Social Determinants of Health in the Age of COVID: Effects of Social Isolation Among Adults 62+ in Rural Pennsylvania

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Abstract

Background: Social isolation and loneliness are problems affecting the aging populations in rural America. This study analyzed the extent of social isolation among rural Pennsylvanians aged 62 or older, evaluated the determinants of social isolation among older residents, identified evidence-based programs and services that minimize social isolation, and assessed potential replicability in Pennsylvania. **Methods**: Researchers surveyed approximately 400 rural residents to measure social isolation, social connection, use of technology, transportation, and physical and mental health. Demographic information from the survey respondents, who resided in five rural Pennsylvania counties, was also compiled. A systematic review of available literature, state aging websites, and grey material, such as government documents and reports, were collected and analyzed to identify interventions targeting social isolation among older rural residents. Focus groups with case managers and administrators from Area Agencies on Aging, mental health providers, and county Mental Health and Intellectual and Developmental Disabilities (MHIDD) offices were conducted to identify current programs in Pennsylvania that address social isolation among rural elderly as well as assess whether or not interventions targeting social isolation in other states could be implemented in Pennsylvania. **Results**: Focus groups reported interventions that partnered with K-12 and university professional programs leverage existing systems and make implementation easier. Animatronic pets and shared housing programs were also identified as interventions that can address social isolation for homebound residents. Seventy percent of the survey respondents were comfortable using the internet and technology and half had social media accounts, but they were less likely to use the internet for telehealth or connecting with others. Older adults prefer face-to-face interaction over virtual.

Keywords: aging services, older adults, mental health, rural communities, social isolation

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Executive Summary

This study analyzed the extent of social isolation among rural Pennsylvanians aged 62 or older. It identified: 1) evidence-based programs and services that minimize social isolation, 2) evaluated the determinants of social isolation among residents aged 62 or older, and 3) evaluated the programs and services that currently exist in rural Pennsylvania to determine replicability throughout Pennsylvania and make policy recommendations. This study was conducted in three phases: a systematic literature review, a telephone survey, and focus groups with case managers.

Key Findings

- *Social Connection and Isolation*: Women were more likely than men to report feeling lonely despite reporting that they are in good health and have enough friends and family around on whom to depend. Survey participants reported preferring in-person social activities.
- *Mental Health Access*: Stigma continues to keep older adults from seeking mental health help or from participating in programs targeting mental illness. Older adults prefer face-to-face interaction, even though roughly half of survey participants reported having social media accounts.
- *Communication*: Faith-based organizations and social media were mentioned as good resources to help rural older populations make social connections, provide mental health resources, and advertise social activities.
- *Transportation:* The lack of public transportation and the difficulty in accessing public transportation continue to be common barriers for rural older adults.
- *Housing and Social Isolation*: Shared housing and Elder Cottage Housing Opportunity (ECHO), which match older adults with younger partners, are good ideas but are difficult to implement because of the difficulty in matching older adults with someone outside of family with whom they can reside.

Possible Strategies and Policy Considerations

- *Transportation*: Expand services provided through the Medical Assistance Transportation Program (MATP) to address barriers that include lack of public transportation routes in rural communities and long ride times. More routes, longer hours of operation, and allowing MATP to cross county lines were suggested.
- *Services*: Expand telehealth, case management services, and Area Agency on Aging and senior center collaborations focusing on education programs for mental health prevention, stigma, and socialization.
- *Collaboration*: Develop more partnerships among the Area Agencies on Aging, Department of Education, and universities to implement community-based interventions. Colleges and universities with social work, nursing, counseling, and psychology programs usually require field work as part of the learning process. This field work could be done in conjunction with the Area Agencies on Aging or senior

centers to provide education, prevention, assessment, and/or intervention for older adults in the community.

- *Program Expansion*: Expand the use of animatronic pets, ECHO and shared-housing programs, care management, waiver services for home modifications, adult day care, Meals on Wheels, and MATP transportation services.
- *Interventions*: Focus on interventions addressing companionship, such as letter writing/pen pal programs between K-12 grade school children and older adults, animatronic pets in the home, and friendly visits from college students as part of professional training.

Background

This study analyzed the extent of social isolation among rural Pennsylvanians aged 62 or older by conducting a systematic literature review, a telephone survey, and focus groups with case managers from the Area Agencies on Aging, and county mental health, autism, intellectual and developmental disabilities.

The results from the literature review of services and programs used throughout the U.S. for socially isolated adults were used to develop a focus group guide to explore the challenges and barriers to implementing similar programs in Pennsylvania. The survey of approximately 400 older rural Pennsylvania adults, which was conducted in five representative counties, explored loneliness, emotional support, health, internet and technology use, and transportation.

Activities, Process and Outcomes

The quantitative data show that more than 70 percent of the survey participants feel comfortable using the internet and technology in their life but are less likely to use the internet for health issues or for connecting with others. Data show that participants still like in-person connections. Even though about half of the participants have a social media account (the most popular of which is Facebook), data did not explore how often they use it or whether they use it to connect with others. More than half the respondents participate in faith-related activities: attending faith-related activities seems to be the most popular. More than 90 percent of the participants drove their own cars and said public transportation was not easily available to them. Based on these findings, faith-based organizations and Facebook could be good resources to help rural older populations make social connections or by which to advertise social-connection activities. However, public transportation could be an issue when people need it.

