Identifying and Reducing Isolation in Seniors (IRIS)

Final Project Report

The Quaker Senior Living Consortium partnered with Temple University School of Social Work to better understand loneliness and social isolation among its residential members. The project sought to evaluate assessment tools and develop recommendations and interventions to support community members experiencing loneliness and/or isolation.

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Executive Summary

Introduction

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PROJECT GOALS

The project sought to evaluate assessment tools and develop recommendations and interventions to support community members experiencing loneliness and/or isolation.

To identify needs project partners worked to evaluate and foster the development of assessment tools to determine the point at which healthy solitude becomes unhealthy. Years two and three of the project focused on developing inter-disciplinary interventions to address loneliness and isolation before progression to possible negative health outcomes that can occur. The ultimate goal is to share the lessons learned, recommendations and intervention tools with other senior living providers to positively impact the quality of life for an even broader population than those served by the organizations represented within the Quaker Senior Living Consortium.

The advent of the COVID-19 Pandemic impacted and informed this work.

Background

Health, life events, vulnerability, location, mobility and sensory impairment may play roles in the experience of isolation and loneliness. That social isolation may also have detrimental effects on health including morbidity and mortality, decreased resistance to infection, increased depression and dementia and emergency admissions to hospital (Landiero et al., 2017), further compound effects.

The funded project was based on a two year cycle where a year one interim progress report would assess the need and direction for year two. Year one of the project established protocols for the evaluation, identified methods and instruments, engaged residents and Friends Life Care (FLC) members through education and data collections and collected data about the organizational context of each project site.

*The Quaker Senior Living Consortium for the purposes of this project represents the following organizations: Friends Village at Woodstown (single site Continuing Care Retirement Community), Medford Leas (dual campus Continuing Care Retirement Community), Foulkeways at Gwynedd (single site Continuing Care Retirement Community), Pennswood Village (single site Continuing Care Retirement Community), The Hickman (single site personal care home), Foxdale Village (single site Continuing Care Retirement Community) and Friends Life Care (project lead). Note: The Hickman and Foulkeways at Gwynedd declined to participate in the project.

Year two was impacted by the COVID-19 Pandemic and therefore the outlined scope of work was adjusted in consultation with Project Leaders and in an effort to follow Center for Disease Control and Prevention Guidance to reduce COVID-19 transmission.

The advent of the COVID-19 Pandemic prevented implementation of some planned year two activities. In consultation with the members of the Consortium a revised scope of work was planned and executed throughout years two and three. Activities and findings related to this work are described in this final report along with recommendations for future consideration.

Findings

Year one findings indicated at baseline approximately two thirds of respondents had at least three relatives and three friends they could rely upon and with whom they felt able to share their concerns.

PARTICIPANTS REPORTED IMPROVEMENTS…IN PROBLEM SOLVING, IN RELATIONSHIPS, MANAGING WORST-CASE THINKING AND USING CREATIVE ENERGY TO SUPPORT ONE'S GOALS.

Participants had an average solitude preference score of 6.67 with a standard deviation (SD) of 2.78 for CCRCs and the figures for Friends Life Care were 7.15 with a standard deviation of 2.65. The norms for this scale are an average score of 4.87 with a standard deviation of 2.57 suggesting that the participants in this study had a higher than average preference for solitude. There was a non-significant trend for Friends Life Care participants to have a higher preference for solitude.

CCRC participants had an average score of 23.91 with a standard deviation of 4.43 for their reliance on cognitive activities and of 11.25 with a standard deviation of 4.57 for social activities; whereas the figure for Friends Life Care were an average score of 24.28 with a standard deviation of 4.18 for cognitive activities and of 13.04 with a standard deviation of 4.56 for social activities. Prior reports (Dong et al, 2014) for general population older adults are of 12.6 with a standard deviation of 5.86 for cognitive activities and of 9.01 with a standard deviation of 4.76 for social activities suggesting that the participants here had a higher level of participation in cognitive activities and a similar level of participation in social activities when compared to other reports for older adults.

Focus group analyses identified the following primary issues influencing the experience of loneliness: Weekend loneliness and isolation; communications issues in finding and accessing opportunities to connect; strategies for new resident onboarding and engagement; availability of formal services for life/health transitions and the challenges posed by sensory changes.

For the subsequently developed intervention, there was a small trend for reduced feelings of loneliness among intervention participants but this was not statistically significant. In examining individual cases there were examples of larger reductions in levels of reported loneliness, and some individuals reported more increased confidence on the PROMIS at post-test.

Participants also reported improvements as a result of the intervention in problem solving in relationships, managing worst-case thinking and using creative energy to support one's goals.

In the open-ended question responses multiple intervention participants raised the value of the conscious and compassionate breathing and the positive thinking activities that they were continuing to use, and the value of the program during COVID-19.

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To identify needs project partners worked to evaluate and foster the development of assessment tools to determine the point at which healthy solitude becomes unhealthy. Years two and three of the project focused on developing inter-disciplinary interventions to address loneliness and isolation before progression to possible negative health outcomes that can occur. The ultimate goal is to share the lessons learned, recommendations and intervention tools with other senior living providers to positively impact the quality of life for an even broader population than those served by the organizations represented within the Quaker Senior Living Consortium.

The advent of the COVID-19 Pandemic impacted and informed this work.

The Identifying and Reducing Isolation in Seniors (IRIS) project is managed by the Quaker Senior Living Consortium made up of:

- Friends Village at Woodstown (single site Continuing Care Retirement Community),
- Medford Leas (dual campus Continuing Care Retirement Community),
- Foulkeways at Gwynedd (single site Continuing Care Retirement Community),
- Pennswood Village (single site Continuing Care Retirement Community),
- The Hickman (single site personal care home),
- Foxdale Village (single site Continuing Care Retirement Community) and
- Friends Life Care (project lead)

  Note: The Hickman and Foulkeways at Gwynedd declined to participate in the project.

The research/evaluation partner for this project is the Temple University School of Social Work with Lisa A Ferretti, Research Assistant Professor Project Co-Principal Investigator and who directed the project and Philip McCallion, Professor and Director of the School of Social Work at Temple University College of Public Health who served as a Co-Principal Investigator.

