaints was targeted for improvement.

Health deficiencies. These are counts of deficiencies on the health surveys conducted by the Ohio Department of Health (ODH) every 15 months or more often. Data were downloaded from the federal Nursing Home Compare website. A 10% reduction in the number of deficiencies was targeted for improvement.

In addition, a conference call with the ombudsman liaisons at the close of the project provided context for our findings. This call asked for their input in understanding any challenges they faced, as well as what was successful about the program.

The evaluation design relies on pre- and post-test comparisons of data that was only collected from the intervention group, and a difference-in-difference design for ODH citations and Ombudsman verified complaints.

Facility selection and participants

In each of Ohio's 12 regional ombudsman programs, a project liaison was hired to provide support and coaching during the project. The first task of the liaisons was to choose and recruit 10 to 12 facilities in their region to participate in the project. Although the proposal suggested the use of existing data sources (e.g., ombudsman complaints, resident satisfaction) for choosing facilities, the consultants suggested a more subjective approach. At the kick-off meeting, Cathie Brady suggested that the recruited facilities be in need of improvement in staff retention and turnover, but also have fairly good quality care. The goal was to choose facilities that had both the need for the program and the resources to implement improvements in care and staffing practices. Facilities facing numerous challenges would likely not be able to devote enough time to succeed, while facilities that were already providing very good person-centered care might not be motivated to sustain a commitment to the project.

One-hundred twenty-four facilities agreed to participate in the program and provided baseline facility profiles, Communication Surveys, and Person-Centered Care Index data from their staff. Fifteen facilities did not complete the program, while five additional

Nursing homes that enrolled in and completed the program were significantly more likely to be not-for-profit, part of a CCRC, have higher resident satisfaction, and a higher overall star rating.

facilities were added after the program began. A total of 129 facilities participated in all or part of the program.

Baseline data was obtained from ODIS and Nursing Home Compare. Nursing Home Compare provides a count of the deficiencies we needed to assess program outcomes, and also provides a picture of facility quality by including the Star Rating System. Star ratings combine data on staffing, health inspections and 17 different physical and clinical measures into one rating, from 1 to 5 stars.[7] Resident and family satisfaction data were also included to provide a more comprehensive comparison of participating and non-participating facilities. Data were merged to complete a data set of 959 Ohio nursing homes that had data across all sources at baseline. Table 1 shows a comparison of nursing home baseline characteristics by their final status in the learning collaborative program.

Table 1. Facility Characteristics by Status in the Learning Collaborative Program

	All Nursing Homes	Non-Participants	Completed Participants	Disenrolled Participants
For-profit**	79.6%	80.5%	71.1%	100.0%
Part of CCRC*	15.2%	14.3%	23.7%	6.7%
Avg. number of certified beds	93.6	94.1	90.9	88.7
Avg. 2017 resident satisfaction*	76.0	75.8	77.3	75.3
Avg. 2016 family satisfaction	75.2	75.0	76.7	75.1
2017 overall star rating*	3.2	3.3	3.5	2.3
2017 STNA hours per resident day	2.1	2.1	2.2	1.9
Total	***N* = 959**	***n* = 830**	***n* = 114**	***n* = 15**

*** p≤.001, ** p≤.01, *p≤.05

Nursing homes that enrolled in and completed the program were significantly more likely than the other facilities to be not-for-profit, part of a CCRC, have higher resident satisfaction, and a higher overall star rating. The groups were not significantly different in the number of beds or in family satisfaction ratings.

It appears that either due to self-selection or ombudsman recruitment, a particular type of facility participated, and also had the ability and means to commit to the completion of the program.

As described earlier, the participating facilities completed a facility profile when they enrolled. Table 2 shows some of the information from the profiles for the two groups of participating facilities. In both groups management tenure was greater than four years for both administrators (LNHA) and directors of nursing (DON). The disenrolled facilities had fewer staff, on average. None of these differences were statistically significant.

Table 2. Staffing and Residents by Facility Participation Status

	Completed Participants	Disenrolled Participants	All Participating Homes
Avg. LNHA tenure (in months)	48.6	74.1	51.8
Avg. DON tenure (in months)	50.8	49.5	60.6
Number of long-stay residents	65.7	60.9	65.2
Number of short-stay residents	15.6	11.5	15.2
Number of full-time STNAS	31.3	22.0	30.1
Number of part-time STNAs	13.2	7.4	12.5
Total	***n* = 107**	***n* = 15**	***N* = 122**

*** p≤.001, ** p≤.01, *p≤.05

In order to examine whether these facilities were engaged in a variety of quality improvement activities in addition to the current one, we asked about their previous and current experience. Their open-ended responses were combined into like categories; the largest categories of responses are shown in Table 3. The majority of facilities had participated in one or more quality improvement activities. Participants who completed this project were more likely than the disenrolled facilities to have completed any quality improvement activities (p-value .09). None of the other differences approached statistical significance.

Table 3. Quality Improvement Activities of Participating Facilities

	Percent of Completed Participants	Percent of Disenrolled Participants
Any Quality Improvement Project	80.6	60.0
Music and Memory	48.2	53.3
HSAG Quality Collaboration	21.1	13.3
Antipsychotic reduction	9.7	13.3
Opening Minds through Art (OMA)	9.6	0.0
Wound care	8.8	20.0
C-difficile reduction	5.3	0.0
National Nursing Home Quality Initiative	5.3	0.0
Hospital readmission reduction	1.8	0.0
INTERACT	1.8	0.0

Part of a learning collaborative approach requires members to choose specific action plans to work on between the quarterly meetings. The ombudsman liaisons reported the action plans chosen by each facility for up to five quarters. The majority of facilities chose a new action plan each quarter, although some carried the same plans for two or three quarters. Table 4 shows the actions chosen by the facilities at least once. Given the importance of huddles and consistent assignment as foundational aspects of improving person-centered care it seems appropriate that these were among the most commonly chosen goals.