Based on the results, the gender and number of people who live with the participants make a significant impact on loneliness. The data indicate that females are more likely to feel lonely. Thus, having people live together could reduce the sense of loneliness. Marital status is also important. Data suggest married people are less likely to feel lonely and have more emotional support and better health conditions. Income, loneliness, and

emotional support all have a significant impact on health. Having a higher income, fewer feelings of loneliness, and more emotional support seem to help improve the health conditions of older individuals. Interventions to help older people reduce loneliness and improve emotional support and income support programs can help improve the health conditions of older adults.

Qualitative data from focus groups identified interventions used in Pennsylvania and examined the challenges with implementing interventions that target socially isolated older adults. Case managers described multiple challenges, including health and mental health, the effect of stigma, work displaced families, difficulty accessing and using technology, problems with accessing transportation, staffing problems at partnering agencies that limit the ability to refer people to services, the isolating and limiting effects of COVID, limited home care services that address health care and socialization needs of rural elderly, and difficulty getting information to older adults about programs and how to access them.

Case managers offered their insights about implementing some of the interventions being used throughout the nation that address social isolation. Interventions that focus on companionship and engagement with other social systems, such as K-12 schools and universities, were among the interventions that were seen as easier to implement compared to interventions that require travel, facilitation, or commitment to several weeks of classes. In general, case managers believe implementing interventions that partner with K-12 schools and universities are good ideas. These interventions take advantage of existing workforce and infrastructure, so programs do not need to be created from the ground up. Schools have policies, practices, and processes designed to implement learning activities, such as letter writing, mentoring, and community service programs. The Area Agency on Aging (AAA) case managers reported that partnerships with K-12 schools allow them to flex their strengths by focusing their attention on screening, referral, follow-up, and program monitoring. The use of robotic pets is novel and relatively easy to implement. Several counties are currently piloting this project and reported positive results in the focus groups. AAA will need additional money to purchase and maintain these pets as well as manage their distribution. Case managers also think it is critical for the Departments of Health and Education to coordinate state level policies that will guide the implementation of these programs.

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Introduction

By 2030, 20 percent of the U.S population will be 65 years old or older (Hogan et al., 2015), which translates into an estimated 2.2 million adults 65 years old or older in Pennsylvania. Projections for Pennsylvania show that, in 2040, rural counties will have more senior citizens (65 years old and older) than youth (under 20 years old). Senior citizens will increase from 17 percent of the total population in 2010 to a projected 25 percent in 2040 (Behney, 2014). This population is steadily increasing and will require ongoing support and services to ensure healthy lives.

While not the same as loneliness or living alone, social isolation is defined as "a state in which the individual lacks a sense of belonging socially, lacks engagement with others, has a minimal number of social contacts and they are deficient in fulfilling and quality relationships" (Nicholson, 2009, p. 1346). The concept of social isolation that researchers are ultimately trying to describe, define and quantify illustrate a "lack" or an inadequacy of social connection (Newall & Menec, 2020).

Social isolation increases the risk of early death and disability (Wesołowska et al., 2017). Individuals who lack social connections or report frequent feelings of loneliness tend to suffer higher rates of serious health problems such as heart disease, cancer, and stroke that disproportionately affect rural residents compared to their urban counterparts (Brummett et al., 2001; Holt-Lunstad et al., 2015; Kulshreshtha et. al., 2014; Seeman, 2000; Stahl et al., 2017; Wildman et al., 2019). In addition to higher risks for depression, socially isolated older adults are 1.5 times more likely to attempt suicide than their urban counterparts (Ivey-Stephenson et al., 2017; Repke & Ipsen, 2020). Health-related problems, including a 50 percent increased risk of dementia (Centers for Disease Control & Prevention, 2020), cognitive decline (Barnes et al., 2004; Wilson et al., 2007), and age-related health conditions, such as hypertension, diabetes, cardiac conditions, and various cancers (Cornwell et al., 2014; DiNapoli et al., 2014), are associated with social isolation, which also increase the mortality risk associated with COVID-19 (Katz, 2020). Indeed, in March 2020, 89 percent of hospitalized COVID-19 patients had one or more chronic medical conditions such as diabetes, hypertension, cardiovascular disease, lung disease or obesity that complicated their recovery and increased mortality (Roberts & Tehrani, 2020).

Social isolation may lead to a lack of social connection. Social connection may be a protective factor guarding against depression, anxiety, and cognitive decline (Finlay & Kobayashi, 2018; Winterton, 2020). Eagle et al. (2019), found that the number of people in your social network is weakly associated with reduction in depressive symptoms; however, people who felt closer to their social networks, even if the network were small, were associated with lower levels of depression. This seems to indicate it is not the number of people with whom the person has contact but the quality of those relationships.

