

# Civil Monetary Penalty Reinvestment Reporting Tool

Please select the report type or types you are submitting for this reporting period. Questions associated with each report type will appear. Please answer each question and/or upload the appropriate documents associated with each question.

Please note that the "Program Expense Report" is included in your contract as Attachment 4 or Attachment 5, depending on when your contract was established. Please reference the CMP Reinvestment Program Instruction Packet if you have any questions related to reporting requirements.

Thank you!

Response was added on 04/27/2021 9:52am.

Please select the type of report you are submitting. Select all that apply.

- Quarterly Narrative Report
- Quarterly Expense and Budget Report (Expenditure Form)
- Annual Expense and Budget Report
- Follow-up Monitoring Report
- Final Progress Report

Reporting Period: November 1, 2019-October 31, 2020 (Example: January 1, 2019-March 31, 2019)

CMS Project Number 2019-04-TN-0403 (This number can be found on your CMS approval letter.)

TDH Contract Number 34305-24620 (This number can be found on the first page (bottom right hand corner) of your TDH contract.)

Project Name Implementing a Preference-Based, Person-Centered Communication Tool in Tennessee. (Please enter your specific project name. Do not enter "CMP".)

Project Contact Name Katherine Abbott

Project Contact Email abbottkm@miamioh.edu

If any agreements or subcontracts were developed to ensure completion of project activities, please attach.

Total number of staff trained during the entire duration of the project (If applicable): 103 (Only enter a numerical value)

- Project Category:
- Direct Improvement to Quality of Care
  - Resident or Family Councils
  - Culture Change/Quality of Life
  - Consumer Information
  - Transition Preparation
  - Training
  - Resident Transition due to Facility Closure or Downsizing
  - Other

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Focus area(s):

- Healthcare-Associated Infections
- Emergency Preparedness
- Preventable Hospitalizations
- Improving nursing facilities' overall star rating
- Residents' Rights (Elder Abuse/Neglect or Alzheimer's disease and other dementias)
- Person-Centered Care and/or Trauma-Informed Care
- Distressed and At-Risk Counties
- Quality Measures
- Culture Change
- Other

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Total approximate number of nursing home residents impacted throughout the duration of the project:

95  
(Total number impacted for all reporting periods )

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Total number of nursing homes impacted throughout the duration of the project:

15  
(Total number impacted for all reporting periods)

What success stories have resulted from the project and how do you plan to showcase successes with stakeholders?

Throughout the project, we were able to connect regularly with participating providers. We gained valuable insight into how the project fit into their day-to-day routines as well as barriers and facilitators that the providers faced, especially since the project was launched during the start of the COVID-19 pandemic. Throughout the monthly calls, providers demonstrated knowledge about the project and its importance to providing person-centered care.

Below are statements from providers regarding their understanding of the project:

- "I in-serviced about six CNAs who are on the hallway that we're targeting. And out of the six CNAs, all of them were very interested. And what I did was I took a person. [looking through a stack of PAL cards]...I chose a PAL card out of my stack of laminated cards. And it happened to be a resident we all know. And without showing them her name, I started giving her bio. And the bio is 'I'm one of 11 children, but only my brother and I remain'. I said, 'so when you're hearing that, what are you thinking about this person?' And one girl chimed in, 'She had a houseful of people.' And I said, 'Right. ... what else, what other clues does that give you?' 'Well, she likes to talk or she likes to be spoken to or she likes to be around people because she grew up with a lot of people.' 'That's right. So when she's in an isolated room hitting her call bell eight times an hour to go to the bathroom. What is she really saying when she's hitting that call bell? Will you talk with me? Will you give me some time, and give me some attention?'. The PAL cards are going to help us give clues or cues on how to meet their needs in a more personal level."

- "I think that when you get down and you talk to and you interview your residents, it gives you a little insight into who they were before. And ... it's a very personal type of interview. And it's relaxed, and they open up. And, you know, each person has a story. And I think it's nice to take time to discover that story. And I thought it was, you know, very enlightening, and I enjoyed it. And just...it was as rewarding to me as I think it was to them."

Although some providers asked to put the project on hold due to COVID-19, several providers acknowledged the benefit that PAL Cards can have in times of isolation, quarantine, and other COVID restrictions.

- "We know we're using this particular wing as our isolation unit. So with that said, the department or the director of nurses said we're going to be...on the frontlines along with the activities, the nursing, the CNAs and all those who give direct care. So we're going to come from behind our desks when we have to and pass trays and feed people. And I think this is the best time to have the [PAL] cards present. So I'm going to appeal to [my supervisor]. So when this day comes and we have another opportunity to have a meeting that says, hey, we're going to be on the front lines, so we're going to be passing trays and we're going to spend time with the residents and visit door to door - use the PAL card. Use the talking points that are offered."

