

# It's Never 2 Late Final Report

Front Porch Center for Innovation and Wellbeing

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## Executive Summary

The Front Porch Center for Innovation and Wellbeing (FPCIW; [www.fpciw.org](http://www.fpciw.org)) piloted its Never 2 Late (iN2L; [www.in2l.com](http://www.in2l.com)) at **Sunny View Retirement Community** for eight weeks from June to September, 2015. iN2L is a touch-screen interface with interactive applications specially designed to promote physical and social engagement for older adults.

During this pilot, FPCIW assessed the impact of iN2L on Care Center and Memory care program neighborhood residents as well as on staff. The aims of the project were to:

- Determine if the iN2L program helps maintain cognitive abilities and memory function for residents with dementia and cognitive decline;
- Assess whether the iN2L increases social interaction and engagement level of residents;
- Determine how effective the iN2L program is for physical, occupational, and/or speech therapy purposes;
- Evaluate the iN2L program material for its relevance, effectiveness and ease of use.

Staff provided positive feedback that iN2L is an effective stimulation tool for low-functioning residents, and it is excellent in promoting activities as well as during downtime schedules.

A tracking survey used over a five-month period provided a robust data set that yielded some compelling outcomes. Here are some results from the study:

- 1114 total sessions were documented: 23% of the total sessions from Care Center and 77% from memory care program.
- Overall mood improvement by 58.4% between pre- and post-sessions (Care Center)
- Overall mood improvement by 69.0% between pre- and post-sessions (Memory care program)

From the pilot results, FPCIW concluded that iN2L successfully complements the activities run by the staff, and has the potential to generate a larger impact on the community, and thus recommends the scaling of the iN2L project to other Front Porch communities. Sunny View has fully integrated iN2L at the community across all levels of

care after the eight week pilot, and continued mood scale data collection for 5 additional months to December, 2015.

## Acknowledgements

The Front Porch Center for Innovation and Wellbeing would like to thank the staff and residents of Sunny View Retirement Community for participating in and contributing to this project. We also would like to thank Jack York and It's Never 2 Late (iN2L; [www.iN2L.com](http://www.iN2L.com)) for kindly lending us an iN2L Flex Cart and providing the technical support during the duration of the project. Finally, we would like to acknowledge the Sunny View Foundation and the generous contribution of Priscilla and Wally Norum, whose funding of the first iN2L system made this project possible.

## Project Summary

From June to December 2015, FPCIW piloted iN2L, an interactive technology and media solution for older adults at Sunny View. iN2L has previously shown to be a powerful therapy tool as well as induce a decrease in psychotropic medication usage (LeadingAge CAST, 2015)<sup>1</sup>. Numerous testimonies by the families and caregivers of dementia patients state that after using iN2L, the patients showed increases in cognitive, social, and physical abilities as well as mood improvements<sup>2</sup>. This pilot aimed to test iN2L for its usability and effectiveness as a therapeutic intervention in conducting daily activities and physical therapy sessions for memory care and skilled nursing residents. The project goals were to:

- Determine if the iN2L program helps maintain cognitive abilities and memory function for residents with dementia and cognitive decline;
- Assess whether the iN2L increases social interaction and engagement level of residents;
- Determine how effective the iN2L program is for physical, occupational, and/or speech therapy purposes;
- Evaluate the iN2L program material for its relevance, effectiveness and ease of use.

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<sup>1</sup>Source: LeadingAge CAST (Center for Aging Services Technologies). (2015). *Reducing the use of psychotropic drugs and improving quality of life through entertaining technology-driven activities*.

<sup>2</sup>Source: <http://iN2L.com/newspage.cfm>

## Vendor Technology Background

It's Never 2 Late (iN2L), founded in 1999, is dedicated to helping older adults realize the full benefits of adaptive technology. iN2L integrates the various hardware, software, media, ergonomic, and adaptive components necessary to allow virtually any person with any interest in using a computer—regardless of background, physical or intellectual abilities—to do so pleurably, engagingly, and with minimal frustration. The system is built on a picture-based, touch-screen interface that allows users to simply “touch” their way to find engaging, educational, spiritual, and personalized content that is appropriate to their level of cognitive and physical ability. From using e-mail and web cams to connect with family and friends, to enjoying mind-stimulating activities, to improving hand-eye coordination as part of a rehabilitation program, elders with a wide range of physical and cognitive abilities, most of whom have never used a computer, are now enjoying technology using systems adapted especially for them.

iN2L's scalable systems are currently installed in more than 2000 senior living communities in 50 states and 4 countries. A focus for the company has been developing engagement tools for older adults dealing with dementia and other cognitive disorders. The customer base for the company is split between nursing homes, assisted living communities and adult day programs. They have strategic relationships with organizations dedicated to changing the culture of senior living, specifically the Eden Alternative, the Pioneer Network, Leading Age, the Dementia Action Alliance, and various other nonprofit organizations. Their work has been highlighted in the Wall Street Journal, Fox News, National Public Radio and dozens of smaller media outlets. Today this type of technology is innovative, tomorrow it will be demanded<sup>3</sup>.