Table 4. Action Plans Selected by Facilities Completing the Program

Key Action Plan	Percentage of Facilities Choosing this Action Once or More
Huddles	68.4
Staff recognition	50.9
Consistent assignment	47.4
On Boarding/training/mentoring	41.2
Recruitment & retention	39.5
STNAs in care conferences	36.0
Other staff communication	28.1
Tracking turnover and retention	25.4
Other unique practice	20.2
Resident Preferences (PELI)	18.4
Exit or stay interviews	14.9
Interviewing	7.9
Job posting/hiring	3.5
Replace/review equipment	3.5
Total	***N* = 114**

As the program continued, one of the challenges for success was change in facility managers who also may have been the program champions at each facility. To document some of these challenges, the liaisons were asked to report on the status of the homes in their region. Table 5 shows the proportion of facilities that experienced a variety of organizational changes that could potentially impact the success of a collaborative project such as this one.

Table 5. Organizational Changes during Project	
Organizational Change	**All Enrolled Facilities**
Change in LNHA	41.0
Change in DON	42.6
Other mgt. changes	25.6
Ownership change	17.1
Total	***N* = 118**

Note. This information is based almost completely on the completing facilities. This information was unknown for 10 of the 14 disenrolled facilities and 1 of the completing facilities.

Of those who had a personnel change, many had multiple managerial turnovers. Thirty percent of the facilities that experienced a change had three, four, or five DONs; 26 percent had three, four, or five administrators during the course of the project. Over half (56.9%) had changed administrators or DONs (53.7%) twice during the course of the project. Forty of these 129 facilities had turnover of both an administrator and DON during the project; 65 had turnover of one or the other. These numbers suggest that these facilities may have enrolled in this project because of staff turnover issues within management as well as the direct care staff.

Forty of these 129 facilities had turnover of both an administrator and DON during the project; 65 had turnover of one or the other.

RESULTS

Ombudsman verified complaints

The Ohio State Ombudsman's Office at ODA provided a database of verified complaints from 2016 through June 30, 2019. Data from July 1, 2016 through June 30, 2017 provides a count of complaints in the 12 months prior to the start of the intervention. Data from July 1, 2018 through June 30, 2019 provide the post-intervention count of complaints. The intervention had been in place for almost 12 months at the time the post-intervention complaint count began. Table 6 shows the average number of verified complaints for the participant and comparison group, as well as the average number of verified complaints converted to a rate per bed in the facility. The more residents in a facility the greater the opportunity for complaints; complaint rates adjusted for facility size are a more valid comparison. Table 6 also shows the average difference in rates pre- and post-intervention.

Table 6. Pre- and Post-Intervention Ombudsman Verified Complaints for all Ohio Nursing Homes by Participation Status			
Time and Complaint Type	**All Nursing Homes**	**Non-Participants**	**Completed Participants**
2016-17 Avg. Number of Complaints (Range)	4.9 (0-40)	5.0 (0,40)	4.5 (0,29)
2018-19 Avg. Number of Complaints (Range)	4.1 (0-40)	4.1 (0,33	3.8 (0,17)
2016-17 Avg. Rate (Range)	.05 (0-.65)	.05 (0,.65)	.05 (0,.35)
2018-19 Avg. Rate (Range) #	.04 (0,.40)	.04 (0,.40)	.04 (0,.20)
Avg. Difference in Number of Complaints pre-post (Range)	.85 *** (-26, 30)	.85 (-26, 30)	.74 (-13, 19)
Avg. Difference in Complaint Rate pre-post (Range)	.010 *** (-.29 .40)	.010 *** (-.29, .40)	.010* (-.13, .20)
Total	***N* = 959**	***N* = 830**	***N* = 114**

*sig. p=.04, difference between participant and non-enrolled nursing homes.

As shown in Table 6, the average number of complaints declined among the comparison group, the program participant group and for the entire population of nursing homes between 2016 and 2019. The change for all Ohio nursing homes as well as the non-participant and participant groups achieved a statistically significant 17% reduction in the number of complaints from late 2016 through the first half of 2019. However, when comparing our participants and the comparison group, the magnitude of the change was not significantly different between the two groups (t=.493, 942 df, p=.622). The goal of reducing the number of complaints by 10% was met but this was true for all nursing homes in Ohio, not just the participant group.

When the numbers of complaints are adjusted by the certified beds in the facility, all groups show the same rate of approximately .05 complaints per bed. In order to examine differences at the facility level, we subtracted the number of complaints and the rate of complaints post-intervention from the number and rate pre-intervention. Positive numbers for difference scores indicate that the change shows a decrease during the period of the intervention. All groups showed a statistically significant change in the rate of complaints from pre-intervention to post-intervention. Again, significant differences in the rate change were not shown between our program participants and the non-participant comparison group. Overall our results show a decline in ombudsman verified complaints and complaint rates among all Ohio facilities. The target outcome of a 10% reduction in complaints was met by the program participants, but cannot be

attributed to the intervention since a similar decline was shown among the non-participating facilities.

ODH citations

ODH inspects certified nursing homes at least every 15 months as required by federal rules. These data are provided to the federal Nursing Home Compare website. Data were downloaded at the beginning of the project in April 2017, and again at the conclusion in April 2019. The final dataset included the most recent three inspections for each facility. The latest survey was used as the post-intervention count of deficiencies. The pre-intervention deficiency count was taken from the survey date closest to the project kick-off in June 2017, up to August 2017. After that date we assumed that some changes may have been implemented that would reflect the intervention. We also recognized that the April 2019 data do not reflect the full extent of the intervention. Forty percent of the facilities had a latest survey date of June 2018 or earlier, giving them one year or less of the intervention to have an impact on their deficiencies. Given the timeframe for the evaluation, however, this is the latest data we could use.