The rural elderly population of Pennsylvania is at an added disadvantage of being able to routinely socialize due to geographical distances between communities and neighbors, and limited transportation services. All these factors may increase the risk of

social isolation for an aging population, especially when they live in smaller communities that often have fewer resources and support.

The Pennsylvania Department of Aging offers a range of formal services and supports in every county via the Area Agencies on Aging (AAA). Programs such as adult protective services, ombudsman services, senior centers, senior community centers, health and wellness education programs, meals on wheels, advocacy, and legal assistance are offered via AAAs (Commonwealth of Pennsylvania, 2020). In Pennsylvania, the ombudsman program "works to resolve complaints and issues on behalf of individuals residing in long-term care settings, such as nursing homes, assisted living facilities, and personal care homes" (Pennsylvania Department of Aging, 2022, aging.pa.gov). In addition, the Pennsylvania Department of Labor and Industry's Disability Services division provides a host of formal services such as hearing aids, employment services, visual aids, and a veterans' registry that provides information about other supportive services (Pennsylvania Department of Labor and Industry, 2020).

The Pennsylvania Department of Aging (PDA) creates a State Plan on Aging every four years to provide a vision and direction for Pennsylvania's network of aging services. The current state plan remains in effect through September 30, 2024. There are five state plan goals designed to address all initiatives that the department has or will undertake to improve aging services in Pennsylvania. The goals include (1) strengthen aging network's capacity, promote innovation and best practices, and building efficiencies to respond to the growing and diversifying aging population; (2) improve services for older adults and the ability to advocate for them by using evidence-informed planning, committing to data integrity and being accountable for results; (3) establish and enhance efforts to support healthy living, active engagement and a sense of community; (4) emphasize a citizen-first culture that provides outreach, embraces diversity, and honors individual choice; and (5) advocate for the rights of older adults and ensure their safety and dignity by raising awareness and responding effectively (PDA, 2020). PDA initiatives correlate with the undertaking of this study while addressing factors related to social isolation and connectedness, while also identifying potential health outcomes that may improve the lives of elders. All these areas outlined in the Pennsylvania's Department of Aging plan show up in the literature as protective factors that may increase socialization for rural elderly populations.

The purpose of this study was to analyze the extent of social isolation among rural Pennsylvanians 62 years old or older. The study sought to identify evidence-based programs and services that minimize social isolation, evaluate the determinants of social isolation among residents aged 62 or older, and evaluate the programs and services that currently exist in rural Pennsylvania to determine replicability throughout Pennsylvania and make policy recommendations. The study was conducted in three phases: a systematic literature review, a mail-in survey, and focus groups with AAAs.

Goals and Objectives

Goal 1: To identify the programs and services in the U.S. that help reduce social isolation for older adults (62+) who live in rural Pennsylvania.

***Objective 1*:** A systematic literature review identified services and programs used throughout the U.S. for socially isolated adults aged 62 or older and compared them with services and programs offered in Pennsylvania. Sources familiar with the needs of Pennsylvania elders that reside in rural areas were further explored, beginning with PDA websites for the 48 contiguous states, grey material, and academic literature.

Goal 2: Identify determinants of social isolation/loneliness and social connection/emotional support and the effects these have on the health of people aged 62 or older in rural Pennsylvania.

***Objective 2*:** A mail-in survey of rural Pennsylvania older adults was conducted in five rural counties (n=410) to examine social isolation/loneliness, emotional support, the effects of social isolation (loneliness and emotional support) on health, and social programs of interest that may reduce social isolation.

Goal 3: To evaluate the programs and services that currently exist nationwide to determine replicability in rural Pennsylvania and to offer policy considerations.

***Objective** 3*: Five focus groups were conducted with case managers from the Area Agencies on Aging, and county mental health, autism, intellectual and developmental disabilities programs (MH/A/DP) (n=35) to identify needs, barriers, and challenges to service delivery as well as replicability of programs identified in the literature review to inform policy considerations.

Methodology

Phase 1: Systematic Literature Review

The literature review helped to identify and synthesize the existing evidence related to interventions addressing social isolation and connection among rural elderly. This systematic review applied the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines as a general framework (see Appendix 1). A detailed description of the search procedures can be found in Appendix 2.

Search Strategy

The search strategy used key words (see Appendix 2) developed during a brainstorming session between the three researchers. This study used peer reviewed journal articles from the following electronic databases: PubMed, Scopus, CINAHL complete, MEDLINE, Psychology and Behavioral Sciences Collection, Web of Science, Social Work Reference Center, PsycINFO, Sociological Collection, Socioindex with full text, and Social Work abstracts plus. Grey literature searches included the Department of Aging websites in each of the 48 contiguous United States and databases and websites linked through the Departments of Aging websites (see Appendix 2 for a description of the search and study identification procedures).

Data Categorization

The researchers met to identify thematic categories for all interventions identified in the literature review. The interventions were placed into four categories based on the professional experience and knowledge of each researcher with community service systems for older adults and the focus or goal of each intervention (see Appendix 4). Once the interventions were categorized, the researchers identified which interventions would be used to represent each category. The researchers decided to include four representative interventions in each category to accommodate the 90 minute length of focus groups in this study.