This final report reflects activities from the full term of the project.

Year one goals:

- Identify assessment tools that effectively determine when isolation becomes a health risk factor.

- Conduct an assessment of a targeted portion of 4,500 older adults to measure the prevalence of loneliness and social isolation and factors that mitigate both.

Year two goals:

- Report recommendations to the Consortium based on data collections and provide guidance on implementation where requested.
- Develop a small group based intervention to address factors associated with loneliness and social isolation in the residents/member of the Consortium partners.
- Deliver and test the intervention.
- Report recommendations to the Consortium.

Year two revised goals:

- Due to the COVID-19 Pandemic scheduled in-person deliveries of the group based intervention developed for the project were halted. The intervention was re-designed for delivery in virtual spaces. This required a re-working of content and delivery methodology which was completed in consultation with the Consortium, on-site project leads and members/resident feedback.
- Deliver three or more group based interventions re-developed for the project in a virtual platform.
- Collect survey and interview data from participants.
- Train staff of the Consortium to deliver the intervention.
- Report recommendations to the Consortium based on data collections and provide guidance on implementation where requested.

Contemporary Understanding of Loneliness and Isolation in Older Adults

HEALTH, LIFE EVENTS, VULNERABILITY, LOCATION, MOBILITY AND SENSORY IMPAIRMENT MAY PLAY ROLES IN THE EXPERIENCE OF ISOLATION AND LONELINESS.

There is an implicit assumption that subjective and objective isolation are intricately related but distinct concepts each with potential negative emotional health/mental health consequences. Subjective isolation is concerned with an individual's perceptions that levels of interactions with others do not meet expectations. Loneliness, or subjective isolation, more often refers to our appraisal applied to circumstances. In other words, we may *feel* lonely as a result of any number of things. Loneliness can be social, transient, situational or chronic and can impact our health and well-being short and long term. Feeling lonely can also have adaptive qualities, for example, when we are experiencing feelings of loneliness we are more likely to reach out or change our circumstances to better manage these feelings.

Objective isolation refers to a scarcity of contacts/social encounters of adequate quality or quantity to meet the needs of an individual. Often, objective isolation is not the result of a singular event, rather it is experienced as the cumulative result of a series of events and our response to them. Therefore, objective isolation, or social isolation, is a more complex and observable state and can be measured. A person's lack of social connectedness is measured by the quality, type, frequency, and emotional satisfaction of social ties. Objective isolation

can impact health and quality of life, measured by an individual's physical, social, psychological and [spiritual] health; ability and motivation to access adequate support for themselves; and the quality of the environment and community in which they live (AARP, 2012).

Health, life events, vulnerability, location, mobility and sensory impairment may play roles in the experience of isolation and loneliness. That social isolation may also have detrimental effects on health including morbidity and mortality, decreased resistance to infection, increased depression and dementia and emergency admissions to hospital (Landiero et al., 2017), further compounds effects. Furthermore, the COVID-19 Pandemic and its initial shutdowns in the US and abroad provided us all with an experience of the daily life of older adults and others already homebound raising questions about the effects of these phenomena and the cumulative impact on the physical and mental health of us all in a time of prudent isolation (Hold-Lunstad, J., 2021).

EFFECTIVE INTERVENTIONS

The literature suggests effective interventions target reducing loneliness and/or depression; increasing social network size; improving quality of supports; and/or increasing frequency of social contacts through, small group, one on one and technology mediated protocols (Gardner et al., 2018).

The literature suggests effective interventions target reducing loneliness and/or depression; increasing social network size; improving quality of supports; and/or increasing frequency of social contacts through, small group, one on one and technology mediated protocols (Gardner et al., 2018). There are also valid measures to assess the outcomes of interventions including the UCLA Loneliness Scale, the Campaign to End Loneliness Scale, Lubben Social Network Scale (6) and the Burger Preference for Solitude Scale and which were employed for this project. Finally, a subscale of the Patient Reported Outcomes Measurement Information System (PROMIS) has items that target patient perspectives in clinical care. The PROMIS Self-Efficacy for Social Interactions Subscale 4a was also utilized to increase understanding of confidence in participating in social activities and asking for help when necessary (Gruber-Baldini et al., 2017).

Project Activities

The project was based on a two year cycle which was extended due to the advent of the COVID-19 Pandemic. Year one goals were to establish a baseline understanding of the members/residents of the Consortium Partners and explore issues of isolation and loneliness within the membership. Year two goals were to report recommendations, gather additional data and develop, deliver and evaluate a small group intervention to address factors associated with social isolation and loneliness in the partner settings. The intervention to be developed was to be a small group in-person intervention.

Year two goals were extended and revised to address the unique circumstances of the COVID-19 Pandemic which recent data reports indicate increased the experience of social isolation and loneliness among many older adults. A key if unexpected activity was to re-design, test feasibility and implement the intervention for online delivery. In addition, development and delivery of a train-the-trainer training and guides for Consortium Partner staff was added to project activities so that programming could be sustained. A full project

activity report can be found in Table 1 including additional activities added to address the impact on the project due to the COVID-19 Pandemic.