## Methods

To assess the impact of iN2L on Sunny View, we modified the Wong-Baker Facial Grimace Scale to fit the program goal (see Figure 6 below). This daily scale quickly and readily captured and quantified the mood of the user before and after each exposure to iN2L. Collection of the mood scales started in June, 2015 and continued for five months until the formal end of the pilot in December, 2015. This tracking tool provided a

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<sup>3</sup>Source: <http://iN2L.com/iN2Lpages.cfm?c=3>

framework to help us measure iN2L as an intervention for positive mood improvement and engagement on residents.

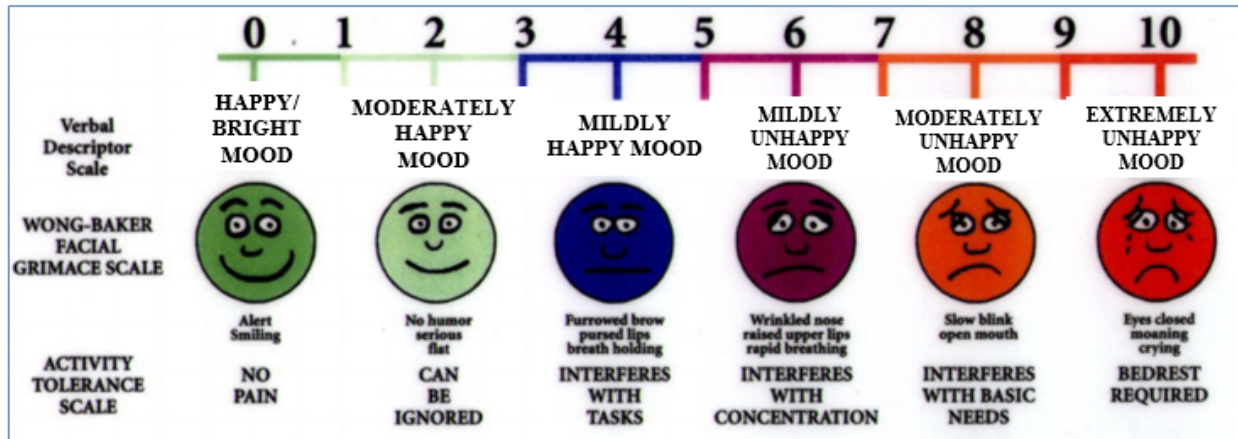
### Technical Issues/Support

FPCIW and FP Department of Information Technology (IT) collaborated to provide necessary support for this pilot. Here are some of the technical issues experienced and resolved during the course of the pilot:

- Dedicated and wired network connection necessary for this pilot was arranged by IT.
- The iN2L systems required unblocked/unrestricted access to the Internet to enable some content, and thus needed to be connected to the residential (non-business) circuit.
- There were some delays in executing actions on iN2L screens, which was resolved by system updates or hardwiring the network connection (for Flex Cart).
- A user error has occurred when two apps were opened at once.
- Units had to be unlocked from their DeepFreeze status in order for the staff to change the settings.

# Project Findings

## Daily Mood Scale Analysis (Jun, 2015-Dec, 2015)



Wong-Baker FACES Pain Rating Scale

**Instructions:** For each IN2L individual (Flex Cart) session, note the Baseline Mood from your observation, according to the scale above. After the session, note the Follow-up Mood and any brief observations.

### Circle one: Care Center (Flex Cart) or Summer House (70" Screen)

Resident Participated	Date/Time	Baseline Mood (#)	Follow-up Mood (#)	Notes

Figure 1. The Wong-Baker scale depicts 6 faces along a numerical scale ranging from zero to ten. The lower numbers represent happy moods, while the higher numbers represent unhappy moods.

The data the Sunny View team completed and collected provided a compelling story of iN2L’s impact during the pilot. 1114 sessions were documented over a 5-month period, with 23% of the total sessions collected from the Care Center and 77% from memory care.

The staff collected mood scale data for all the residents before and after each exposure. The daily mood scale results showed similar trends for both care center and memory care program. After each activity, follow-up moods of the residents were recorded. A decrease in “mood rating” on the scale meant mood improvement, and vice versa. For example, if staff recorded a resident’s baseline mood as 10, or extremely unhappy, and follow-up mood as 0, or extremely happy/bright, it was concluded that the resident’s mood improved by 100%.