Phase 2: Resident Surveys

Sampling and Recruitment

Sampling. The researchers used the following steps to select the counties for the resident survey: (a) the state was divided into the three regions using the Bureau of Community Health System's regional map (Bureau of Community Health, n.d.), (b) mean (110 per square mile) and median (85 per square mile) population densities for each county were calculated and examined, and (c) inclusion criteria were set by including the percent of people aged 65 and older enrolled in PACE (Pharmaceutical Assistance Contract for the Elderly), and the number of noninstitutionalized people aged 65 and older with disabilities to select one representative county from each region in Pennsylvania. Based on these criteria, the western counties of Crawford and Indiana, the eastern counties of Bradford and Lycoming, and central Mifflin County were selected. The selections included counties from different regions with average population density and relatively higher numbers of people with disabilities and low-income older adults to provide a good overview of social isolation issues among older rural Pennsylvanians. The research team recognizes the line demarcating west, central, and eastern counties is arbitrary, and Lycoming could be considered as a centrally located county.

Marketing Systems Group (MSG) provided the cell phone numbers, home phone numbers, and home addresses (including the name and age of the identified resident of the home) for the selected counties. The study team has used this marketing company in the past and its sampling frames were found to be very reliable, and all return surveys were from participants meeting the age-related inclusion criteria. Simple random sampling was used to select the participants. All eligible participants were defined as people who were age 62 or older. Of the 4,000 surveys sent out, 410 valid surveys were returned and used in this study. The research team used an anonymous mail-in survey to help participants feel comfortable providing their true information.

Recruitment. The research team originally used phone interviews to collect the data, but the response rate was about 1 percent. The research team then changed the data collection method to a mail-in survey, to which the response rate was about 10 percent. The team sent the survey directly to older adults' homes with a one-page introduction letter explaining the purpose of the study, a survey consent form, and the survey (see

Appendix 5). Everyone who completed a survey was eligible to be entered into a random drawing for a $40 gift card. The principal investigator contacted winners by phone. Gift cards were sent via certified mail and each recipient had to sign and return the signature card to confirm receipt of the gift card.

Measurement. The study survey included questions on demographic information, loneliness, emotional support, health, internet and technology, and transportation. For loneliness, the researchers modified the de Jong Gierveld's Loneliness Scale, which covers emotional loneliness (EL) and social loneliness (SL) (see Appendix 8). According to Sansoni et al. (2010), the de Jong Gierveld Loneliness Scale rates the highest for the effective assessment of social isolation. Additionally, the AARP Foundation (Frank, 2018) also used the de Jong Gierveld Loneliness Scale to measure isolation in adults over 50. Social connection is measured using the Patient-Reported Outcomes Measurement Information System (PROMIS) "Emotional Support" Short Form 4a, which is a four-item scale measuring emotional support (see Appendix 7). Health quality is measured using the PROMIS Global Health, a 10-item scale, to assess physical, mental, and social health. Both PROMIS scales were initiated by the National Institutes of Health (NIH) funding, and both are reliable and consistent (see Appendix 7). The internet and technology questions included accessibility, affordability, and confidence in using the internet and technology. The transportation questions included accessibility to public transportation and the older person's ability to get around. The instrument was used to complete 85 phone surveys and the data from the phone survey were used to modify the original instrument. As a result, demographic questions, such as marital status, gender, age, education, income, and number of people residing in the home were added to the final instrument prior to mailing to potential respondents. The survey had a total of 56 questions (see Appendix 5).

Missing Data. Overall, 2.9 percent of responses had missing data. Questions with the largest proportion of missing data were on income (16.5 percent) and the affordability of public transportation (24.6 percent). Little's Missing Completely at Random (MCAR) test was not significant, $\chi 2(66.71, n = 410) = 98$, $p = .993$, so the data were randomly missing and met the criteria to apply EM (expected maximization) imputation (Little, 1988). Thus, the researchers used the EM method to assign the missing data.

Data Analysis. Descriptive analysis includes frequencies, percentage, mean, median, mode, and standard deviation to describe the demographic of the population. Using an independent *t* test for the inferential analysis, the researchers compared (a) gender and loneliness, (b) gender and emotional support, (c) gender and health, (d) gender and emotional loneliness, and (e) gender and social loneliness. Using ANOVA, they compared (a) marital status and loneliness, (b) marital status and emotional support, (c) marital status and health, (d) marital status and emotional loneliness, (e) marital status and social loneliness, (f) education and loneliness, (g) education and emotional support, (h) education and health, (i) education and emotional loneliness, and (j) education and social loneliness.