Survey citations are of two kinds; health and physical environment as assessed by fire safety and similar codes. Health deficiencies are also organized by type such as resident rights and quality of care/quality of life (QOC/QOL). Table 7 shows the pre- and post-intervention citations for participating facilities as compared to non-participating homes. Some facilities were new and did not have data for both time points so are not included in the comparison.

Table 7. Pre- and Post-Intervention Citations for all Ohio Nursing Homes by Participation Status

Time and Type of Citation	All Nursing Homes	Non-Participants	Completed Participants	Disenrolled Participants
Pre-Avg. Total (Range)	6.9 (0-34)	6.9 (0-34)	6.4 (0-24)	7.6 (0-22)
Post-Avg. Total (Range)	10.1 (0-53)	10.0 (0-53)	10.3* (0-33)	11.9 (0-19)
Pre-Avg. Health	4.4	4.5	4.0	5.6
Post-Avg. Health	6.4	6.3	6.9	8.3
Pre-Avg. Resident Rights	0.6	0.6	0.6	0.5
Post-Avg. Resident Rights	1.1	1.1	1.1	1.1
Pre-Avg. QOC/QOL	0.9	0.9	0.8	1.3
Post-Avg. QOC/QOL	1.6	1.5	1.9	2.3
Avg. Change (Pre-Post Total)	-3.2	-3.1	-3.7	-4.3
Total	***N* = 946**	***N* = 817**	***N* = 113**	***N* = 15**

*Paired sample t-tests for participants found the difference statistically significant as well.

As shown in Table 7, all groups—participants, non-participants, and disenrolled facilities—experienced an increase in survey citations from their pre-intervention levels. Pre-intervention found 24 citations as the highest among program participants; this rose to 33 after the intervention. Statewide, the highest number of citations rose from 34 to 53. Across all measures other than citations for resident rights, the disenrolled facilities performed lower than both the completing and the non-participant nursing homes. The average change from Time 1 to Time 2 across the groups was higher for the program participant group than the non-participating facilities. T-tests between the Time 1 and Time 2 changes in the participant group only, found the change to also be statistically significant.

In our conversation with the ombudsmen liaisons, one of their main discussion points was the changing survey process that occurred during the time of the intervention. They expected that we would not find improvements in citations, since in their experience, all of their facilities seemed to have worse survey results than they had previously. Their expectations were verified by our quantitative results. In November 2017 a new survey process was implemented which appears to have impacted all of Ohio's nursing homes by increasing the number of citations statewide. However, the new process affected all nursing homes and the survey citations for participants in this project actually increased more than the citations for non-participants. The target outcome of a 10% reduction in citations was not met.

The first two outcomes examined did not meet the targeted outcome goals for program participants. In the case of ombudsman verified complaints, we did see a reduction in verified complaints in nursing homes overall, however our program participants did not show a larger decrease than non-participating facilities. In the case of the ODH citations, the change in the survey process implemented during this project outweighed any differences that could be attributed to this project. Both of these measures reflect facility performance overall, and do not provide indications of changes in staff performance or engagement. Also, as previously mentioned, the length of our data collection for these two measures may not have fully captured the impact of the intervention.

Communication infrastructure

The Communication Infrastructure Survey was provided by B & F consulting. It was designed to be completed during a facility meeting, with team leaders determining by consensus the correct answers for the facility. At Time 1, however, many facilities submitted multiple forms instead of one. For facilities with multiple forms, a mean score was calculated for each item. At Time 2 and Time 3 the ombudsmen provided additional instructions and only one form was submitted for each facility. Time 1 and Time 2 comparison data were analyzed for the 100 facilities that provided information pre-

intervention and one year into the intervention (summer 2018). An overall communication score was calculated by recoding six of the items so that the highest number represented the most positive response. The overall score was used to provide a single statistical comparison between Time 1 and Time 2 and Time 1 and Time 3. The final comparison from Time 1 to Time 3 includes only the 59 facilities that provided information for all three waves of data collection ending in spring, 2019. A 20% improvement in communication was targeted for an outcome.

Detailed tables of Time 1 and Time 2 comparisons are provided in Appendix B. Because only 59 facilities provided information all three times, the comparisons at one year that include 100 nursing homes provide a larger picture of the changes made by facilities than we would see by limiting our illustrative comparisons to the 59 facilities that provided data all three times.

Some of the highlighted improvements at one year are listed below.

- The percentage of facilities that provided newly admitted residents' customary routines to STNAs in one day or less increased from 49.5% to 71.4%; a 44% improvement.
- The percentage of facilities that did not provide new residents' social histories to STNAs declined from 38.2% to 10.2%; a 73.3% improvement. For nurses, the decline went from 19.3% to 5.1%; a 73.6% improvement.
- The proportion of facilities assigning 76-100% of their STNAs to the same residents went from 53.9% to 63.0%. For nurses, the increase went from 73.3% to 77.0%.
- The percentage of facilities reassigning consistently assigned STNAs, i.e., moving an STNA away from their regular residents, more than once per week went from 11.4% to 6.1%, and the proportion only occasionally reassigning went from 38.6% to 38.0%. The proportion never reassigning nurses went from 1.1% to 6.0%.
- Facilities never or rarely including STNAs in care planning meetings went from 38.0% to 28.0%; a 26.3% improvement. The proportion including them most or all of the time went from 35.9% to 56.0%; a 56.0% improvement.
- Direct care nurse inclusion in care planning most of the time or always increased from 25.6% to 45.0%.
- The proportion of facilities reporting STNAs and nurses participate in huddles every day, at least on some or all shifts and units went from 43.2% to 64.7% with the largest part of the increase in the proportion using huddles every day, on every shift and unit.
- The percentage of facilities reporting that management never participates in huddles declined from 17.5% to zero. The proportion reporting management

participates in huddles more frequently than once a week or daily increased from 59.7% to 75.0%; a 25.6% increase.