- COVID-19 helped us in this way, which

sounds strange. ... in March, we stopped the visitation from our family. And we essentially stopped grouping for activities. So the activities director and the social worker... had to go into the room and provide that one on one support.... But incorporating [PAL Cards] became easier because it gave us an activity to be completed during that one on one visit."

While the main goal of the PAL card is to communicate resident's preference to their care staff, there were additional benefits that project champions mentioned. Some of these benefits include:

- "I really feel like the therapists specifically are the ones who have shared with me, how they really enjoy them [PAL Cards] ... I'm thinking of one lady in particular ...When this particular therapist is in her room and talking with her and using the things from the card, they're able to communicate. Otherwise, this woman can be very negative and critical and resistant to therapy care."
- "So there was one of the other residents reading the PELI PAL [card]. And she struck up a conversation. Now, this is a little challenging because we're trying to keep everybody in their doorways and six feet apart is not always easy. But she struck up a conversation with the lady who lives across the hall from her. And now they've had an interesting friendship as a result of being able to connect. They knew the towns that they each grew up in. They had similar interests in the outdoors, planting, gardening, that kind of thing. They had interests in the same religious backgrounds. So they found a way to communicate because the PELI PAL [Cards] were outside in the hallway. And that was interesting."

Even though this project was implemented in the midst of a global pandemic, several providers found ways to engage their staff and residents:

- Several strategies to improve engagement among staff members were to facilitate a scavenger hunt, post PAL cards on a bulletin board, or integrate the PAL card project into regular QAPI meetings.
- The following is an example of how the PAL Cards helped staff and resident engagement during a time of isolation:
  - o "When [residents are] in isolation, we restrict to a central staff only. But what we're able to do is use these cards and create kits that can be placed in the room by the direct care staff so they're able to look at the card, look at if they're... Let's say the activity component. What do you like to do when you're by yourself? What do you like to reminisce about? We create little plastic bins with all of that in there that can go to the room, doesn't have to come back out, and that can be there for that resident that matches their preferences on the card. As the activities personnel can't come in, we can still look at the card and get a really good idea. Or even the interview if it didn't make it to the card. We go back to our interview process, we'll get that and create a bin or a bag that can go in the room that has things they enjoy. But we can still give staff tools to talk to that resident when they're in there. They'd like to talk about their dog, Pete, that they had forever and a day. Even though they're isolated, we're still meeting that need that socialization needs and we're doing it in a

way that is something they want to talk about."

The successes we saw throughout the project was showcased to stakeholders through presentations, conferences, and posters. These include:

- Corpora, M., Kelley, M., Kasler, K., Cinfio, B., Heppner, A., & Abbott, K. "Observing a Human Zoo": Implementation of a Person-Centered Care Intervention in a Global Pandemic" Miami University Graduate Research Forum, Oct. 30, 2020. Recording can be accessed via this link: <https://www.youtube.com/watch?v=QfAEjqSOvRE&feature=youtu.be>
- Abbott, K., Heppner, A., Hermes, A., Kasler, K., Cinfio, B., Burshnic, V., Poth, S., Corpora, M., Kelley, M., & VanHaitsma, K. "Build that relationship, that's where it all begins": Staff perceptions on the implementation of a person-centered communication intervention. Academy Health 13th Annual Conference on the Science of Dissemination and Implementation in Health, Dec 15-17, 2020. Virtual.
- Abbott, K., Heppner, A., Corpora, M., Kelley, M., Kasler, K., Cinfio, B., Van Haitsma, K. "It's worth the time and energy': Nursing Home Provider Perspectives on Implementing a Person-Centered Communication Intervention During a Global Pandemic. The Society for Post-Acute and Long-Term Care Medicine (AMDA) PALTC21 Virtual Annual Conference March 10, 2021.
- We are presenting "Utilizing Care Preference Assessment of Satisfaction (COMPASS-16): A new, interactive tool to facilitate person-centered care" at the annual Ohio Association of Gerontology and Education (OAGE) Conference on April 14, 2021.

Please provide any feedback that has been received from staff, family, or residents as a result of the project.

Throughout the project, we received feedback from our provider champions. Some of their direct quotes include the following.