Additionally, the researchers used regression analysis to test the important factors of older adults' social isolation by comparing (a) number of people that live with participants and loneliness, (b) number of people that live with participants and emotional support, (c) number of people that with participants and health, (d) number of people that live with participants and emotional loneliness, (e) number of people that live with participants and social loneliness, (f) income and loneliness, (g) income and emotional support, (h) income and health, (i) income and emotional loneliness, (j) income and social loneliness, (k) loneliness and health, (l) emotional loneliness and health, (m) social loneliness and health, (n) emotional support and health, (o) emotional support and emotional loneliness, and (p) emotional support and social loneliness. These analysis methods can help identify the significant factors that affect social isolation.

Phase 3: Focus Groups

Sampling and Recruitment

Focus group participants for this study were case managers from the AAAs and county Mental Health, Autism, Intellectual and Developmental Disabilities Program offices (MH/A/DP).

AAAs are listed on the Department of Aging's website at https://www.aging.pa.gov/local-resources/Pages/AAA.aspx. AAA case managers are the primary contact for individuals, families, and professionals needing community services for people aged 62+ in Pennsylvania. AAA case managers act as resource coordinators, completing the initial assessment to determine services for which a person might qualify, and making the appropriate referral to the agencies providing those services.

County MH/A/DP offices administer intellectual/developmental disability services (http://pafamiliesinc.org/understanding-systems/intellectual-disabilities/intellectual-developmental-disabilities-county-contact-information-for-pennsylvania). The role of the MH/A/DP also includes advocacy, resource coordination, assessment, and referral for those who qualify for MH/A/DP services.

As the primary points of contact for their respective groups, AAA and MH/A/DP case managers are knowledgeable about a range of interventions used in Pennsylvania and they are able to discuss which programs and interventions are critical in their communities. Recruitment of the AAA and MH/A/DP case managers consisted of 1) developing a list of contact information of each provider listed on the directories above, 2) direct phone calls to each office and email outreach to each office to identify a person who could authorize study participation, 3) follow up emails to facilitate scheduling of the focus groups, and 4) multiple email and face-to-face outreach attempts by the Pennsylvania Department of Aging to all county AAA directors. Agencies agreeing to participate in the study were asked to provide frontline case managers and supervisors familiar with the needs of socially isolated rural residents aged 62 and older. Several AAA and MH/A/DP offices forwarded the study recruitment letter to service providers contracted to provide services for AAA and MH/A/DP.

Participants and Data Collection

The focus group sample population (n=35) was divided into seven focus groups, which were conducted between July 2021 and November 2021. The final sample population included a broad range of frontline case managers from AAA protective services, housing supports, shared housing, OPTIONS assessment, base service unit mental health case workers, and supervisors from AAA and MH/A/DP from 14 counties. The average years of experience among the study sample was 8.85 years, with a range of one year to 25 years of experience.

Focus groups were conducted online using Zoom teleconferencing technology. Each focus group lasted approximately 90 minutes and was moderated by a trained facilitator and a team of researchers who managed the Zoom technology, presentation slides, and comments section of Zoom, and a research assistant who was assigned to take thematic field notes. Focus group narrative data were captured by Zoom, cleaned by a research assistant, and uploaded to NVivo 12 in preparation for data analysis. Repetitive themes emerged during the focus groups suggesting data saturation.

Results

Systematic Literature Review

The literature review produced an initial group of 346 articles. Of these, 111 were duplicates resulting in 220 unique articles. These were imported to NVivo 12 and screened by title and abstract resulting in a final total of 24 studies. The review of the Pennsylvania Department of Aging websites and grey material resulted in 262 programs and services that could address social isolation or loneliness. The researchers made a list of all of the interventions being used and identified a final list of evidence-based programs (see Appendix 3). The interventions were organized according to the purpose of the intervention. The research team identified the following four broad categories of interventions:

1. **Companionship -** Defined as someone or something who interacts in-person with the older person (i.e., robotic pet, friendly visitor: school children visiting or college student outreach through an educational program, real pets that are being cared for by the elderly person with assistance). This can be in or out of the home.
2. **Activity -** Defined as the older person engaged in an activity outside of the home or virtual programs with and around others that offers an *opportunity to socializ*e with others (i.e., senior center groups, exercise, mediation, education, bingo, grandparent mentoring in schools or other location program etc.)
3. **Counseling/Therapy/Training -** Defined as any program that follows a manualized program or has a mental health treatment component using a recognized therapeutic process or skilled therapist, trainer, or someone with specialized training to implement the program or intervention. The purpose of these programs is generally to change behavior, thinking, or improve mood and/or interpersonal skills.

4. **Outreach/Check-in -** Defined as a person or organization that calls an older adult in their home to check on them about how things are going without the older adult leaving the home or socializing with anyone else. They are not developing a larger social network. Outreach is initiated by the person/organization. Passive participation by the older adult that relies on others to engage them.

Next, the researchers met to place interventions into one of the four categories listed above. A final focus group guide was developed based on the results of the intervention categorization and goals of this study (see Appendix 5).