Table 1: Project Activities

Project Activity	Progress to Date
Define target population.	● Organizational leaders were convened and identified that only residents in independent living and FLC members who are not utilizing services would be subjects of the research project.
Define study measures and obtain Temple University Institutional Review Board approvals for data collection.	● Researchers proposed and recommended several measures for use in the study. ● Three scales were embedded within an anonymous survey distributed in-person and via web technology. ● In addition to completed scaled measures, focus groups and in-depth interviews were included in the research protocol to assist in providing a more complete understanding of participant experiences and in an effort to help identify future interventions. ● For a summary of data collection efforts to date please see associated information below.
Collect organization scan data.	● Each site was asked to provide information about their organizational structures, populations served and other policies/procedures to assist researchers understanding of participant context.
Conduct on-site presentations and primary data collections.	● Each engaged site hosted one or more in-person presentation on the subject matter of the IRIS Project. ● The presentation served both to educate participants on the subject matter and the IRIS Study in an effort to identify potential co-researchers/focus group participants.
Conduct on-site focus groups.	● Focus groups were conducted at four of the five project sites – at least one at each CCRC. ● Friends Life Care attempted to recruit people for an online focus group given geographic spread for the site but the scheduled focus group was cancelled for low enrollment. ● To better understand recruitment for this effort at Friends Life Care, the lead researcher will meet with Care Coordinators in September. Additional strategies will be implemented to recruit focus group participants from Friends Life Care members.
Conduct in-depth interviews.	● This activity was added by the lead researcher in an effort to reach people who might be experiencing voluntary isolation and therefore may decide not to participate in other data gathering opportunities. ● Each site will help to identify 1-5 people for an in-depth interview and it is possible that researchers will utilize these key informants to assist in additional data

Project Activity	Progress to Date
	collections through survey, focus group or additional interviews.
Analyze data to identify potential interventions.	● Early data analysis of survey data collections and focus group themes is described in more detail below along with possible interventions where noted.
Report Project Progress	● Reports were made Consortium Members to establish recommendations and select strategies for implementation in year two. (Appendix XXX)
Develop Identified Intervention	● Develop the *Effective Connections Program* a small group psycho-educational self-management group to guide participants in developing skills needed to assess, increase and manage social networks and activities to reduce loneliness and isolation.
Define measures and establish Temple University IRB approval for intervention implementation and evaluation.	● Identify measures for use in the study. ● Establish data protocol and consent for de-identified pre/post matching of survey data by participant. ● Seek IRB approval for intervention evaluation. ● For a summary of data collection efforts to date please see associated information below.
Implement Intervention	● Recruit participants, consent and collect baseline data, enroll participants in intervention programming. ● These activities were revised substantially due to the COVID-19 Pandemic.
Revise and restructure intervention for virtual delivery	● Due to the COVID-19 Pandemic all in-person programming was discontinued requiring that the developed intervention be revised for delivery in virtual settings. ● This also required a change to the data protocol and therefore an additional review by the Temple IRB. ● The review indicated the need for additional data protections where scales were embedded within a secure online data system to allow for de-identified pre/post matching of survey data by participant.
Implement Intervention Virtually	● Recruit participants, consent and collect baseline data, enroll participants in intervention programming. ● Where needed provide training to participants unfamiliar with the selected virtual conferencing platform. ● A total of 4 intervention groups were conducted.
Collect and analyze post test data	● Data requested and collected through secure online platform.
Conduct Key-Informant Interviews	● Participants of the intervention were recruited for interviews to provide feedback on the impact of the intervention.
Train staff for future intervention delivery	● Materials and methods for delivery of the intervention were shared with a group of staff to support future deliveries of a small group psycho-educational self-management group intervention to guide participants in developing skills needed to assess, increase and manage

Project Activity	Progress to Date
	social networks and activities to reduce loneliness and isolation.
Develop Final Report	• Aggregate data and recommendations for dissemination.

The Effective Connections Intervention

To begin to address issues of social isolation and loneliness a series of recommendations was made to Consortium Members at a quarterly update meeting held on January 13, 2020. Recommendations reflected information from a review of intervention literature and the data collected through the project including focus groups and key informant interviews. The literature suggested that technology, volunteering and other interventions may be helpful for adults who are experiencing loneliness and isolation. Small group psycho-educational groups, particularly those utilizing self-management and cognitive restructuring have also been demonstrated to be effective mitigation techniques.

In terms of content for the psychoeducational groups, several themes emerged through focus groups and key informant interviews conducted through CCRC sites and they largely fell into two categories – accessibility and life transitions. Accessibility captured items related to sensory changes, environmental barriers and communication. Life transitions including themes related to loss, both personal and health related. Caregiving presented another set of unique challenges that emerged from the data. An interview with Friends Life Care Partners staff revealed very similar factors for the population they serve but also indicated that difficulty in requesting assistance and supports and a lack of readiness to try new things might also lead people to greater experiences of loneliness and isolation.

Considering all of this information the researchers suggested three possible interventions to address the loneliness and isolation identified through prior data collections. Each is outlined below.

There's an App for That! This intervention would take place over three sessions in person and would support participants in developing an understanding of the potential for currently owned technology. This course would utilize tech experts to assist participants in a hands on way to learn how to use tablets, computers, and/or smart phones. This would also include information about social media platforms, online/virtual safety and virtual companion technology. Practice homework assignments between sessions would support participant learning.

Volunteering and Intergenerational Connections. This intervention would also take place over three sessions and would utilize a self-assessment to help participants identify potential volunteer opportunities in the local community and/or virtually. A volunteer match counselor would assist and support participants as they identified possible opportunities, learned more about the requirements and developed volunteer roles that would build on strengths and experience.

[EFFECTIVE CONNECTIONS PARTICIPANTS] WOULD ENHANCE THEIR OPPORTUNITIES TO CONNECT WITH OTHERS IN WAYS THAT ARE MEANINGFUL…

The Effective Connections Program would be an in-person small group 4 session interactive workshop for people who want to improve their ability to connect with

others. Through educational content, interactive activities, discussions and at-home "practice" participants would enhance their opportunities to connect with others in ways that are meaningful and to support personal and community wellness. The program relies on the experiences of participants and is guided by two facilitators. The program utilizes self-management skill development like goal setting, problem solving and decision making to support participants as they navigate topics demonstrated to impact both the psycho-emotional and physical impact of loneliness and isolation.

After much discussion the Consortium Leadership selected the *Effective Connections Program* for implementation and evaluation. With support from the Consortium, the first two workshops were scheduled to being in March 2021 just as the COVID-19 Pandemic came into focus along with mass closing, lock downs and other critical pandemic mitigation strategies to *bend the curve*. Needless to say, the Pandemic required all of our attention for a great many months.

After the first few months of the Pandemic, the Consortium Leadership was consulted again as project goals were in clear need of revision. Researchers proposed re-designing the selected intervention for delivery on a virtual video conferencing platform. The Consortium agreed and researchers set out to make needed adaptations to the program that would reflect best practice for virtual delivery, provide supports for participants surrounding the technology and would reflect the experience of the Pandemic as a factor in isolation and loneliness.