- Management team review of CASPER data increased from 20.2% reviewing data every couple of weeks or more frequently, to 29.6% reviewing that often.
- QA committee members huddling to discuss resident issues with nurses and STNAs improved from 30.9% reporting "never" to 13.0%. Over four in ten (41.0%) report every couple of weeks or more often up from 24.5% at Time 1.
- DONs communicated resident progress with STNAs annually or never in 39.7% of facilities at Time 1 improving to 13.0% of facilities by Time 2; a 67.3% decline. Nearly a third (32.0%) reported progress every couple of weeks or more often by Time 2, up from 21.3% at Time 1.
- Only six percent of facilities never reported resident progress to nurses at Time 2, while 75.0% reported resident progress to nurses at least monthly by Time 2.

Table 8 shows the overall mean comparison of the 100 facilities that we examined at Time 1 and Time 2. Overall, they showed a 16% improvement in average communication scores; about nine percentage points. This change was also statistically significant.

Table 8. Overall Communication Score Mean Comparisons, Time 1 and Time 2

	Time 1	Time 2	Change (Percent)	
Minimum	28	44	57.1%	***t*= -8.26**
Maximum	82	82	0	***p* <0.0001**
Mean (*SD*)	55.2 (11.2)	64.1 (7.8)	16.1%	
N	100	100		

Table 9 provides a comparison of the facilities that completed Communication Surveys at all three periods. This group remained fairly constant from Time 2 to Time 3 with an overall mean score improvement of about eight points from Time 1 to Time 3. This change was also statistically significant.

Table 9. Overall Communication Score Mean Comparison, Time 1 to Time 3					
	Time 1	**Time 2**	**Time 3**	**Change T1 to T3(Percent)**	
Minimum	28	44	44	57.1%	***t*= -5.2**
Maximum	82	82	78	-5.1%	***p* <0.0001**
Mean (*SD*)	54.8 (11.5)	63.6 (8.3)	63.4 (8.7)	14.2%	
N				59	

The subset of facilities with data at all three time periods shows very similar scores to the larger group at Times 1 and Time 2 suggesting there is not a substantive difference between the facilities that did or did not provide data at the end of the project. Our findings also suggest that the highlighted changes we saw in the first year of the project continued until the project end. Unfortunately, despite a number of meaningful changes in communication practices, they did not result in an overall improvement in communication of 20%; the targeted outcome. However, the data do illustrate the extent to which the communications bar was raised with the lowest performer improving their communication practice score by 57%. The overall 14% improvement in average scores on communication practices is a positive outcome of the project.

The overall 14% improvement in average scores on communication practices is a positive outcome of the project.

Person-centered care

The Person-Centered Care Index (PCCI) was developed by the Scripps Gerontology Center. The tool was tested in 10 Ohio nursing homes and refined from 25 items to 16 based on the data collected from 100 STNAs in the initial test.[8] It is designed to be completed by STNAs and other direct care workers about the care they provide in their nursing home. The tested and revised tool was used in this study.

The ombudsmen liaisons set aside a day at each of their facilities to implement the PCCI. They made themselves available to distribute surveys, answer any questions, and collect the completed forms from staff at each of their nursing homes. All 124 enrolled nursing homes completed the PCCIs as one of their first intervention activities. Scripps analyzed the data from each home and provided individual facility reports that the ombudsmen and the facility staff could use to prioritize areas for improvement.

Data were also collected at the end of the intervention. Only 72 of the 114 remaining enrolled facilities participated; two of these were facilities that began late and didn't have initial PCCI data. Pre- and post-intervention comparisons are limited to the group of 70 facilities that provided data both times.

Pre-intervention data were collected from 2,474 participants with an average of 20 surveys per facility (*SD* = 6.9). In each facility, about 55.7% of the respondents were STNAs with the other positions including nurse supervisors (16.1%), DONs or ADONs (4.1%) and 23.9% other positions.

Post-intervention data were collected from 1,194 participants, an average of 16.6 surveys per facility (*SD* = 7.0). Over half (54.8%) of the participants were STNAs, followed by nurse supervisors (17.2%), DONs or ADONs (4.2%) and 23.8% other positions. Despite a much smaller number of participating facilities the composition of the participant pools are almost equivalent at both times.

Data were aggregated at the facility level, and overall facility scores were calculated as an average of all the items. Responses were scored 1 “always” to 4 “never,” with lower scores indicating a greater extent of person-centered practices. The second item was reverse scored since “never” was the most positive answer. Table 10 shows the PCCI item and overall scores for the entire group of facilities at Time 1 as well as the pre- and post-intervention scores for the group of facilities that provided data both times.

Table 10. Pre- and Post-Intervention Scores on the Person-Centered Care Index

PCCI Item	Pre-Intervention Mean All Enrollees (*SD*)	Pre-Intervention Mean for Time 1 and Time 2 group (*SD*)	Post-Intervention Mean for Time 1 and Time 2 Group (*SD*)
1. Do you have a good understanding of the residents you are caring for?	1.5 (0.2)	1.5 (0.2)	1.4 (0.2)***
2. Do you find it hard to talk to residents because you don’t know enough about them?	1.7 (0.3)	1.6 (0.2)	1.6 (0.3)
3. Do you feel like you know each resident as a unique individual?	1.7 (0.2)	1.7 (0.2)	1.6 (0.2)***
4. Are residents able to decide when they want to eat?	2.0 (0.4)	2.0 (0.4)	1.7 (0.4)***
5. Are residents able to decide how they want to bathe (e.g., tub, shower)?	1.8 (0.4)	1.8 (0.4)	1.6 (0.3)**