Residents' Survey

Demographic Information

Demographic data from the 410 respondents are as follows: 222 (54.1 percent) were male and 188 (45.9 percent) were female. The average age was 76.01, the median age was 75 years. The age range was 64 to 96 years old. For the number of people living in the participants' homes, the average was 1.68: the median was two people. The range was one to five people. For marital status, 34 (8.3 percent) people were single, 218 (53.2 percent) were married, 43 (10.5 percent) were divorced, 114 (27.8 percent) were widowed, and one (0.2 percent) was separated. For highest education, six (1.5 percent) people said other, nine (2.2 percent) said middle school, 172 (42 percent) said high school, 141 (34.4 percent) said college, 71 (17.3 percent) said master's, and 11 (2.7 percent) said doctorate. "Other" included GED courses, nursing school, below middle school, certificate courses, et cetera. (See Table 1.) The average household income was $52,479.79, and median income was $46,174.50. The range for income was from $0 to $350,000.

Table 1: Descriptive Analysis of Resident Demographics

Demographics	Frequency	Percentage (percent)
Gender		
Male	222	54.1
Female	188	45.9
Marital Status		
Single	34	8.3
Married	218	53.2
Divorced	43	10.5
Widowed	114	27.8
Separated	1	0.2
Education		
Other	6	1.5
Middle School	9	2.2
High School	172	42
College	141	34.4
Master	71	17.3
Doctorate	11	2.7

De Jong Gierveld's Loneliness Scores

For de Jong Gierveld's Loneliness Scale, the research team included five questions addressing emotional loneliness and social loneliness (see Appendix 7 for survey questions, abbreviations, and coding). The results showed 50 percent to 85 percent of participants reported that they never or rarely felt empty or lonely and that they had enough people around them with whom they could rely. The frequency and percentage details are in Appendix 8.

A composite score for loneliness was created by adding the scores of the five questions representing Loneliness. The range for the composite scores was from 5 to 25, the mean was 20.14, the median was 20, the mode was 20, and the standard deviation was 3.41. Higher scores mean less loneliness. To check the internal consistency and reliability of the scale, the researchers ran Cronbach's alpha and the Pearson correlation. The results showed that the scale's internal consistency is acceptable (α= .797; Tavakol & Dennick, 2011) and reliable (see Appendix 8).

Table 2: de Jong Gierveld's Loneliness Scores

	Never	Rarely	Sometimes	Usually	Always
Experience Sense of Emptiness	140 (34.1 percent)	146 (35.6 percent)	109 (26.6 percent)	12 (2.9 percent)	3 (.7 percent)
Miss Having People Around	76 (18.5 percent)	128 (31.2 percent)	162 (39.5 percent)	37 (9 percent)	7 (1.7 percent)
Often Feel Rejected	185 (45.1 percent)	149 (36.3 percent)	61 (14.9 percent)	10 (2.4 percent)	5 (1.2 percent)
Have People to Rely On	10 (2.4 percent)	20 (4.9 percent)	52 (12.7 percent)	154 (37.6 percent)	174 (42.4 percent)
Feel Close to Enough People	7 (1.7 percent)	14 (3.4 percent)	42 (10.2 percent)	155 (37.8 percent)	192 (46.8 percent)

PROMIS Emotional Support Scores

For PROMIS Emotional Support scores, the research team included four questions addressing personal feelings and emotional support (see Appendix 7 for survey questions, abbreviations, and coding). The results showed 77 percent to 86 percent of participants reported that they always or usually have someone to listen to them, discuss their problems with, make them feel appreciated, and support them when they have a bad day (See Table 3, PROMIS Emotional Support Scores).

A composite score was created for emotional support by adding the scores of the four questions. The range for PROMIS Emotional Support scores was from 4 to 20, the mean was 16.96, the median was 18, the mode was 20, and the standard deviation was 3.54. Higher scores mean more emotional support. The scale was proved to be reliable and have good internal consistency (α= .931) (See Appendix 8 for PROMIS Emotional Support Pearson Correlation Scores).

Table 3: PROMIS Emotional Support Scores

	Never	Rarely	Sometimes	Usually	Always
Have Someone Who Will Listen	6 (1.5 percent)	15 (3.7 percent)	37 (9 percent)	125 (30.5 percent)	227 (55.4 percent)
Have Someone to Confide In	11 (2.7 percent)	24 (5.9 percent)	47 (11.5 percent)	125 (30.5 percent)	203 (49.5 percent)
Feel Appreciated	3 (.7 percent)	16 (3.9 percent)	53 (12.9 percent)	115 (28 percent)	223 (54.4 percent)
Have Someone to Talk to When Having Bad Day	10 (2.4 percent)	34 (8.3 percent)	48 (11.7 percent)	124 (30.4 percent)	194 (47.3 percent)

Global Health Scores

The Global Health scores included 10 questions that addressed mental health, physical health, quality of life, health satisfaction, pain, and overall health issues (see Appendix 7). Sixty-five percent to 80 percent of the participants reported that their physical health, mental health, and ability to carry out daily activities was excellent or very good (see Table 4 frequency and percentage for Global Health Scores). The mean Fatigue score was 3.3, the median was 3, the mode was 3, the standard deviation was 1.001, and the range was from 1 to 5. Higher scores mean more fatigue. The mean pain score was 7.14, the median score was 8, the mode was 9, the standard deviation was 2.342, and the range was from 1 to 10. The lower the score the greater the pain.

