

## Project Details

### Problem Statement

The heart of Mercy LIFE - West Philadelphia (MLWP) is connection. In normal times, the Mercy LIFE Day Center is a hub of wellness, from the caring expertise of a nurse, physical therapist, or social worker, to a hot meal and a friendly game of dominoes. Hundreds of low-income, predominantly African American, nursing-home-eligible older adults come to the Day Center to paint pictures and write poetry with their friends, and to receive holistic preventative health care from a top-notch Interdisciplinary Team. Our aim is to provide the support they need to age in place, keeping their lives intertwined with the community around them.

In March of 2020, the COVID-19 pandemic shut down our Day Center. These fragile older adults suddenly became confined to their homes, shut away from their normal activities, and isolated from friends and family for their own safety. Yet loneliness and social isolation are known to present grave dangers to physical, emotional, and cognitive well-being (Baker & Clark, 2020; Hoffman, Webster, & Bynum, 2020; Plagg, Engl, Piccoliori, & Eisendle, 2020), and we have seen these effects among our participants. MLWP has been challenged to find the best new ways to mitigate these risks while still protecting our participants from the virus.

During a focus group conducted in October 2020, MLWP participants spoke about how much they miss their friends and families. One person who had access to video calling capabilities said, "It's not the same, but it beats the alternative... sitting there feeling sorry for yourself." She spoke about the joy of being able to "meet" her new great-grandchild. If more of our participants had access to video calling, a visual connection with those they can no longer see in person, loneliness and social isolation could be reduced. Conroy et al. (2020) suggest that providing older adults at risk for loneliness with "a device... designed to be intuitive and simple to use - pre-loaded with a small number of programs such as videoconferencing and health-care resource apps... could greatly increase the efficacy of efforts to reach vulnerable populations."

Our pilot program, Operation Reconnect, will introduce the GrandPad®, a tablet computer designed for older adults and fulfilling the above description by Conroy et al. This device will bring our participants closer to their personal and healthcare communities. In order to fully adopt a new technology, the literature tells us that an older person must see it as easy, fun, well-supported, useful, and encouraged by important people in their lives (known as "social influence"). Its use must also develop into a habit (Bixter, et al., 2019; Venkatesh, Thong, & Xu, 2012). While the design of the device along with the company's support services may demonstrate the qualities of ease, utility, and fun, our challenge is to create that social influence and develop GrandPad use into a habit.

Lee and Kim (2019) demonstrated a program of "reverse mentoring," in which college students were trained to communicate effectively with older adults and serve as mentors for technology use. Their study found that building these intergenerational relationships surrounding technology helped to create positive attitudes toward technology, overcoming both fear and lack of interest. We propose to create a program with a similar structure. By engaging students from the University of Pennsylvania School of Nursing (UPSON) to befriend our participants and mentor them on the use of the GrandPad, we will encourage them to adopt it into their daily lives, reestablishing a visual and emotional connection with their world. Isolation and loneliness pre-date the pandemic for vulnerable older adults, and even when it's over, the GrandPad will be there for them.

## Action Plan

Phase I – Curriculum Development (summer 2021):

- A subcommittee drawn from the Interdisciplinary Team (IDT) will spend four weeks developing the curriculum for a two-hour online workshop to introduce the GrandPad to nursing students and train them to communicate effectively with older adults.

Phase II – Eight-participant pilot (fall 2021):

- Starting in September 2022, eight undergraduate nursing students in the Psychiatry and Mental Health class will be trained remotely using the curriculum.
- Eight Mercy LIFE participants will be recruited, and baseline data will be collected.
- Participants will be transported to the Mercy LIFE Day Center and issued GrandPads. The project lead and a representative of Health Informatics will train them on basic operations (charging, powering on/off, etc.).
- Each student will be assigned one participant and will complete one 30-45-minute video call each week for 6 weeks.
- Preliminary outcomes data will be collected from Phase II students and participants.

Phase III – 24-participant pilot (spring 2022):

- Revisions will be made to the student training curriculum based on feedback.
- Starting in January 2022, 24 participants will be recruited, and baseline data will be collected.
- Participants will be transported to the Mercy LIFE Day Center (in shifts, to allow for physical distancing) and issued GrandPads. Representatives from the IDT and Health Informatics department will train them on basic operations (charging, powering on/off, etc.).
- Each student will be assigned three participants and will complete one 30–45-minute video call each week for 6 weeks.
- Preliminary outcomes data will be collected from Phase III students and participants.