6. How often do you ask residents about how they want things done?	1.6 (0.3)	1.7 (0.3)	1.5 (0.2)***
7. How often do you participate in care planning for residents?	2.6 (0.4)	2.6 (0.4)	2.4 (0.4)*
8. Do you have the time you need to learn the histories of the residents?	2.6 (0.4)	2.6 (0.4)	2.3 (0.3)***
9. Do your supervisors consider your preferences when making decisions about resident care?	2.5 (0.4)	2.5 (0.4)	2.3 (0.4)**
10. How often do you share personal information you learn about residents that may help other staff members?	2.0 (0.3)	2.0 (0.3)	2.0 (0.4)
11. Are you able to calm residents if they become upset?	2.1 (0.2)	2.1 (0.2)	1.9 (0.2)***
12. Are residents able to make their own choices, even if it puts them at risk?	2.3 (0.3)	2.3 (0.4)	2.2 (0.4)*
13. Do you feel the residents have enough to do during the day?	2.5 (0.4)	2.6 (0.4)	2.4 (0.5)***
14. Do you have enough time to allow residents to do things for themselves?	2.3 (0.4)	2.4 (0.4)	2.1 (0.3)***
15. Do you know what the residents you care for like?	1.9 (0.3)	1.9 (0.2)	1.7 (0.2)***
16. Do you know residents' favorite foods?	2.4 (0.3)	2.4 (0.2)	2.2 (0.3)***
Overall Facility Average	2.1 (0.2)	2.1 (0.2)	1.9 (0.2)***
Total	***N* = 124**	***N* = 70**	***N* = 70**

All but two of the items—finding it hard to talk to the residents, and sharing information about residents with other staff—showed statistically significant improvements among the 70 facilities with comparison data. The items with the greatest improvement are also some of the items that still have relatively poor scores. That is, although large improvements were shown, there is still a great deal of room for improvement. Residents being able to decide when to eat, staff having time to learn the histories of the residents, having supervisors that consider their preferences when making care decisions, and having time to allow residents to do things for themselves showed the greatest improvements. The best scoring items are staff reporting that they have a good understanding of the residents they are caring for, followed by how often they ask residents about the way they want things done. Both of these practices would indicate a basis for providing good person-centered care based on knowing their residents.

All but two of the items—finding it hard to talk to the residents, and sharing information about residents with other staff—showed statistically significant improvements among the 70 facilities with comparison data.

Residents being able to decide when to eat, staff having time to learn the histories of the residents, having supervisors that consider their preferences when making care decisions, and having time to allow residents to do things for themselves showed the greatest improvements.

Ombudsmen input

A telephone discussion with the ombudsmen liaison group provides some final context for understanding the results of the project. First, the ombudsmen were asked to provide information about some of the successes that they had noticed. One of the big changes was related to on-boarding improvements and orientation as well as assigning mentors, both within the STNAs as well as management mentors. Another liaison also mentioned the connections built among facilities in these collaboratives. Despite competing for the same residents and staff, the nursing homes plan to continue their collaborations. They see value in working together to think about strategies to prevent some of the staff hopping from facility to facility within the same area.

One of the factors that was seen as essential for success was the support from the top down leadership. Facilities with stable and supportive management had better successes. Facilities also learned that involving direct care staff in problem-solving really made a difference.

Some facilities involved residents in activities related to staff retention, including involving them in interviews with new staff. Some facilities were also able to eliminate the use of agency staffing.

The ombudsmen were also able to provide some important insights about struggles and challenges. Several of the things that didn't work included exit interviews or "stay" interviews. Once employees had left—often on not very good terms—they did not answer or return calls. There was just no availability to be able to understand the circumstances that caused a departure.

Finally, someone suggested the importance of a staff member that is dedicated to the STNAs. Scheduling, educating, and really being a support person for the STNAs would be an important job at each facility as well as engaging the supervisory nurses in problem-solving. At many facilities the supervising floor nurses were not effective supervisors and didn't receive much education and support on how to improve their performance.

Another challenge is established staff being unaccepting of, or unwilling to work with, new staff members. New STNAs have an extra hurdle in those facilities and are often quick to leave.

Several mentioned the challenges of facility ownership changes. Some of the administrators began the project with expectations that changed due to resources that new owners were no longer willing to provide. It is also challenging for administrators to be proactive and put program changes in place when they were often responding to corporate pressures, the realities of managing a short-staffed facility and dealing with a changed survey process and increased facility deficiencies.

Suggested improvements for a similar intervention included a need to be flexible, particularly when engaging individual champions and facility teams. Preparing to work with multiple staff, rather than engaging one or two as program leads might be a reasonable expectation.

The liaisons also suggested surveying STNAs early in a project to get a feel for what was going on in the facility; one of the liaisons had used a staff survey that included items such as "when was the last time someone thanked you" in order to examine how managers and supervisors related to staff. Several others had used the staff surveys included in the National Nursing Home Campaign and suggested they be a required first step for participating facilities. They also appreciated the PCCI reports for the facilities and thought they should be implemented as early as possible to help prioritize areas for changes.

CONCLUSION

Our evaluation of the ODA Person-Centered Staff Engagement Project noted several substantial program successes as well as other areas where targeted outcomes were not achieved. The learning collaborative model with coaching from ombudsman liaisons appears to be an effective strategy with an 88% retention rate in participating facilities. Substantive and significant changes were shown among participating facilities in their communication and person-centered care practices. Unfortunately target outcomes for reductions in verified complaints and survey citations were not met.

Changes in the survey process during the time of the intervention made our survey citation data unreliable from pre- to post-intervention. Verified complaints also decreased for all nursing homes during the intervention; the decrease for our participating facilities was part of that larger trend and cannot be attributed to this program.