A composite score for Global Health was computed by adding the scores of the 10 questions. The range for Global Health scores was from 20 to 50, the mean score was 38.23, the median score was 38, the mode was 38, and the standard deviation was 5.22. Higher scores mean better health conditions. The Global Health composite appears to have good internal consistency ($\alpha = .824$) and be reliable (Table 4 Global Health Pearson Correlation Scores.)

Table 4: Global Health Scores

	Poor	Fair	Good	Very Good	Excellent
Health Quality	5 (1.2 percent)	16 (3.9 percent)	62 (15.1 percent)	217 (52.9 percent)	110 (26.8 percent)
Health Physical	6 (1.5 percent)	29 (7.1 percent)	105 (25.6 percent)	222 (54.1 percent)	48 (11.7 percent)
Health Mental	3 (.7 percent)	18 (4.4 percent)	77 (18.8 percent)	185 (45.1 percent)	127 (31 percent)
Health Satisfaction	12 (2.9 percent)	26 (6.3 percent)	88 (21.5 percent)	172 (42 percent)	112 (27.3 percent)
Health Roles	10 (2.4 percent)	21 (5.1 percent)	74 (18 percent)	183 (44.6 percent)	122 (29.8 percent)
Health Overall	3 (.7 percent)	28 (6.8 percent)	109 (26.6 percent)	225 (54.9 percent)	45 (11 percent)
	Never	Rarely	Sometimes	Often	Always
Health Activity	5 (1.2 percent)	14 (3.4 percent)	50 (12.2 percent)	114 (27.8 percent)	227 (55.4 percent)
Emotional	60 (14.6 percent)	173 (42.2 percent)	128 (31.2 percent)	45 (11 percent)	4 (1 percent)

Internet and Technology

The survey included nine questions to measure internet and technology use (see Appendix 7 for questions, abbreviations, and coding). These questions included internet accessibility, confidence of using the internet and technology, the likelihood of using telehealth, and use of technology for making connections with friends and family.

Results show that 43 percent of the respondents said they never or rarely use the internet to stay in contact with friends and family and 93 (27.7 percent) said they sometimes do (see Appendix 8). More than 70 percent of all participants said they have the internet at their homes and feel comfortable in using the internet and technology to stay in contact with family and friends. In addition, 209 (51 percent) people said they have a social media account, and 201 (49 percent) said they do not (see Appendix 7). For those who have social media accounts, 173 (42.2 percent) reported having a Facebook account. Other accounts that participants listed were Instagram, Twitter, Snapchat, LinkedIn, and email.

There were 208 (50.7 percent) respondents who said they were very unlikely to use telehealth and 178 (43.4 percent) people who said they are very unlikely to use the internet for video calls with friends and family or online activities (See Appendix). There were 176 (42.9 percent) people who said they agreed connecting with family and friends via the internet or technology was just as satisfying as seeing them in person and 234 (57.1 percent) who said they disagreed.

Transportation

The survey included four questions to address transportation issues such as the use of public transportation and who provides the transportation. The data indicate that 383

(93.4 percent) respondents said they mostly drive their own vehicle to get where they need to go. For public transportation, 226 (55.1 percent) respondents said that public transportation was not easily available to them (see Appendix 8).

Faith-Based Activities

For faith-based activities, 240 (58.5 percent) respondents said they participated in faith-based activities and 170 (41.5 percent) said they did not. Of the people who participated in faith-based activities, 134 (32.7 percent) attended faith-related activities. Other faith-based activities included watching faith programs online, participating in Bible study, volunteering at their religious institution, praying daily, and attending faith services.

Independent t Test

To understand how gender affects loneliness, Emotional Loneliness (EL), Social Loneliness (SL), emotional support, and health among older adults, the research team conducted an independent *t* test. Based on the findings, gender shows significant impact on loneliness and Emotional Loneliness (EL). Females were more likely to feel lonely (including EL; see Table 5). The higher the mean score the less lonely a person feels.

Table 5: Independent T-test Results

	Male	(*N* = 222)	Female	(*N* = 188)	*t*	*P*
	Mean	Std.	Mean	Std.		
Loneliness	**20.4955**	**3.29369**	**19.7287**	**3.50337**	**2.281**	**.023**
Support	17.0631	3.69120	16.8404	3.36799	.633	.527
Health	38.3829	5.32154	38.0532	5.09664	.637	.524
Emotional Loneliness (EL)	**12.1036**	**2.14899**	**11.3777**	**2.27540**	**3.317**	**<.001**
Social Loneliness (SL)	8.3919	1.71354	8.3511	1.75632	.238	.812

One-Way Analysis of Variance (ANOVA)

A one-way ANOVA was conducted to understand how marital status and education level affect older adults' feelings of loneliness, EL, SL, emotional support, and perceived health. The findings show that marital status has significant impact on all factors. In general, married people are less likely to feel lonely (including emotional and social loneliness) and more likely to feel emotional support and have better perceived health. Education did not show any impact on loneliness, EL, SL, emotional support, and perceived health and was not a protective factor (see Tables 6 and 7).