Revisions to the program included:

- Adding a session zero option for participants to get used to the virtual platform
- Adding content specific to the type of isolation as a result of the Pandemic
- A combination of the length of weekly workshops being shortened and the number of sessions increased to cover content thoroughly without need to long times sitting in from of screens
- Additional resources developed including more virtual activities

Weekly topics included:

- Solution Steps, Setting Goals/Guidelines;
- How We Socialize; Expanding Your Social Network by Reaching Across Generations, Socializing in a Virtual World; Setting Goals
- Finding Your Identity; Managing Change; Setting Goals
- How Our Thinking Impacts Our Ability to Connect; Finding Support in a Virtual World; Setting Goals
- Physical Health, Loneliness and Isolation; Being Active in Isolation; Setting Goals
- Managing Losses (people, roles, senses, cognition); Finding Support in a Virtual World; Connecting Across the Generations with Younger Family Members, Setting Goals
- Self-care; Conscious and Compassionate Breathing; Positive Self-Talk; Goal Setting
- New Skill Review; Planning for the Future (long-term goals); Celebrating Our Success!

The program intervention was delivered to four groups over the course of the next eight months. Two groups were targeted at community dwelling adults and two were targeted at residents of CCRCs. The fourth group began just as CCRC outdoor activities began again. The time of the workshop was in conflict with multiple newly scheduled outdoor activities

and there was a strong desire among members to discontinue in favor of outdoor in-person activities – the researchers of course complied with this request.

A robust data collection for intervention participants took place and included a pre/post survey, interviews and satisfaction/feedback survey. The results can be found below in the Project Data Report section of the report.

To support future deliveries, training for CCRC and Friends Life Care Partners staff in the *Effective Connections Program* was also requested and took place in September of 2021.

Project Data Report

The project utilized multiple data collection strategies to gain insight into the experience of loneliness and isolation of participants, ascertain the impact of interventions and develop recommendations for future work. Each strategy is described in detail below.

Strategy One: Paper and online anonymous survey collection Year One *(year one)*

More than 500 people participated in the initial survey data collection (N= 512) for this project. Respondents who were on average aged over 80 years old described themselves as largely female (67.5%), white (93.2%) and non-Hispanic (96%). In addition, over 90% reported having one or more chronic condition with hypertension (46.3%) the most commonly noted, followed by arthritis (38.2%) and high cholesterol (33.7%). Just over 20% indicated that they have depression/anxiety conditions. There was little difference in these demographic variables between those who lived in CCRCs and those in Friends Life care.

Table 2: Quantitative Data Collections (N = 512)

Site	# Survey Respondents	Total population	Population reached
Foxdale Village	49	363	13.5%
Friends Life Care	323	2506	13%
Friends Village Woodstown	22	170	13%
Medford Leas	33	597	5.5%
Pennswood Village	83	425	19.5%
Total	512	4061	12.6%

Data record through 8/29/2019

In addition to the project descriptive data collection, the researchers utilized three measures to collect information about their social network: Lubben Social Network Scale – 6; respondent activities: Social Engagement Scale by Dong, et.al. (2014); and preferences for solitude: Burger's Preference for Solitude Scale (Burger, 1995).

The Lubben Social Network Scale – 6 (LSNS – 6) is a six item self-report measure of social engagement. The LSNS-6 is a validated instrument designed to gauge objective isolation in older adults by measuring the number and frequency of social contacts with friends and

family members and the perceived social support received from these sources. Lower scores on the measure are associated with increased isolation, mortality, hospitalizations and depression (Lubben & Gironda, 2003).

For both CCRCs and Friends Life Care approximately two thirds of respondents had at least three relatives and three friends they could rely upon and with whom they felt able to share their concerns.

The Burger Preference for Solitude Scale. Past research suggests that solitude can have either a positive or a negative impact on a person's well-being. How time away from others affects people may depend on the person's general preference for solitude. Most research relates wellbeing to the amount of time spent alone, but not about the link between wellbeing and a person's preference for being alone. The Preference for Solitude Scale addresses this. Participants are asked to pick between twelve pairs of statements picking the response that best describes them. The scale possesses good internal consistency, stability, and reliability. (Burger, 1995).

PARTICIPANTS IN THIS STUDY HAD A HIGHER THAN AVERAGE PREFERENCE FOR SOLITUDE

Participants had an average solitude preference score of 6.67 with a standard deviation (SD) of 2.78 for CCRCs and the figures for Friends Life Care were 7.15 with a standard deviation of 2.65. The norms for this scale are an average score of 4.87 with a standard deviation of 2.57 The norms for this scale are an average score of 4.87 with a standard deviation of 2.57 suggesting that the participants in this study had a higher than average preference for solitude. There was a non-significant trend for Friends Life Care participants to have a higher preference for solitude.

The Social Engagement Scale designed for older adults is a 16-item scale comprising two subscales, cognitive and social activities, with each scored on a one to five Likert scale and then summed. Each subscale has good reliability (Dong et al., 2014).

CCRC participants had an average score of 23.91 with a standard deviation of 4.43 for their reliance on cognitive activities and of 12.86 with a standard deviation of 4.87 for social activities; whereas the figure for Friends Life Care were an average score of 24.28 with a standard deviation of 4.18 for cognitive activities and of 13.04 with a standard deviation of 4.56 for social activities. Prior reports (Dong et al, 2014) for general population older adults are of 12.6 with a standard deviation of 5.86 for cognitive activities and of 9.01 with a standard deviation of 4.76 for social activities suggesting that the participants here had a higher level of participation in cognitive activities and a similar level of participation in social activities when compared to other reports for older adults.

Strategy Two: Focus Groups
(second and third quarters of year one)

After a preliminary review of the quantitative data gathered a series of focus groups in CCRCs were organized to further explore some of the emerging themes and issues. Focus

groups were conducted throughout the summer within two months of the initial presentations/data collections. As may be seen in Table 3, six focus groups held at five sites were completed.