At the Care Center, the average difference between baseline mood and follow-up mood recordings over the five-month period was 1.8 (58.4% improved mood). The average baseline mood was close to 3.1 which was “mildly happy mood” on the scale, while the average follow-up mood was 1.3 which was “moderately happy mood,” indicating the staff observed very happy/bright moods after sessions. In the memory care program, the difference in the baseline and follow-up moods showed a decrease as well. The average baseline mood of 1.5 decreased to 0.5 in the follow-up (69.0% improved mood), indicating the residents’ moods changed from “moderately happy mood” to “very happy/bright mood” post-session. At both Care Center and memory care program, it was apparent that the usage of units resulted in mood improvement.

	<b>Baseline Mood</b>	<b>Follow-up Mood</b>	<b>Change</b>	<b>% Change</b>
<b>Care center</b>	<b>3.15</b>	<b>1.31</b>	<b>-1.84</b>	<b>58.4%</b>
<b>Memory care program</b>	<b>1.45</b>	<b>0.45</b>	<b>-1.00</b>	<b>69.0%</b>
<b>Combined</b>	<b>1.81</b>	<b>0.64</b>	<b>-1.17</b>	<b>65.2%</b>

**Table 1. Daily mood scale results for both Care Center and memory care program.**

### Activities

Residents participated in various activities in between their baseline and follow-up mood inspections, as reported by the staff on the mood scale. Some of the most utilized activities were Family Feud, karaoke, Travelogue, word challenge, trivia, and exercise.



IN2L was also used to connect the residents to someone at a remote location. One resident at the Care Center was able to watch her grandson graduate from a college in New York, who podcasted the graduation ceremony live online. Also, there were nine 10-20 minute Skype calls conducted between two FPCIW volunteers and Sunny View residents: four from Care Center and two from memory care. The calls mostly occurred on Fridays between September and December, and the staff coordinated the calls on the residents' side and facilitate the conversations. The volunteers prepared sets of various topics (i.e. traveling, gifts) and questions before the calls and led the calls. The goal of these Skype calls was to use video call conversations to create connections and promote social engagement.

### Staff Response

Staff response based on anecdotal data on the pilot have been overall highly positive. During the interviews conducted in September 2015, they answered that IN2L was effective with participants in the following ways:

- Increased levels of activity and energy level

*"She did not get up until 11:30 or 12. When she got up, she had lunch went back to her room right away. Now instead of going into her room, she gravitates toward IN2L and even asks us to open certain apps for her." –Roma Samuel, Life Enrichment Assistant*

*"She pulled herself out of her room to use the unit. It inspired her to practice piano again. She cannot see so she plays by ear, with the Cart playing the same music next to her." –Julia Early, Life Enrichment Specialist*

*"After lunch, the residents go automatically to see what is on IN2L. They used to go to their rooms right after lunch." –Roma Samuel, Life Enrichment Assistant*

- Promotion of transitional activities

*"When activities fall through, the staff utilize IN2L to facilitate between-activities." –Julia Early, Life Enrichment Specialist*

- Better relationship between staff and residents

*“It’s such a game changer for the staff, since it provides a broad spectrum of activities we can do with the residents.” –Sarah Adams, Life Enrichment Specialist*

*“It’s a great conversation starter even among the residents. One resident was showing how to play Solitaire on IN2L to his visitor. He was able to teach her how to use it without a difficulty.” –Julia Early, Life Enrichment Specialist*

- Mood improvement

*“He got easily angered and sour. After using IN2L, he would be in a great mood... he frequently used exercise videos like chair exercises and Tai Chi.” – Sarah Adams, Life Enrichment Specialist*

- Great sensory stimulation for low-functioning residents

*“85% of the Care Center residents are low-functioning and they really enjoy using the sensory apps like videos. IN2L provides appropriate sensual stimulation for these residents.” –Sarah Adams, Life Enrichment Specialist*

## **Conclusion**

In coordination with the staff, FPCIW found that iN2L improved the quality of life for Sunny View Care Center and memory care program residents by increasing overall activity and energy levels, improving moods and motor skills, and enhancing engagement levels with other residents and staff. The staff reported that the impact of IN2L on low-functioning residents was enormous.

From the strong results observed in multiple areas including energy level, group participation, mood improvement, and staff relations, FPCIW has recommended scaling of IN2L to other FP communities. FPCIW will continue to provide technical and administrative support to the staff to promote further utilization of IN2L at Sunny View as well as other FP communities.