- "I'm so proud of the result and reaction of the residents. A lot of the residents felt very proud to see their life story written down. I love the fact that residents got to share it with residents and family members got to share it with their loved ones. Those things are very rewarding."
- "I think it's [PAL Cards] an excellent way for staff to feel closer to the residents. It's a good conversation starter, I think it will definitely positively impact the residents and the staff."
- "I think the PAL cards were very useful, ...any information that you can give to somebody who's not as familiar with that patient is a good thing. Or something that really makes them happy, something that they enjoy, like, if they're isolated, if you looked on their car and found out that they really enjoyed, you know, gospel music, and you could find some way of playing that for them. I think it would help."
- "[Residents] have enjoyed ... doing that life review during the bio and developing that, because we didn't just go based on the documented social history. We let them kind of delve into that some. What do you want on your card? We enjoy that we started with the higher BIMS scores because they could say, 'Well, this is what I would want the staff to know about me.' And like I said, that bio component is just fantastic for that."
- "It's just very beneficial when you have [staff] who have never been [with the residents]. They don't know the residents, the residents don't know them. It gives them a starting point. And it gives them a reference to the likes and dislikes, a little background on the patient. I think it was a very good thing."
- "I was very passionate about the PELI PAL card project. I'm very passionate about our residents and very passionate about their families and building community here. I really do feel that the PELI PAL card program was an asset to building community."
- "But the administrator, she thinks that it's great. She really loved our old process that we were doing, the 'getting to know me'. But she also thinks that this [the PAL Cards] will be more successful than 'getting to know me' because with the old process, it went into a folder and nobody ever looked at it unless somebody was bored and just trying to kill time. Nobody really read up. We feel like the PAL Cards will be more accessible."
- "I've gotten some really positive family feedback. One woman in particular is nonverbal. She says some nonsensical things, but she was a professor. And another woman worked at the Pentagon. And we're not able to understand her story either. So the family was excited to be able to share things that their loved ones no longer can, you know, and how my daughter in law was very brilliant. And she flew to Germany more than 15 different occasions. And she studied with, you know, such and such and all these amazing things that she had done. I don't realize these things, and of course, I think, wow, that happened back then. I didn't know I never would have known. You

know, these people had such a valuable impact in our lives. They've affected our lives."

- "I actually had a family member go to a social worker when they were having their care conference...she was so pleased, and she was so thankful for the company taking this extra step of loving kindness...the social worker said, hey, I have to stop you and tell you that this person was so pleased."

- "[A resident's family] said that they thought it was going to be a really good idea. They thought that it was really helpful. Especially because one family member in particular that we called, his brother, he's very sweet but he is very set in his ways and there is things that he thinks needs to happen a certain way and he can get kind of feisty. They thought that it would help with his routine and whatnot."

- "Most of [the residents] loved it. Like I had one that burst into tears. And she's like, "You know me." And it was really cool. It made me so happy."

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Please attach any materials, meeting minutes, or attendee lists that have resulted from the project. Examples: toolkits, process documents, training materials, marketing materials, photos, etc.

[FILE: TN PAL Card Project Training.pdf]

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Do you have additional materials to upload?

Yes  
 No

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Please upload any additional materials.

[FILE: TN CMP Recruitment Flyer\_Final Nov 1.pdf]

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Please upload any additional materials.

[FILE: TN PAL Card Recruitment Email.pdf]

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What do you consider to be the greatest impact(s) of the work performed utilizing CMP funds?

We were able to create and launch the PAL Card editor feature for the CompPASS application. Moving forward, NH providers will be able to use CompPASS to conduct the PELI interview but also to create the PAL Cards.

Throughout the pandemic, we were unable to physically meet with providers and talk about how the project is going. To compensate for not physically going and meeting with providers, we utilized virtual coaching. We realized that our virtual coaching was a huge benefit because it allowed us to increase the scope/scale of our program.

Finally, we were able to teach TN providers QAPI principles so that they can integrate what they used into their daily routine. Additionally, we helped encourage providers to integrate the PELI into their new or existing QAPI activities.

What best practices resulted from the project and how can other facilities or other organizations duplicate the project?

There were several practices that resulted from this project that will help future organizations in implementing this project. The first practice is virtual coaching. Virtual coaching has allowed us to reach providers wherever they are. We no longer have to physically go to each and every organization to get progress reports or to touch base. We plan to utilize virtual coaching even after the pandemic restrictions are lifted.

Another best practice that resulted from this project was the creation of several tip sheets. After hearing feedback from providers, we realized there was a need for additional resource(s) to help the providers implement the project. At the beginning of the project we learned that several providers were concerned about following HIPAA privacy requirements while creating the PAL Cards for their residents. The tip sheet was helpful in creating PAL Cards that are HIPAA compliant. For example, we specified that protected health information (PHI) such as birth dates should not be included on the PAL Card. Another tip sheet that we developed was specifically about how to provide activities when there is a need to quarantine residents.