It is likely that changes in staff communication and person-centered care do not occur at once, and do not impact the entire organization in ways that can be captured by deficiency or complaint counts. For example, changes in staff and care practices do not affect food temperatures or the cleanliness of one's room; both of these areas are captured in the complaints and citations.

The extent to which our participants experienced management turnover may have also had an impact on overall facility deficiencies, or may have occurred as a result of such. Because we don't have similar turnover data for our comparison group, we are not able to determine the extent to which that turnover impacted the success of this project.

Despite challenges, the ombudsmen felt that this intervention made real substantive changes in a large number of Ohio nursing homes. Our data support that finding. We suggest a longer time period for measuring deficiencies and complaints (i.e., a full year after program completion), coupled with some more specifically targeted outcomes such as declines in resident rights deficiencies, or complaints related to staff attitudes might distinguish program participants from other facilities in a statistically significant way. However, our data on person-centered care and communication illustrate the substantive ways in which this program successfully impacted the participating facilities.

APPENDIX A

COMMUNICATION INFRASTRUCTURE SURVEY

1. How quickly after a new resident's admission are his/her customary routines for sleeping, waking, bathing, and eating provided to the certified nursing assistant (CNA) assigned to care for the resident?
    - o (1) <4 hours
    - o (2) ≥4 hours, but the same day of the resident's arrival
    - o (3) Next day
    - o (4) 2-3 days
    - o (5) >3 days
    - o (6) This information is not provided to the CNA

2. How quickly after a new resident's admission are his/her customary routines for sleeping, waking, bathing, and eating provided to the nurse assigned to care for the resident?
    - o (1) <4 hours
    - o (2) ≥4 hours, but the same day as the resident's arrival
    - o (3) Next day
    - o (4) 2-3 days
    - o (5) >3 days
    - o (6) This information is not provided to the nurse

3. How quickly after a new resident's admission is his/her social history provided to the CNA assigned to care for him/her?
    - o (1) <4 hours
    - o (2) ≥4 hours, but the same day as the resident's arrival
    - o (3) Next day
    - o (4) 2-3 days
    - o (5) >3 days
    - o (6) This information is not provided to the CNA

4. How quickly after a new resident's admission is his/her social history provided to the nurse assigned to care for him/her?
    - o (1) <4 hours
    - o (2) ≥4 hours, but the same day as the resident's arrival
    - o (3) Next day
    - o (4) 2-3 days
    - o (5) >3 days
    - o (6) This information is not provided to the nurse

5. A. What percentage of CNAs are consistently assigned to work with the same residents every time they come to work?

    By "consistent assignment" for CNAs, we mean that CNAs are given the same residents to care for every time they work.

    - o (1) 0%
    - o (2) 1-25%
    - o (3) 26-50%
    - o (4) 51-75%
    - o (5) 76-100%

    B. If there are times when consistently assigned CNAs are pulled to another assignment, how often does that occur:

        1. Never
        2. Occasionally
        3. At least once per month
        4. More frequently than once per month but less often than once per week
        5. More frequently than once per week

6. A. What percentage of nurses are consistently assigned to work with the same residents every time they come to work?

   By “consistent assignment” for nurses, we mean that nurses are given the same residents to care for every time they work.

   - o (1) 0%
   - o (2) 1-25%
   - o (3) 26-50%
   - o (4) 51-75%
   - o (5) 76-100%

   B. If there are times when consistently assigned nurses are pulled to another assignment, how often does that occur:

      1. Never
      2. Occasionally
      3. At least once per month
      4. More frequently than once per month but less often than once per week
      5. More frequently than once per week

7. How often do CNAs participate in care plan meetings?

   - o (1) Never
   - o (2) Rarely
   - o (3) Sometimes
   - o (4) Most of the time
   - o (5) Always

8. How often do nurses providing direct care participate in care plan meetings?
   - o (1) Never
   - o (2) Rarely
   - o (3) Sometimes
   - o (4) Most of the time
   - o (5) Always

9. How often do CNAs and nurses participate together in a daily huddle during their shifts?

   By “huddle,” we mean quick group meetings, often standing, to share and discuss important information and problem-solve together. By “daily” we mean at least once per shift.

   1. Never
   2. Occasionally
   3. At least once per week
   4. A few times per week on some shifts and some units: explain _____
   5. Every day on some shifts and some units: explain _____
   6. Every day on every shift and every unit

10. How often does management huddle together with staff?

    By “huddle,” we mean quick group meetings, often standing, to share and discuss important information and problem-solve together. By management, we mean the Administrator and/or DON. By staff, we mean CNAs and nurses providing care.

    - o (1) Never
    - o (2) Once a week or less often
    - o (3) More frequently than once a week, but less than daily: How often? On average, _____days per week.
    - o (4) Daily / 7 days per week

11. How often do any of your quality assurance (QA) committees huddle to discuss resident issues with the CNAs and nurses who are caring for them?

    By “huddle,” we mean quick group meetings to share and discuss important information and problem solve together.

    - o (1) Never
    - o (2) Annually
    - o (3) Quarterly
    - o (4) Monthly
    - o (5) Every couple of weeks
    - o (6) Once a week or more frequently: How often? On average, _____days per week.

12. How often does the management team review CASPER data?

    By “management team,” we mean the Administrator and/or Director of Nursing.

    - o (1) Never
    - o (2) Annually
    - o (3) Quarterly
    - o (4) Monthly
    - o (5) Every couple of weeks
    - o (6) Once a week or more frequently than once a week: How often? On average, _____days per week.

13. How often does the DON communicate progress with quality measures with the CNAs who work with the residents targeted for improvement?

    - o (1) Never
    - o (2) Annually
    - o (3) Quarterly
    - o (4) Monthly
    - o (5) Every couple of weeks
    - o (6) Once a week or more frequently than once a week: How often? On average, _____days per week.