Table 3: Focus Group Participation

Site	Focus Group Date	# of Participants
Medford Leas	07/09/2019	N=13
Foxdale Village	07/17/2019	N=4
Foxdale Village	07/18/2019	N=5
Woodstown	08/12/2019	N=9
Pennswood	08/12/2019	N=2
Friends Life Care	n/a	n/a

The interview guide for the focus groups was comprised of six topic areas and is based on data from the formative quantitative data analysis of the project (see Table 4).

Table 4: Focus Group Topics and Prompts

Topic	Prompt(s)
Health conditions	To what extent have these conditions impacted your ability to participate in social activities? How have these conditions increased your feelings of loneliness or social isolation?
Contact with relatives	Most respondents stated that there are 3-4 relatives they interact with every month, can talk with about private matters, and can call on for help. In your experience: ● How much do you agree or disagree with these findings? ● Do you feel that interacting with relatives prevents you from experiencing loneliness?
Contact with friends	Most respondents stated that there are 3-4 friends they interact with every month, can talk with about private matters, and can call on for help. ● How much do you agree or disagree with these findings? ● Do you feel that interacting with friends prevents you from experiencing loneliness?
Activities	What types of activities do you participate in and how frequently do you participate? ● If you are not able to participate in activities, what is preventing you from doing so? ● Do you believe that participating in activities decreases your feelings of loneliness or isolation? Why or why not?
Desired solitude	How much do you agree or disagree with the idea that most of us like having some time alone?
Undesired isolation	When are the times and where are the places when you feel alone and don't wish to be?

The focus groups comprised individuals who expressed a wish to participate, and were made up of both men and women, recent as well as long term residents of the participating CCRCs and of very active as well as less active community participants including individuals with significant caregiving responsibilities. Two researchers participated in the focus groups. Notes were taken during the focus group meetings by one of the researchers and then, verified afterwards with the other researcher. Microphones were used during the meetings so that all participants could hear and participate fully.

A cross-comparative thematic analysis of the notes taken identified five themes:

- Weekend loneliness and isolation
- Communications issues – finding and accessing opportunities to connect
- New residents onboarding and engagement
- Formal services for life/health transitions
- Sensory changes, barriers and concerns

Focus group comments that highlighted these themes included:

"I end up talking to myself too much…dealing with hearing and memory problems I don't have people to talk to"

"How do you find out about these things in a small enough group where you don't lose about 80% of what people are saying?"

"I like to know how things work – sometimes when you join something people don't want to tell you how it works – so either you go along or you are not too welcome."

"I fear that if I lost my wife I would be very, very lonely"

"There is nothing that is addressing the isolation that comes with lack of family"

"We are not trying to find the holes that people are falling into."

"The weekends are so lonely."

Quotes selected here are representative of similar issues raised by multiple participants in all of the focus group held.

Strategy Three: Key Informant In-depth interviews
(fourth quarter year one and first quarter year two)

Key informant in-depth interviews also took place at the end of year one and into the beginning of year two. There were a number of individuals who indicated that they had more to say but did not wish to do so in a focus group. The interviews were consistent with both survey and focus group data and also provided some unique though anecdotal thoughts The Key Informant Interview Guide (see table 5) asked participants to respond to themed questions that reflected several issues previously raised in focus groups and reflective of current understanding of factors leading to or impacting loneliness and isolation as we age. These include depth of social networks and relationships, caregiving, sensory changes, life transitions, self-perception, environmental barriers and a self-guided prompt.

Two groups were purposively targeted: (1) as indicated, those previously participating in other data collections who have indicated a desire to be interviewed individually and in

addition, (2) individuals identified by staff and other interviewees as having a particular perspective on loneliness who have not previously participated in other data collections. Interview participant age ranges and other demographic features (over 80 years old, female and male, and with more than one chronic condition) were consistent with earlier samples.

Table 5: Key Information In-depth Interview Guide

Topic	Prompt(s)
Social networks and relationships	● Regular contact with a wide social network can improve quality of life and help us to manage or reduce feelings of isolation and loneliness. ○ How would you describe your social network and its ability to support you when you are feeling down, lonely or blue?
Caregiving	● Providing regular or daily care to a loved one can lead to feelings of loneliness and isolation. The challenges of providing support and care to others seems to be connected with isolation both in terms of physical isolation and psychological and emotional isolation. ○ Have you personally experienced the role of caregiver and if so how would you describe the supports that help(ed) you manage this role? ○ If not, do you know of other friends or families who have shared this experience with you?
Sensory Changes	● Sensory changes as we age sometimes cause us to withdraw from activities and relationships we enjoyed in the past. ○ Have you ever experienced a time when you decided not to participate in something because of your ability to hear, see or otherwise understand people/place? ○ If so, what was that like for you? ○ What might have made things better or encouraged your participation?
Life Transitions	● Life transitions can be difficult. Retiring, losing loved ones and changes in physical or cognitive abilities can change our perspective on our future, our goals and mood. ○ What can you tell me about your experience with these types of changes? You might talk about things that have happened and/or things you are concerned will happen. Tell me what you have done or think you might do to cope with these types of changes.
Self-perception	● Sometimes changes we experience have a profound effect on our mood and thinking. We might decide that we aren't useful anymore, that people are not interested in our contributions or that we are being left out of activities on purpose by people who Do not value us or think it will be too much work to have us around.

Topic	Prompt(s)
	○ Have you ever experienced these types of feelings? ○ If so, was it a short time or did the feelings last? ○ What if anything did you do that helped? ○ What might you try if you experienced these feelings again?
Environmental Barriers	• Sometimes environmental barriers to our participation in activities are a factor in our living our fullest life. Transportation, building structure and technology can all impact our ability to move through our lives. ○ Can you identify a time when this may have been a concern for you or someone you know? Please describe the circumstances and how the situation was or might be resolved.
Self-guided response	• What else would you like to tell me about your experiences with isolation and loneliness and/or the experiences of your loved ones?