All of the resources providers used are available on our website (<https://www.preferencebasedliving.com/>). These resources allow providers to implement PAL Cards in their own organizations. Some of the resources specifically for providers include how to get started with the PELI, how to conduct PELI interviews, how to engage with staff and family, options of PELI questionnaires, how to integrate the PELI and preferences into care plans, how to integrate PELI into QAPI programs, and resources around communicating effectively while wearing a face mask.

Finally, we launched ComPASS with the PAL Card editor with the support of our partner Linked Senior. ComPASS is another resource for providers to use because it is a web-based application that allows providers to conduct PELI interviews for their residents, create PAL Cards, and view data about how/if preferences are being met throughout the organization. ComPASS can be accessed at this link <https://compass.linkedsenior.com/>



What activities have occurred to ensure sustainability since the completion of the project?

ComPASS was launched as a partnership with Linked Senior. This web-based application is available to all providers in the U.S. and Canada at no cost. The resources outlined in the previous question are up on our website at no cost and can be accessed at any time for providers to use.

Finally, several providers verbally committed to continuing the project during our final virtual coaching session:

- "We are going to continue to do it once our residents like transition from the quarantine to long-term care. I think I'm going to continue to keep doing it."
- "I think going forward, I'm going to do some things differently. But I am going to train my new hire to continue to work on the PELI PAL cards and to use them."
- "Oh, yeah, we'll continue [to make PAL Cards]."

One provider integrated the tasks into several job descriptions to promote sustainability:

- "We actually put this in our social service job description. And, yes, this is actually in the job description now; part of their job. And it is also in the MDS coordinator, because you have your preferences for your customary routine and activities in the care planning process. And that can be expanded on through PELI. So we were looking at Section F, ... you have those questions that then you could go to kind of your important and non-important preference interview. we [included preference] form that's to be completed during admission, under this social service component, once again, that's where we found the most success in that first seven days. And we really want to get to know that early on, because there's so much you can prevent in the first 30. So, we actually had this now in that admission process that are the Social Work component."

Describe any plans for moving forward and what, if anything, you will do differently.

Moving forward we plan to allot more time for providers to implement PAL Cards because of COVID-19. Several providers during this project expressed how they didn't have the time to focus on implementing a new intervention because of COVID restrictions, illnesses, or other barriers. We have decided to move from a 6-month time frame to a 12 month time frame in working with providers who seek to implement PAL Cards. We launched another PAL Card QIP during fall 2020 and are currently working with 18 providers across 5 states.

Please list the major goals and objectives of the project and answer the following questions for each:  
 -Did you meet the outlined goal or objective? Why or why not? Please provide a detailed response.  
 -What impact did your activities targeted at meeting the outlined goal or objective had on nursing home residents in the facility or facilities?

The major goals and objectives of this project include: recruiting providers, training providers, evaluating the training, creating PAL Card module in ComPASS-16, making telephone help line available to providers, supporting providers to create and place PAL Cards, conducting evaluations of the ComPASS-16 application, collecting implementation data from providers, and evaluating PAL Card implementation/outcomes. To date all of the major objectives have been completed.

Recruiting providers: We sent a recruitment email to 611 individuals. (Email addresses obtained via Eden Alternative contact and community websites). Contacted 142 communities via contact forms on their website. Called 129 communities within a 3-hour drive from Tennessee Technological University (TTU) in Cookeville. We successfully recruited 15 providers to participate in the project.

Training providers: 13 of the 15 providers that were recruited participated in our February 2020 training which included an online virtual training session. In the virtual training session, providers learned what the PAL Cards are, how they can benefit the community, and the implementation process. At least one staff member from each community attended the training.

Evaluating the training: Post-training evaluations were completed by n=18 participants across n=13 provider communities. Overall, the majority of participants (n=17) were either very or extremely confident in their ability to conduct PELI interviews with residents, identify residents' important preferences, and create PAL Cards. Only n=1 participant was not at all confident in his/her ability to create a PAL Card after the training. In addition, all participants reported that the amount of information given during the training was just right, as opposed to not enough or too much. Finally, n=14 participants reported the quality of the training as excellent and n=4 reported it as good. An additional n=12 people attended the training as part of a group but did not complete the evaluation

PAL Card Editor integrated into ComPASS: Our TTU colleagues successfully integrated the PAL Card editor software into ComPASS. ComPASS was launched and continues to be available at no cost to providers via this link

<https://compass.linkedsenior.com/>

Telephone helpline: We offered a helpline available for providers to support their implementation efforts throughout the project.