14. How often does the Director of Nursing communicate progress with quality measures with the nurses who work with the residents targeted for improvement?
    - o (1) Never
    - o (2) Annually
    - o (3) Quarterly
    - o (4) Monthly
    - o (5) Every couple of weeks
    - o (6) Once a week or more frequently than once a week: How often? On average, _____days per week.

PERSON-CENTERED CARE INDEX

Person-Centered Care Index

Instructions - Use a dark-colored ink; please do not use pencil. If you make a mistake, cross out the incorrect answer and check the correct one. *Please do not fold your survey*

Correct: ☑

If you make a mistake: ☒

Q1 **Facility Name - PLEASE PRINT IN ALL CAPS**

Q2 **What is your position?**

- *STNA* ☐
- *Nurse Supervisor* ☐
- *DON or ADON* ☐
- *Other* ☐

Q3 **For each item below, check the box in the column that most closely describes your opinion about the care you provide, or the overall care in this facility.**

	Always	*Often*	*Occasionally*	*Never*
1. Do you have a good understanding of the residents you are caring for?	☐	☐	☐	☐
2. Do you find it hard to talk to residents because you don't know enough about them?	☐	☐	☐	☐
3. Do you feel like you know each resident as a unique individual?	☐	☐	☐	☐
4. Are residents able to decide when they want to eat?	☐	☐	☐	☐
5. Are residents able to decide how they want to bathe (e.g. tub, shower)?	☐	☐	☐	☐
6. How often do you ask residents about how they want things done?	☐	☐	☐	☐
7. How often do you participate in care planning for residents?	☐	☐	☐	☐
8. Do you have the time you need to learn the histories of the residents?	☐	☐	☐	☐
9. Do your supervisors consider your preferences when making decisions about resident care?	☐	☐	☐	☐
10. How often do you share personal information you learn about residents that may help other staff members?	☐	☐	☐	☐
11. Are you able to calm residents if they become upset?	☐	☐	☐	☐
12. Are residents able to make their own choices, even if it puts them at risk?	☐	☐	☐	☐
13. Do you feel the residents have enough to do during the day?	☐	☐	☐	☐
14. Do you have enough time to allow residents to do things for themselves?	☐	☐	☐	☐
15. Do you know what the residents you care for like?	☐	☐	☐	☐
16. Do you know residents' favorite foods?	☐	☐	☐	☐

APPENDIX B

COMMUNICATION INFRASTRUCTURE DETAILED REPORT

Time 1 and Time 2

Communication Infrastructure Surveys were completed by facilities at the beginning of the project (Time 1), after one year of the intervention (Time 2), and at the end (Time 3). About 100 facilities provided data at Time 1 and Time 2, while only 66 facilities provided data at all three points. In order to show the impact on the largest number of facilities, the analyses in this Appendix use data from Time 1 and Time 2. Because our data coincidentally has about 100 facilities answering each question, our reports of changes in percentage points can be thought of as corresponding to changes in the number of facilities. For example, a 19 percentage point increase indicates that approximately 19 facilities changed their practice from Time 1 to Time 2.

A comparison of the Time 1 baseline and Time 2 Communication Infrastructure Survey results shows substantial differences after about one year of the intervention. The proportion of facilities providing information about routines to state-tested nurse aides (STNAs) and nurses in less than four hours increased by around 10 percentage points, while the proportion providing social histories in less than four hours increased by three percentage points. Nearly a third of facilities (38.2%) did not provide social history information to their STNAs[iii] at baseline, at Time 2 this number had declined to 10.2 percent. For nurses the proportion declined from 19.3 to 5.1. The proportion of facilities taking longer than three days to provide information declined across all categories of information. Our results suggest that facilities made substantial changes in the type and timeliness of communicating resident information.

[iii] Although Ohio refers to nurse aides as State-Tested Nurse Aides, STNAs, the survey items used the terminology of CNA or certified nurse aide.

Table B1. Proportion of Facilities Providing Resident Information to Nurses and STNAs								
Response	**Customary Routines to STNA**		**Customary Routines to Nurse**		**Social History to STNA**		**Social History to Nurse**	
	Time 1	**Time 2**	**Time 1**	**Time 2**	**Time 1**	**Time 2**	**Time 1**	**Time 2**
<4 hours	23.1	39.8	44.3	54.1	9.0	13.3	19.3	21.4
≥4 hours, but the same day as resident's arrival	26.4	31.6	25.0	24.5	10.2	21.4	19.3	20.4
Next day	18.7	19.4	6.8	13.3	11.2	23.5	11.4	22.5
2-3 days	16.5	8.2	10.2	8.2	18.0	21.4	19.3	22.5
>3 days	8.8	1.0	10.2	0.0	13.5	10.2	11.4	8.2
This information is not provided	6.6	0.0	3.4	0.0	38.2	10.2	19.3	5.1
Total	***N* = 91**	***N* = 98**	***N*= 89**	***N*= 98**	***N* = 88**	***N* = 98**	***N* = 89**	***N* = 98**

Changes in consistent assignment of nurses and STNAs showed disparate results. While an increase was shown in the proportion of facilities reporting 76-100% of their STNAs or nurses were consistently assigned an increase was also shown in the percentage of facilities reporting 1-25% of their aides were consistently assigned (See Table B2).

Table B2. Percentage of Facilities Reporting Extent of Consistent Assignment of STNAs and Nurses				
Response	**STNAs Consistently Assigned to Work with Same Residents**		**Nurses Consistently Assigned to Work with Same Residents**	
	Time 1	**Time 2**	**Time 1**	**Time 2**
0%	0.0	0.0	0.0	0.0
1-25%	0.0	4.0	1.0	5.0
26-50%	16.3	6.0	4.1	4.0
51-75%	29.6	27.0	22.4	14.0
76-100%	53.9	63.0	73.3	77.0
Total	***N* = 98**	***N* = 100**	***N* = 98**	***N* = 100**

Reassignment of consistently working staff shows mixed results among STNAs and nurses. The proportion of facilities reporting reassignment of consistently working

STNAs occasionally or never shows an increase, while reassignment more frequently than once per week shows a decline at Time 2. The percentage of facilities reporting reassignment among nurses shows very small changes across all categories.