Social Network

Each of the interview participants was able to describe social contacts that they found helpful to their well-being. Although some identified wider networks, most networks described were largely family based and one person mentioned having a good friend they stay in regular contact with but also expressed a desire to build a larger social network. Much of the loneliness reported by the group in terms of social network was caused by losses in the network, usually a spouse or significant other. Several did report attending grief groups or counseling but expressed that while these activities are helpful they were unable to meet their resulting social needs. Several indicated an inherent desire to be alone and a preference for solitude. As one respondent stated "I feel quite comfortable mostly being alone" and that there are "so many people who are lonely and the interactions in [groups] are great but not sufficient for me."

Caregiving

Several of the interview participants expressed having had caregiving responsibilities that were isolating though none were actively caregiving at the time of the interview. Some provided caregiving to spouses and others to parents or family members. The caregivers interviewed expressed intense feelings of loneliness and isolation during that period. One respondent stated caregiving is "one of the loneliness existences in the world" and another saying "I came through the experience knowing that I would need someone to be there for me."

…caregiving is "one of the loneliness existences in the world"

The caregivers described both instrumental support challenges such as needing rides, assistance with hands-on-care, etc. as well as the need to emotional support. One participant expressed frustration with family and friends who "just stay away."

Furthermore, caregivers also expressed that in many cases they were not able to address their own health concerns due to their caregiving responsibilities; although each also described strategies they used to stay engaged, including virtual support groups and spending time at the gym. Finally, one caregiver added that "there are some universal experiences for caregivers. It is so difficult and lonely."

Sensory Changes

Several interview participants noted sensory changes that limited their ability to connect socially. Vision loss, and in particular its impact on one's ability to drive was noted as a confounding issue for some socializing. Hearing loss was also mentioned and one participant expressed frustration with knowing they were "missing parts" of conversations, television, etc. The participant also noted they had not had a hearing test and were not interested in having one until it was "necessary." An impression that hearing aides are not helpful was also expressed. Finally, several participants noted that chronic pain related to injury or deterioration impacted mobility and in one case was associated with a fear of falling such that the participant was no longer interested in attending some social engagements.

CRITICAL COMMUNITY SUPPORT

Several participants mentioned how helpful it was to be connected to social and instrumental supports as a member of their continuous care retirement community or through a service coordinator.

One participant said "I'm impressed with how people have dealt with changes in their lives. People are so vibrant and you can

Life Transitions

As previously noted, many of the interview participants stated that losing a spouse or significant other had a profound effect on their feelings of loneliness and/or isolation. Participants noted feeling very alone even when a supportive and wide social network was in place. Several mentioned joining grief groups and/or seeing private counselors for support as well. One member stated "I have a good support network but that didn't stop me from missing the early morning and end of day conversations with my wife." These losses were not the only life transition mentioned.

Career changes were also noted as limiting social connectedness. One participant noted that becoming a full-time caregiver resulted in the end of their careers severely limiting social and instrumental supports. Another participant described retiring before their partner and the "disconnect" that left in their relationship. Although these life transitions presented challenges most participants felt that the transition period was most challenging and when they needed the most support. One participant described this as finding their "new normal."

Self-Perception

None of the participants noted concerns in this area. While most could point to a time or circumstance where they might have experienced negative or self-defeating thoughts, each

described finding supports to assist them. Several participants mentioned how helpful it was to be connected to social and instrumental supports as a member of their continuous care retirement community or through a service coordinator. One participant said "I'm impressed with how people have dealt with changes in their lives. People are so vibrant and you can see it here," Pointing out that the example of others was a helpful support and changed their own perception of their situation

Environmental Barriers

The most notable concern environmentally for interview participants was related to transportation. One participant said that as they now have difficulty driving because of a vision loss they feel more isolated; however, they also noted that learning to navigate public transportation has helped to resolve this. Several participants were still driving their own vehicles and one reported moving to the city where public transportation was more readily available. Another participant noted the challenges living in a three-story home but rather than move preferred to add adaptive equipment (grab bars, railings, etc.) and chooses to see the stairs as a good form of exercise.

…several members mentioned the need for more technology support…

Finally, several members mentioned the need for more technology support as they believed this to be a way to stay connected but acknowledged the barrier that they have limited experience and/or equipment. The COVID-19 Pandemic definitely demonstrated the need to such supports and participants we were able to follow-up with later said they felt that technology support had proved both more critical and more available as a result of the Pandemic.

Self-guided Responses

The interviews concluded with an open ended question: What else would you like to tell me about your experiences with isolation and loneliness and/or the experiences of your loved ones?

Thematically responses fell into two categories expressing a positive perspective and/or a focus on a personal challenge. One participant who spent many years as a caregiver described a desire to help others in a similar situation but also found that difficult to do and did not find the experience supportive of building the types of social contacts desired. Several participants noted that being alone was often preferred and their experience of loneliness was driven more by the loss of a loved one also noting nevertheless, that they understood why they might need a broader social network. A participant experiencing chronic pain identified this as a barrier to living their life to the fullest but also reported that they still felt they were able to find the supports they need despite being concerned about a decreasing ability to ambulate.

In the words of interview participants:

"I do know that the group experience was never for me so I have to find other ways to build my social networks but I am also quite comfortable being alone."

"Knowing that I am aging can be depressing at times, but I am still grateful to wake up every day."

"I always try to find the bright spot or the humor in everything….people who are a part of your life leave you and we don't have any control over the people we lose – hopefully Friends Life Care will be there when you are feeling socially isolated."

Strategy Four: Online anonymous survey collection for Workshop Participants
(third quarter year two through second quarter year three)

Participants (28 participants across four deliveries of the intervention), recruited for the *Effective Connections Program* the small group psycho-educational intervention developed for this project, were asked to complete a pre-test prior to participation in the program. The survey utilized several measures previously used in the project. In addition, information about basic technology skills and demographics were collected.

THERE WAS A SMALL TREND FOR REDUCED FEELINGS OF LONELINESS

Participants were aged between 74 and 92 years, were mostly but not exclusively female (every group but one had male participants) and all had one or more chronic conditions.