Supporting providers to create and place PAL cards: We provided monthly coaching calls to participants to receive progress updates, help problem-solve, and offer guidance. Calls were scheduled at the participant's convenience. The project manager also shared successful strategies and tips learned from other communities.

Our TTU partner successfully created and evaluated the PAL Card Editor feature for ComPASS. ComPASS is available to providers at no charge at this link

Evaluating the PAL Card implementation/outcomes: Collecting implementation/outcome data from providers: We provided data collection forms to the providers so that we could gain information about who did the PELI interviews, how long they took, if

residents participated in the interview, how long it took to create the PAL Card, if residents reviewed and approved of their card, if family members were involved, where the PAL Cards were placed, and how long they remained in place. Additionally, we gave providers staff feedback forms to gain understanding if other staff members saw the PAL Cards and if they used them to provide care.

Please list any project deliverables that are outlined in the project description and answer the following for each:

-Did you meet the project deliverable? Why or why not? Please provide a detailed response.

-What impact did your activities targeted at achieving the project deliverable have on nursing home residents in the facility or facilities?

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Results Measurement(s): Please indicate what measurement methods you utilized to track progress and project success. Please provide a summary of measurable project results.

Fifteen providers were initially recruited to participate in this project. Thirteen provider communities completed the training and the post-training evaluations. From the post-training evaluations completed by 18 individuals, most (n=17) felt either very confident or extremely confident in implementing this project in their own community. Additionally, all participants felt that the training materials given were the right amount to move forward with implementation.

We supported 7 providers in creating and placing 90 PAL Cards. During implementation, each project champion recorded implementation data such as who assisted with the project, time spent interviewing residents and creating PAL Cards, where the card is placed, and whether or not the card remains in place. A summary of our results are listed below.

- It took providers on average 36 minutes (SD=15) to complete an 8-item interview, 56 minutes (SD=49) for a custom interview, and 72 minutes (SD=36) for the 33-item interview.

- It took providers on average 24 minutes (SD=8) to create the PAL Cards via the word template.

- The locations of the PAL Cards varied:

- o 19 were placed on resident wheelchairs
- o 2 were placed on resident walkers
- o 7 were placed on resident doors
- o And 62 were placed in 'other' locations including, inside the resident's rooms, on bulletin boards, in closets, and in CNA booklets

- Placement of the card over time also varied:

- o 63 of the PAL Cards remained in the original location throughout all months reported
- o 3 of the PAL Cards went missing at some point during the reporting months
- o 7 of the PAL Cards were moved at some point during the reporting months. Movement of the PAL Cards were for various different reasons including the resident moving rooms, being discharged from the community, being admitted into the hospital, or dying.

- o 12 of the PAL Cards had to be reprinted and replaced at some point during the months reported

We utilized multiple methods to measure the impact of the PAL Card implementation on outcomes of interest including Resident Quality of Care and Quality of Life, Staff Perceptions of Usefulness of PAL Cards, and Resident Perceptions of PAL Card Usefulness.

During the final interview with providers, we asked about their perceptions about whether the PAL Cards improved Resident Quality of Care and Quality of Life. Provider champions spoke to how PAL Cards assisted with getting to know residents, starting conversations, building rapport, and preventing behavioral responses. A few direct quotes from providers are listed below.

- "I just like the whole concept of the project. It's kind of in line with what I think anyway, ... you have to get to know your residents or else you're not going to get anywhere. If you're rushing, and you don't really care to know details about them, they will know. It does not matter what stage of dementia they are in, they will know. And so I liked the whole project to begin with, but I guess, yeah, that bulletin board did the education. And then when you have these little responses and

people are so proud of their card and they're going up to CNAs like, "Read this!" That was really fun."

- "I've even had improvement with behaviors, which was one of the things I was most interested in. The one resident where we put it on his door, and he was probably the one that the most CNAs and everyone engaged in the card just as a way of trying to figure out how to work with him. So yeah, I think that helped decrease behaviors, because they would just literally start going down the card, like, "Oh he likes birds. Let's play a bird game." Anything. And then I've also had a resident who ... kind of that self where she's just like, "I'm getting out of this place." And right now, you know you can't leave because you'll end up on quarantine for 14 days.... She'll be demanding the social worker, and the social worker will come in, she's like, "I'm going to drop things and leave." I'm like, "how about you tell her about your [PAL] card?" She's like, "Yes. Do you want to hear about how I like to have my nails and hair done?" The social worker is like, "Thank you, yes!""