Table B3. Proportion of Facilities Reporting the Frequency of Staff Reassignment

Response	Reassigning Consistently Working STNA		Reassigning Consistently Working Nurses	
	Time 1	Time 2	Time 1	Time 2
Never	1.1	2.0	1.1	6.0
Occasionally	38.6	48.0	61.4	58.0
At least once per month	12.5	12.2	8.0	12.0
More frequently than once per month but less often than once per week	36.4	31.6	23.9	20.0
More frequently than once per week	11.4	6.1	5.7	4.0
Total	***N* = 100**	***N=100***	***N* = 100**	***N* = 100**

Participation in care plan meetings shows improvements among both STNAs and direct care nurses. The percentage of facilities having STNAs (38.0%) and direct care nurses (43.3%) never or rarely participate in care plan meetings both decreased at Time 2. Most encouragingly, the proportion of facilities reporting their STNAs participate in care plan meetings most of the time increased by 19 percentage points—an 86% increase—while the increase in the proportion of facilities reporting participation in care plan meetings among nurses clusters at sometimes (9.2%) and always (11.7%).

Table B4. Proportion of Facilities Reporting Frequency of Nurse and STNAs in Care Plan Meetings

Response	STNAs Participate in Care Plan Meetings		Direct Care Nurses Participate in Care Plan Meetings	
	Time 1	Time 2	Time 1	Time 2
Never	15.4	4.0	15.5	4.0
Rarely	22.6	14.0	27.8	11.0
Sometimes	25.7	26.0	30.8	40.0
Most of the time	22.6	42.0	13.3	21.0
Always	13.3	14.0	12.3	24.0
Total	***N* = 97**	***N* = 100**	***N* = 97**	***N* = 100**

As shown in Table B5, nurses and STNAs participated in daily huddles much more frequently at Time 2. The proportion of facilities reporting nurses and STNAs have daily huddles occasionally or never declined by about 20 percentage points. In addition, the proportion of facilities reporting nurses and STNAs have daily huddles at least every day on some shifts increased by 21 percentage points, a 49% increase.

Table B5. Proportion of Facilities Reporting Nurses and STNAs Participate in Daily Huddles

Response	Nurses and STNAs have Daily Huddles	
	Time 1	Time 2
Never	19.6	4.0
Occasionally	21.6	17.2
At least once per month	6.1	8.1
A few times per week on some shifts and some units	9.2	6.1
Every day on some shifts and some units	21.6	27.3
Every day on every shift and every unit	21.6	37.4
Total	***N* = 97**	***N* = 99**

Participation of management in huddles with staff also significantly improved at Time 2. As shown in Table B6, among these 100 facilities, no facility reports management never participates in huddles with staff. At Time 2, three fourths of facilities reported that management participate huddles with staff more frequently than once a week, but less than daily, or every day, this proportion increased by about 15 percentage points compared to Time 1.

Table B6. Frequency That Management Participates in Huddles with Staff at Time 1 and Time 2

Response	Mgt. Participates in Huddle with Staff	
	Time 1	Time 2
Never	17.5	0.0
Once a week or less often	22.6	25.0
More frequently than once a week, but less than daily	38.1	47.0
Daily/7 days per week	21.6	28.0
Total	***N* = 97**	***N* = 100**

Frequency of review and communication regarding quality issues also showed large improvements at Time 2. No facility reports management never reviews CASPER data (See Table B7). The proportion of facilities with management review of CASPER data every couple of weeks or more frequently increased by almost 10 percentage points. At Time 1, a substantial proportion of facilities never had QA staff huddle with direct care workers, or communicate resident progress to STNAs or nurses. By Time 2, practices had changed in a majority of facilities. In addition, the proportion of facilities reporting committee members huddle to discuss resident issues with nurses and STNAs increased by 19 percentage points. The proportion of facilities reporting DON communication of progress with STNAs and nurses about resident's improvement showed increases while facilities reporting DONs never communicates progress with STNA and nurses also decreased.

Table B7. Frequency of Quality Reviews and Communications

Response	Mgt. Team Reviews CASPER Data		Any of QA Committees Huddle to Discuss Resident Issues with Nurses and STNAs		DON Communicates Progress with STNA about Resident's Improvement		DON Communicates Progress with Nurses about Resident's Improvement	
	Time 1	**Time 2**	**Time 1**	**Time 2**	**Time 1**	**Time 2**	**Time 1**	**Time 2**
Never	2.1	0.0	30.9	13.0	34.7	10.0	19.4	6.0
Annually	2.1	3.1	5.2	2.0	5.0	3.0	0.0	4.0
Quarterly	24.6	18.4	15.4	15.0	16.2	18.0	23.3	15.0
Monthly	51.1	49.0	23.7	29.0	22.4	37.0	29.6	37.0
Every couple of weeks	2.1	11.2	7.1	13.0	9.1	17.0	10.2	19.0
Once a week or more frequently than once a week	18.1	18.4	17.5	28.0	12.2	15.0	17.3	19.0
Total	***N* = 94**	***N* = 98**	***N*= 98**	***N*= 100**	***N* = 98**	***N* = 100**	***N* = 98**	***N* = 100**

As shown in the detailed results above, large substantive increases were made in many facilities regarding many of their communication practices, both in type (e.g., huddles) and in content (e.g., social histories, resident progress). These foundational communication practices hold the promise of improved staff engagement and empowerment by being included and informed. They also provide the potential for improved quality of life and quality care as more staff know more about the residents to whom they are assigned.

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