The following survey scales were used in the evaluation of the program:

- Campaign to End Loneliness Scale
- Patient Reported Outcomes Measurement Information System
- Lubben Social Network Scale-6

Because the numbers participating in this pilot of the intervention were small, comparisons were limited to comparing aggregated means. The results can be found in Table 6.

Table 6 (n=28)

Scale	Pre-Test Mean	Post-Test Mean
Campaign to End Loneliness Scale	4.90	3.50
Patient Reported Outcomes Measurement Information System (PROMIS)	14.8	15.4
Lubben Social Network Scale-6	16.8	16.5

As can be seen there was a small trend for reduced feelings of loneliness but this was not statistically significant and findings for the other two scales were for no real change. However the overall starting point for participants for these scales were that they were not particularly lonely, they had reasonable confidence in getting support and they had some participants in their support networks. In examining individual cases there were examples

of larger reductions in levels of reported loneliness and some individuals reported more increased confidence on the PROMIS at post-test.

Strategy Five: Participant Satisfaction/Feedback Survey Specifically for those who participated in the Intervention
(third quarter year two through second quarter year three)

As can be seen in Table 8, here were a series of 8 fixed questions scored on a four point scale (with 4 being the most positive response) posed to the participants as well as the opportunity for open-ended responses to better understand what participants perceived they gained from the intervention and their related satisfaction.

Table 8: Satisfaction/Feedback Survey for *Effective Connections* Intervention Participants

Question	Mean Score
I feel that I can develop more effective problem solving skills for my relationships as a result of participating in the program	3.6
I feel that I can develop more effective problem solving skills for the management of my health and wellness as a result of participating in the program	3.3
My confidence level of using technology to connect with friends and family increased as a result of participating in the program	3.2
I feel that I can better manage worst case thinking as a result of participating in the program	3.7
I feel that I can better manage loss as a result of participating in the program	3.1
I learned how to find creative energy and use it to support my goals as a result of participating in the program	3.5
I feel that I can better manage fears about future memory loss	2.9
I feel that I can better manage fears about future sensory changes	3.1

Interestingly the highest scores were for questions that reflected the targeted content of the intervention: problem solving in relationships, managing worst-case thinking and using creative energy to support one's goals.

In the open-ended question responses from multiple participants raised the value of the conscious and compassionate breathing and the positive thinking activities that they were continuing to use, and the value of the program during COVID-19. One participant stated: "I took something away from every session I attended" and another: "I would like to find a way to bring these skills to our community."

"I took something away from every session I attended"

In addition, we received feedback from staff working with some of the participants in the program. One stated "I just wanted to write to say that I just spoke to one of my members who is involved with the isolation

and loneliness group. She sounds like a totally different person from the woman I spoke to in August! She loves the group and is getting a lot out of it."

Strategy Six: Key Informant interviews for Workshop Participants
(third quarter year three)

Participants in the Effective Connections Program were invited to participate in key informant interviews to help project researchers better understand the experience of intervention participation and to provide feedback about the experience. The interviews were semi-structured and were independently conducted by a Temple University Master of Social Work student who was trained in interviewing and who had experience with similar interviews. The interview guide can be found in Table 7.

Table 7: Interview Guide for Workshop Participants

Topic	***Prompt(s)***
General	• What did you like most about the Effective Connections Program? • What do you remember most about the workshop? • Why do you think the thing you remember most really stuck with you?
Program Sessions	• Which sessions did you find the most helpful? • Prompts if needed focus on content areas like goal setting, socializing virtually, stinking thinking, relaxation, etc.
Program Strategies	• Which strategies from the program helped you the most? • Are there strategies that you still use today? If so, how do you use them today and in what circumstances?
Program Benefits	• Can you tell me more about how you benefitted from your participation in the program if you believe that you did? • Can you describe how you are currently making connections with others? • Do you think the program helped you with this?
Program Strengths and Weaknesses	• Is there anything not covered in the workshop that you wish had been covered?

Topic	***Prompt(s)***
	• Is there anything you would change about the program? • Did you think the program was the right length and the sessions were long enough?
Free Response	• Is there anything else that you want us to know about the Effective Connections Program or your experience as a participant?

General Feedback

Overall feedback from program participants was positive. Most of those interviewed reported that they enjoyed the group and in particular getting to know new people. Several participants mentioned how important the program was during the height of the COVID-19 Pandemic as opportunities to socialize were more limited. In addition, most participants reported lasting connections with some members of their group; although this was not true for all members who expressed a desire to stay connected but over time did not do so. There is a group of participants still meeting on a regular basis as reported by several participants. When asked what they liked most about the program one participant said, "I think the connection with people. We're still meeting!"

Program Sessions

Of participants interviewed most could not point to a single session, rather they described self-management strategies utilized throughout the program. These will be described under *Program Strategies*. One respondent did mention the session focused on cognitive restructuring as a favorite.

Program Strategies

Much of the feedback from respondents was focused on the self-management strategies used throughout the program and in particular goal setting. One participant said that "learning to set goals that were manageable," a concept that is introduced in the first session and repeated in each subsequent session was one of the most helpful strategies. Another participant noted that the goal setting was important but felt the program did not create enough accountability for goal success.

Program Benefits

…the program "helped me to see that I wasn't the only one that was struggling"

The feedback on program benefits included much of the prior noted topics but also included a great many comments about the weekly resources. Several participants noted the resources as one of their favorite things about the program. Another said that "I knew a lot about accessing resources, but the group had so

many wonderful things and of course [the facilitators] had a lot of stuff, so the combination was great."

In addition, most people interviewed felt that the program provided important opportunities to meet new people. Noting that the program "helped me to see that I wasn't the only one that was struggling" according to one respondent. Another stated that "as people talk and we really talk, even though there is a certain map of considerate reserve, there was a lot of intimate things that we discussed and that you would trust each other with." This respondent also noted that the sharing of personal stories that took place in the workshop helped them to connect with other members more.

Program Strengths and Weaknesses

When considering strengths of the program, again, respondents noted previously mentioned strategies like goal setting and the relationships built during the time together and beyond. Many respondents noted that the structure of the program allowed for discussion and sharing and that the virtual platform worked for some participants more than others. The majority of respondents felt they benefitted from their participation and felt enriched by the new relationships even if they did not continue much beyond the program.