- "my main thing is, I think the PELI PAL Card could help, because it could help with that continuity of care. One of the worst feelings you can have in any health care, long-term care environment, is you feel like this resident will only get this if I'm on shift. They will only get this level of care when I'm in the building. So when you have that card and everybody's literally reading off the same page, then you might be able to have more continuity of care. And eventually, people are picking up on what works as far as engagement in what situation."

- "I think their life and their care, too, because the main thing about this approach is a big thing with residents that have dementia. And if our staff know their preferences and a little bit about their history and their likes and dislikes, they're going to be able to provide them better care. That is going to be more important for when they first come in and those that our staff don't know already. It's going to be a very beneficial thing."

- "I definitely think it will have an impact on them. Because if people put triggers on there or things they don't like or things that they do like or their normal routine, you take away a lot of that anxiety or agitation. Especially with residents with dementia, they can't tell you. And it's heartbreaking when you have somebody who wants to tell you something, but they can't. They just can't tell you. Or they did something a certain way and they're trying to tell you how they did it, but they just can't get it out. So I felt like it definitely would enhance their quality of life, just having a little guide for staff ... And I think that it'll also help the staff and help them care for other patients faster, because it will go ahead and cut that time that you would have to spend trying to figure out well, what's wrong. You'd cut out all those other side steps that you may have taken first. I feel like just overall, it'll enhance the quality of life. Because they'll be able to receive the care that they need faster on top of it's the care that they want."

- "I think that given that we see this as a rapport-building tool, and rapport assists with satisfaction, it's kind of a, it's kind of a base for us, if you will. So we're probably most proud as I'm looking at our annual numbers, any numbers,

where we're seeing improvements. This is going to be one of those contributing factors that we did so many this year, that we improved communication between the staff and residents. Even turnover, even staff turnover, I think that the happier your residents are, ultimately the happier staff are and vice versa. So anytime we see improvement, and we use a tool, such as a PAL Card, I think that that's what we would be most proud of."

- "I think it's an excellent way for staff to feel closer to the residents. It's a good conversation starter, I think it will definitely positively impact the residents and the staff." To address staff perceptions, project champions were given surveys to pass out to staff members who come into direct contact with residents. Additionally, project champions were asked during the final interview if they had gotten any feedback from their staff. Here is the information from the surveys and from the final interviews:

- Two providers returned feedback forms to us upon completion of the project. In total, we received feedback from 23 staff members, 3 of which were male and 20 of which were female. Eight staff members were CNAs, 6 held 'other' positions, 5 were nursing, and 4 were housekeepers. Two of the staff members had been working at their community less than six months (average 5.5 months (SD=4)). The other 21 staff members had been working at their respective communities for more than 1 year. The average time working among this group was 8 years (SD=8).

- The majority (n=22) of staff remembered someone telling them about PAL Cards, 17 (77%) noticed residents with PAL Cards, 16 (73%) reported that the information on the PAL Card helped them start a conversation with a resident, and 13 (59%) reported that the information on the PAL Card helped them provide care to a resident.

- The feedback form also left space for the staff member to add comments for improvement. Here were some of the comments they left:

- o "Shorten the paragraphs"
- o "Make them bigger"
- o "Make them more visible in the room"
- o "use bullet points, there is a lot of information on the cards. The paragraph form takes a lot of time to read"
- o "open or enlarge area for the bio. Make the left hand side for the name smaller"
- o "place in same location to cut down on confusion"
- o "make colorful"

- When asked about feedback from staff, champions responded that they had heard from their staff:

- o "I got a lot of like, "Yeah, I didn't know that." Or "Yeah, that's cool" because we have some pretty interesting people that they really didn't know.

- o "A lot of them said that they think that that would definitely help them, especially with new staff, that would be very helpful."

- o "But the staff, do they use the cards, as you know, I have verbally heard them say, Oh, I didn't know this about so and so or oh, I love you know, that, that, that I know this or we have this in common."