Phase IV – Data collection, analysis, and reporting (summer and fall of 2022):

- Follow-up outcomes data will be collected at five weeks, six months, and nine months post-intervention for both Phase II and Phase III participants.
- Data will be analyzed and presented to external funding sources and internal stakeholders.

## Program Partners

Mercy LIFE – West Philadelphia, as a Pathway to Excellence® designated organization, is eligible to apply for the American Nurses Credentialing Center's (ANCC) 2021 Pathway Award® for use of state-of-the-art technology to improve the practice environment. We are applying for this award to fund Phases III and IV of this project.

We will also partner with the UPSON, with whom we have a long-standing affiliation. We will provide a student practicum for 16 students, and they will serve as mentors for our participants.

## Outputs

- Four members of LIFE's IDT and one representative from Health Informatics will attend collaboration sessions and work independently to develop a training curriculum for nursing students.
- Curriculum is developed to train nursing students as GrandPad mentors.

- Mentor curriculum is delivered to 16 nursing students from the UPSON (half in Fall 2021 and half in Spring 2022).
- 32 MLWP participants are transported to the Mercy LIFE Day Center (8 in the fall and 24 in the spring) to receive their GrandPad and learn basic operations. This will be run by representatives from the IDT and Health Informatics, with support from the transportation department.
- Each student mentor conducts six weekly “reverse mentoring” video calls with each of three assigned mentees using the GrandPad.
- 32 MLWP participant mentees attend video calls with their assigned student mentor.
- A variety of LIFE staff (Recreation Therapists, Rehabilitation Therapists, Chaplain, etc.) will conduct weekly group activities for participants using videoconferencing.
- Primary Care, Rehabilitation Therapy, and Social Work staff will conduct one-on-one telemedicine sessions with participants using the GrandPad as needed.

### Outcomes

Participants will:

- Short term
  - know how to use the videoconferencing feature of the GrandPad
  - demonstrate attitudes that suggest likely adoption of the GrandPad
- Medium term
  - independently use GrandPad to connect with family and friends on at least a weekly basis
  - join enriched MLWP recreational programming via videoconference on the GrandPad weekly
- Impacts
  - maintain social contacts and a feeling of social connectedness
  - maintain or improve their physical, cognitive, and emotional wellness
  - experience increased quality of life
  - use fewer healthcare resources

### Measurement

Outputs

- Curriculum is produced and delivered to 16 students (8 fall, 8 spring)
- 29 of 32 participants are issued GrandPads with initial training (8 fall, 24 spring)
- 7 of 8 students complete 5 of 6 video calls to each participant
- 29 of 32 participants complete 4 of 6 video calls with mentors
- 29 of 32 participants attend at least one Mercy LIFE Day Center group video activity per week
- 29 of 32 participants attend at least one telemedicine visit during the year

Outcomes

Outcome	Methods, criteria, and timeframe
Participants will:  demonstrate use of videoconferencing	<b>Method:</b> Instrument – Mentor Post-Intervention Questionnaire. <b>Criterion:</b> 90% of mentors will report that their mentees initiated at least three video calls over the six-week intervention. <b>Timeframe:</b> 1 week post-intervention

demonstrate attitudes that suggest likely adoption of the GrandPad	<b>Method:</b> Instrument –UTAUT2 Survey (Modified) (Venkatesh, Thong, & Xu, 2012) <b>Criterion:</b> 90% of mentees will have an overall mean score of >=6.0 (7-point Likert scale) <b>Timeframe:</b> 1 week post-intervention
independently use GrandPad to connect with family	<b>Method:</b> Procedure – Analyze GrandPad Usage Reports. <b>Criterion:</b> 80% of mentees will participate in at least 1 social video call per week. <b>Timeframe:</b> 5 weeks, 6 months, and 9 months post-intervention
join enriched MLWP social programming via videoconference	<b>Method:</b> Procedure – Activities Attendance Lists. <b>Criterion:</b> 80% of mentees will participate in at least 1 MLWP video activity per week. <b>Timeframe:</b> 5 weeks, 6 months, and 9 months post-intervention
experience reduced loneliness	<b>Method:</b> Instrument - De Jong Gierveld 6-item Loneliness Scale (Goodman, n.d.) <b>Criterion:</b> 90% of mentees will improve overall score. <b>Timeframe:</b> Baseline; 5 weeks, 6 months, and 9 months post-intervention

**Sustainability**

MLWP is also applying for the ANCC Pathway Award, which will expand the pilot to a total of 32 GrandPads in the spring of 2022. Data from this completed pilot program will inform Trinity Health’s decision to deploy the GrandPad throughout its 14 Programs of All-Inclusive Care for the Elderly across the country, using its own funds.