In terms of weaknesses there were two themes among those interviewed. The first was related to desired follow-up sessions with the same group members, or, a slightly different way of addressing this for some was related to the cadence of the program perhaps adding more sessions or stretching them out over more time. In both cases it seems there was a desire for an ongoing connection for most people interviewed. One respondent captured this by stating "[the program] was such a wonderful [program] and I guess that it, it is a shame not to follow up on it in some way because it brings people together…"

The second theme focused on the lack of depth allowed by the program structure. Some participants would have like more in-depth discussions and time to process with a more robust accountability structure. One respondent noted that they "would have liked a little more depth in places…I thought it was really well organized and it was designed for people to kind of build on what they learned, which I really appreciate."

"Yes, I would say [I make more connections now]. I'm not the most social person. It's a struggle, you know, and I still work on that. I work more consciously."

Free Response/Notable

As the interviews were semi-structured respondents were encouraged to elaborate on or add commentary that we beyond the scope of the questions. While most comments are reflected in prior sections participants did expand on several themes.

Comments included the following:

- *"It would have been lovely to be in person, but I did not feel deprived in any way of the experience, in fact, I would even add that, in some ways it's easier to listen."*
- *"Yes, I would say [I make more connections now]. I'm not the most social person. It's a struggle, you know, and I still work on that. I work more consciously."*
- *"You know, it was certainly an enjoyable experience and I think the two facilitators really worked hard you know, to make it a good experience."*

- *"It just made me realize how I become kind of a hermit and I wasn't doing those kinds of things and it made me open up more."*
- *"It was really, really great to hear what other people were doing and to meet some new faces and see who live in a similar environment."*

Training for Future Programming and Sustainability *(third quarter year three)*

To support sustainability of programmatic efforts at reducing loneliness and isolation a training was offered to partners of the Consortium. Four organizations were able to send staff to be trained. These include Friends Life Care Partners, Foxdale Village, Pennswood Village and Medford Leas. The training was held in late September over a two day period. Each organization sent a single staff to the training.

The training goal was to prepare trainees to deliver the *Effective Connections Program*, or a customized version of the program, by providing background information related to the current research on loneliness and isolation particularly related to older adults and the core content, skills and information utilized in the pilot *Effective Connections Programs.* Materials were provided to trainees that included a slide set guide for the program and associated handouts.

A training evaluation was conducted and generally participants were satisfied with the training. Trainees agreed that the trainers were prepared, demonstrated expert knowledge of the subject and presented the information in a logical manner. Confidence levels for delivery of a similar small group effort to organizational populations varied slightly with two-thirds of those reporting that they felt "confident" they could do so and one-third noting they only felt "somewhat confident."

In terms of the most valuable components of the training people noted both the logistics of delivering a similar program and the foundational information were most valuable. When asked if there was a component of training they would have preferred the trainers spend more time on one participant noted they would have like to "actually see a group." Given HIPAA regulations no classes were recorded; therefore to address this in future trainings that trainers should consider a mock-session of sorts being added to the training.

One additional recommendation by a trainee was for a shorter intervention, based on comments from former participants that the eight week commitment was difficult.

The course design is based on foundational learning principles from self-efficacy and adult learning theories. As this was a pilot all feedback received will be considered for any future iterations of the program.

Recommendations

Recommendations fall into two areas: (1) potential additional interventions and (2) further delivery of Effective Connections Program.

A number of potential interventions are indicated by the data findings.

1. Add weekend programming at CCRCs.

2. Expand and test education and technology approaches to address hearing loss challenges including portable sound systems for smaller group meetings and activities.

3. Develop additional communication strategies to engage and integrate new residents into a CCRC. This may include multiple distribution channels for information on on-site resident managed groups and activities and improving onboarding of new residents through a mentoring type ambassador program and dining room welcoming for new residents and for residents who will no longer be attending with a spouse.

4. Additional supports for caregivers which might include respite, Mind Matters programming (already being implemented at Pennswood) or other supports.

5. Expanding understanding of the experiences of community residents from the Friends Life Care membership. This might include additional information gathering as well as developing an assessment tool for self-identification of subjective and/or objective isolation and its causes in this setting.

6. Further delivery of the Effective Connections Program might include a regular offering of both a virtual and an in-person delivery of the intervention. There should also be efforts to reach individuals identified by staff or in the case of CCRCs, by other residents who have had losses, who have withdrawn from earlier levels of participation in activities, who are new to CCRC or Partners programming or who have not participated in programming or in community activities.

Conclusion

It was clear throughout the various data collections that many individuals choose to be connected with CCRCs in the consortium and/or with Friends Life Care Partners because they were seeking the opportunity to be connected with others in new ways. Many also came with spouses/partners, had linkages with other family members and friends and had connections in the greater community. Living within the CCRCs and continuing to interact with Friends Life Care Partners has also resulted for many in new connections and an appreciation of the opportunities offered by the various activities that are part of this experience.

However, some struggle in making new connections and changes in people's lives such as death of a spouse/partner, less contact with other family members, losses among friends, reduced access to activities because of increasing health concerns or disabilities and/or long standing issues in being with others all contribute to some individuals having unwanted isolation leading to loneliness. During the course of this study the appearance of COVID-19 caused disruptions to connections for even the most involved and self-sufficient individuals; never mind those who were already isolated.

The findings here are that most individuals are doing well with lower levels of concern overall, as compared to other groups of older adults. Those who are at risk and the reasons why risk increases are also identified. A number of solutions are proposed and the feasibility of a group intervention was successfully demonstrated as well as valued outcomes confirmed among participants. Staff has been trained in that intervention so that it may be continued. To the extent that there is a possibility that COVID-19 concerns will continue and/or there may be new similar concerns, this represents a tool that will mean the Quaker Senior Living Consortium will be better prepared to deal with the loneliness consequences that may result.

There are also resources now to address longer standing loneliness concerns and some additional intervention recommendations to consider.

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