The logs that project champions were given to collect data about project implementation included questions about if the residents thought their card



accurately represented their interests and the number of residents who refused and why. Additionally, project champions were asked during the final interview if they had gotten any feedback from residents. Here is the information from the surveys and from the final interviews:

- Based on the log information that project champions filled out, 82 (86%) residents reviewed their PAL Card and reported that the information was accurate.
- Out of the 13 residents that did not review or report accuracy, 4 of the resident's family members reviewed the card and reported that the information was accurate, 5 residents refused to participate in the interview or PAL Card creation, and 4 residents did not wish to review their card.
  - o The reasons reported about the residents who did not participate include:
    - "cannot complete interview, aggravated, upset her, too many questions"
    - "nobody's business"
    - "resident noted increased paranoia when asked questions and became anxious"
    - "resident did not wish to answer any questions"
    - "did not wish to share any information"
  - o The reasons reported about the residents who did not wish to review their card include:
    - "resident did not wish to review"
    - "resident did not fully comprehend the project"
    - "Although the resident answered questions, he did not fully comprehend the use of the card fully and displayed little interest"
    - "resident stated "I trust you" and did not wish to review"

- When asked about feedback from residents, here are some of the things project champions reported:
  - o "Most of them loved it. Like I had one that burst into tears. And she's like, "You know me." And it was really cool. It made me so happy."
  - o "Oh, yeah. Aggravated, upset, too many questions. Well, we did make one for a resident because I knew that would be her reaction, but she is one that needs one. She's the type that she ... Employees that didn't work down there that didn't know her would benefit from. That's why. I just knew that it would upset her because she gets real ... She just waves her hands and gets real agitated."
  - o "They haven't said too much about it. The one that I showed, she seemed to really like it. And she was like, "Yeah," but she didn't ... she didn't say too much, but she's kind of a quiet lady, though."

To assess sustainability, champions were asked during their final interview about what it would take to expand their project across their community or if they will continue the doing the PAL Cards after the project is completed. Of the providers who completed the exit interview (n=7), 6 providers (86%) reported plans to continue using PAL Cards in their communities. Here are some of the responses project champions gave:

- "Yes, definitely. The PELI PAL Card fits on half a sheet of paper and tells you everything you need to know."
- "Yeah, I think now that I know that it's doable on the iPad, the interview thing, yeah. But I'm also not going to do the long interview. I'm

not going to do that. It's too long. 30 minutes. Most of those were 30, 20, some were 45 minutes. That's a long time, especially when other people are doing another assessments."

- "The only changes that I really had to make were with the interview. At the end once I would ask all the questions on that, I would have asked more about their social history, like, Where did you work? Were you married? Did you have any kids? Are you a veteran? Different little questions like that I had to ask."

- "I think just keeping at it and not stopping. Now that I'm getting in the flow of it and kind of getting a groove to it, I feel like I could do it faster. And things seem to be getting better in the COVID world, so I'm just hoping that that keeps up so that I can just keep it going. I feel like if I take a break, that I will have a very hard time getting going again. So just keeping on."

- "we kind of put it at the top of the tier. Because we know if we made the preference, ultimately, we're going to have a reduction in negative behaviors, which is going to reduce antipsychotic use, falls, I mean, just, if you put it at the top of the pyramid, and you use it as the tool to meet your satisfaction goals, ultimately, then I think everything else you can see improvement across the board."

- "It was really fun. I think we're going to keep using it."

Usability of the PAL Card module in CompASS-16 was evaluated via a heuristic evaluation by (n=6) providers.

The cognitive walkthrough for this project asked users to walkthrough the tasks listed below. The users engaged in the following steps for each task:

- Verbally stating the task and identifying aloud what they think they will need to do to complete the task
- For each task:
  - o Explore the software system to find the action that enables them to perform the task, speaking aloud as they look at the screen
  - o Select the action (click or other relevant action) that most closely resembles the intended action. Preface the action with "I am going to ...."
  - o Interpret what the system's response was and assess if any progress has been made toward completing the task.

While the user does the above, the evaluator observed the following:

- Is the correct action evident to the user?
- Did the user connect the description in the interface with correct action needed for the task?
- Was the user able to identify that they made a correct or incorrect choice on the basis of the system's response to the chosen action?

The results of these observations were recorded in a form along with notes. A screen capturing system (Apple Quicktime or Kaltura for Windows) was used to record both audio and user actions for transcription and were discarded as per the process defined in an IRB process submitted in February 2020. Those videos are to be discarded as per our IRB approach.

The tasks used by the users in the evaluation were as follows:

- System login
- Navigation to resident pages
- Interview process
  - o Start
  - o Resume
- PAL Card Editor
  - o Create
  - o Edit
  - o Save
  - o View / Preview
  - o Print
- Others as needed

The evaluation participants were recruited from nursing home staff, two evaluators associated with nursing home advocacy organizations, and a CNA unaffiliated with nursing homes. In usability evaluation theory, five independent evaluations is typically desirable for feedback on software interfaces. Beyond five evaluations there are diminishing returns on the usefulness of the feedback.