**Sharing and Replication**

MLWP will share results of the program

- with the Friends Foundation for the Aging throughout the program and in a final presentation;
- with the ANCC in a presentation at their annual conference in November 2022;
- with audiences at other conferences related to the care of older adults, such as Leading Age and the American Occupational Therapy Association;
- with the other 13 other Trinity Health PACE organizations via webinar and personal consultation;
- and with a broader audience via possible publication in an academic journal.

With proof of return on investment and the opportunity to share lessons learned among Trinity Health PACE organizations, a blueprint will exist for successful deployment of the GrandPad using reverse mentoring to promote device adoption.

**Friends Foundation Values**

*Service to Diverse Populations:* MLWP serves over 400 low-income participants, 94% of whom are African American, and all of whom have a level of disability that qualifies them for nursing home placement. As part of our strong affiliation with UPSON and other neighborhood schools and universities, our project places intergenerational learning at the center of a major technology deployment. Our management team and board are majority female and more than one third African American.

*Potential to Create Change:* Operation Reconnect will spark a new digital connection between LIFE staff and healthcare providers and the older adults they serve. LIFE participants, instead of being isolated in

their homes, will learn a new way of taking part in social and wellness activities of the Mercy LIFE Day Center, and will become accustomed to using telemedicine for quick and accurate response to their health needs.

*Leveraging of Resources:* As a large, national health system, Trinity Health has the means to invest in programs that are proven to be a good use of resources and are in alignment with its mission and values. The data generated by Operation Reconnect will serve as evidence on which to base replication and expansion of GrandPad deployment with reverse mentoring.

*Collaboration:* Operation Reconnect includes collaboration with UPSON, as well as the GrandPad company, which provides extensive support for its product.

*Engagement of Employees and Participants:* LIFE staff in Primary Care, Physical and Occupational Therapy, Social Work, Recreation Therapy, and Chaplaincy will use the GrandPad platform to communicate with our participants and include them in center activities even when they cannot attend in person. This new way of connecting will extend far beyond the pandemic.

*Continuing Engagement of Friends Foundation for the Aging:* MLWP will welcome continuing collaboration with the foundation.

*Integration of Services:* PACE is a holistic model of care that seeks to support older adults' social, physical, and spiritual wellness. Operation Reconnect will extend the program's reach during and after the pandemic.

## Budget and Timeline

Timeline		Phase I Summer '21	Phase II Fall '21	Phase III Spring '22	Phase IV Summer '22      Fall '22	
<b>Devices</b>	<b>Volume</b>					
GrandPad (\$1080 ea.)	8	\$ 8,640				
GrandPad (\$1080 ea.)	24			\$ 25,920		
Webcam (\$25 ea.)	20	\$ 500				
<b>Tasks</b>	<b>Time (hours)</b>					
Curriculum development, recruiting, and communication	85	\$ 8,798		\$ 1,613		
Training (students, participants, colleagues)	10	\$ 521		\$ 521		
Data compilation and report development	320		\$ 3,156		\$ 6,312	
Curriculum revision	10			\$ 1,774		
Participant gift cards (\$25 ea.)		\$ 200		\$ 600		
On-site system support from informatics	80	\$ 1,010		\$ 3,031		
<b>ANCC Conference presentation estimates</b>						
Travel Costs (transportation/lodging for 3)						\$ 3,526
Development time	40					\$ 6,018
Registration fees						\$ 975
Presentation	1					\$ 150
	<b>Totals</b>					
<b>Total funded by Friends Foundation</b>	\$ 22,825	\$ 19,669	\$ 3,156			
<b>Total funded by ANCC Pathway Award</b>	\$ 50,441			\$ 33,459	\$ 6,312	\$ 10,670
<b>Grand total</b>	\$ 73,266					

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