In Q4, the Tennessee Tech team continued the process of recruiting and performing evaluations of the PAL Card module for the features that are listed above. Each of the evaluation sessions were conducted with the cognitive walkthrough approach and results recorded in a cognitive walkthrough template. The primary findings from conducting the evaluation sessions are summarized below. During the evaluation no software errors occurred resulting in a need to restart or recover the system. A rendering issue was encountered as found in the first bullet below.

- The system was developed with modern web browsers in mind. The evaluation determined that Internet Explorer and the older versions of the Microsoft Edge web browser were unable to properly render the interface features.
  - o The issue was reported to our develop partner for future work.
- One user had questions about how to best answer nested question responses for later inclusion on PAL cards.
  - o Editorial: This was an astute observation by the user that was later resolved during the latter part of the evaluation.
- Drag and drop features of the PAL Card Editor interface was not entirely visible to users without the use of some tutorial or prompt.
  - o This issue would be best resolved through training or online help made available via the PAL Card module.
- A user misunderstood the distinction between titles, items, and cards within the context of the workflow.
  - o Training on terminology through documentation of the feature will resolve this issue.
- Selection of text areas in the nested question part of the workflow created confusion amongst two users.
  - o This issue was resolved after completion of the first question in the interview workflow. Documentation and training would resolve this issue
- Some users thought that deleting text from within the PAL card editor would result in deletion of the nested question response in the main interview workflow.
  - o This issue would be resolved with a disclaimer or other training on the use of the

software.

- In the main system (outside the PAL Card module) users were confused about the inability to generate reports for incomplete interviews.
- o This issue would be resolved by training and documentation

In addition to evaluating the ComPass PAL Card module using a cognitive walkthrough, the system was evaluated using a heuristic evaluation in which users responded to a number of usability questions as follows:

- I can identify the status of the last operation I completed.
- I am able to identify the progress of my task.
- I am able to clearly identify the context of where I am in the application.
- There are visible cues present on screen that make clear how I am to complete various actions (example, are there buttons or other controls that are clearly marked when some action must be performed?)
- It is clear as to what information should be entered into each available text field.
- There is enough information displayed on various screens to make it clear as to how you are to proceed when trying to complete a task.
- I am able to clearly understand the language used in the application.
- I am able to find functions or operations that I need to use.
- Navigation through the interview process supports natural conversations with residents.
- Is there any unnecessary or superfluous information displayed on any screens? Where?
- The system has a consistent look and feel.
- There are no inconsistencies in the way different features are presented or used.
- Did any errors occur?
- Describe what you were doing when you encountered an error.
- If I encountered an error, it was clear how to respond.
- It was easy to resume my task once an error did occur.
- If you encountered an error, was the error page Compass themed?
- I am able to correct errors in data entry.
- I am able to leave and resume interviews.
- I am able to use the "back" button to return to a previous page.

Evaluators rated each question using a five-item Likert Scale ranging from Strongly Disagree to Strongly Agree.

In all of the questions except the following, the responses were either "Agree" or "Strongly Agree":

- If I encountered an error, it was clear how to respond.
- It was easy to resume my task once an error did occur.
- I am able to correct errors in data entry.

In each of these cases, the question refers to error states, which were either not observed by the users, or in those cases where errors were observed, the suitable action could be taken. Users primarily answered "Neither agree nor disagree" (in the case that no error was encountered) or "Agree" (in the case that the user was able to recover from the error).

Overall, the evaluation of the PAL Card module yielded positive outcomes in regard to actions necessary to improve overall usability of the system. Anecdotally speaking, we did receive requests by users for long-term access to the system after completion of their evaluation as they desired to continue to use the software for their operations.

#### Obstacles

We experienced difficulty in recruiting participants for the evaluation study due to COVID-19 restrictions. We adjusted by recruiting participants affiliated to the industry but not necessarily currently working in nursing homes (e.g., LeadingAge TN and the Eden Alternative).

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Results Measurement: Please upload any relevant data or graphs related to project final outcomes and/or success. Please segment all data as appropriate.

Examples:

- Unidentified MDS data for residents participating in the program before and after implementation;
- Infection rates at baseline and after project implementation;
- Number of participating residents each quarter;
- Pre and post survey results;
- Costs savings.

[FILE: Supporting Materials for TN...-27-21.pdf]

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Do you have additional results measurement documentation to upload?

- Yes  
 No

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Please upload additional results measurement documentation.

[FILE: PALTC21 QI Poster Abstract A...ebsite.pdf]

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Please upload additional results measurement documentation.

[FILE: TN Qualtrics Training Evalua...eport .pdf]

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Please provide any additional information you would like to include in your final report.

Thank you for the opportunity to work with TN providers.

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Please upload any additional documentation you would like to share in your final report.