Table 6: One-Way ANOVA Results

	Loneliness		Support		Health	
	Mean	Std.	Mean	Std.	Mean	Std.
Marital Status						
Single	17.8529	3.23927	14.2059	3.31003	35.7353	5.36718
Married	20.9725	3.06146	17.5413	3.28109	38.9954	5.00645
Divorced	19.2558	3.93454	16.4884	3.52793	37.5349	5.16097
Widowed	19.5965	3.41967	16.8246	3.72089	37.9386	5.08039
Separated	18.0000		20.0000		20.0000	
F	9.325		7.458		6.819	
P	**<.001**		**<.001**		**<.001**	
Education						
Others	19.6667	3.77712	15.5000	3.27109	34.1667	7.88458
Middle School	19.5556	3.12694	14.4444	5.27046	35.6667	7.44983
High School	20.3547	3.57490	16.9244	3.56561	38.0988	5.19521
College	20.0709	3.29642	16.9362	3.68048	38.3191	4.98902
Master	20.0423	3.29257	17.4366	3.03189	39.1549	4.72273
Doctorate	19.1818	3.37100	17.6364	2.37793	37.5455	6.94786
F	.406		1.460		1.692	
P	.844		.202		.135	

Table 7: Loneliness subscale One-Way ANOVA Results

	Emotional Loneliness		Social Loneliness	
	Mean	Std.	Mean	Std.
Marital Status				
Single	10.5588	2.07717	7.2941	1.50815
Married	12.3211	2.11155	8.6514	1.52022
Divorced	11.2791	2.26070	7.9767	2.19836
Widowed	11.2719	2.23125	8.3246	1.83619
Separated	11.0000		7.0000	
F	8.333		5.703	
P	**<.001**		**<.001**	
Education				
Others	11.5000	3.27109	8.1667	1.47196
Middle School	11.6667	1.87083	7.8889	1.69148
High School	12.0116	2.32200	8.3430	1.89299
College	11.6383	2.19830	8.4326	1.63141
Master	11.6056	2.03876	8.4366	1.58324
Doctorate	11.0000	2.23607	8.1818	1.66242
F	.858		.245	
P	.509		.942	

Regression

Linear regression was conducted to test how (a) the number of people living with participants affects their loneliness, EL, SL, emotional support, and health, (b) income

affects loneliness, EL, SL, support (social connection), and health, (c) loneliness affects health, (d) EL and SL affect health, and (e) emotional support affects health, loneliness, EL, and SL.

The results show the number of people living with participants has a significant impact on their loneliness, including EL. For older adults, health, income, loneliness (including EL and SL), and emotional support all have important impacts. Emotional support also affects older adults' feeling of loneliness, including EL and SL (see Table 8, Linear Regression Results).

Table 8: Linear Regression Results

	B	SE B	β	*t*	*p*
Live With					
Live With (IV) & Loneliness (DV)	1.015	.256	.193	3.967	**.000**
Live With (IV) & Support (DV)	.361	.270	.066	1.334	.183
Live With (IV) & Health (DV)	.721	.397	.089	1.814	.070
Live With (IV) & EL (DV)	.780	.166	.226	4.685	**.000**
Live With (IV) & SL (DV)	.235	.132	.088	1.780	.076
Income					
Income (IV) & Loneliness (DV)	3.386E-6	.000	.037	.750	.454
Income (IV) & Support (DV)	3.919E-6	.000	.041	.835	.404
Income (IV) & Health (DV)	1.658E-5	.000	.119	2.415	**.016**
Income (IV) & EL (DV)	4.648E-6	.000	.078	1.574	.116
Income (IV) & SL (DV)	-1.262E-6	.000	-.027	-.550	.582
Loneliness					
Loneliness (IV) & Health (DV)	.812	.064	.531	12.644	**.000**
EL					
EL (IV) & Health (DV)	1.099	.102	.471	10.781	**.000**
SL					
SL (IV) & Health (DV)	1.316	.134	.437	9.810	**.000**
Support					
Support (IV) & Health (DV)	.604	.066	.411	9.097	**.000**
Support (IV) & EL (DV)	.292	.028	.464	10.574	**.000**
Support (IV) & SL (DV)	.361	.016	.739	22.141	.000
Support (IV) & Loneliness (DV)	.653	.035	.679	18.695	.000

* Unstandardized beta (B), the standard error for the unstandardized beta (SE B), the standardized beta (β), the *t*-test statistic (*t*), the probability value (*p*), the independent variable (IV), and dependent variable (DV).

Quantitative Data Conclusion

Based on the findings, the research indicated that most respondents are comfortable using internet and technology and have a social media account (the most popular of which is Facebook). But they prefer to visit in-person rather than online and do not feel comfortable using telehealth for medical appointments. The majority of older adults in the survey participate in faith-related activities, drive their own cars, and do not use public

transportation. The results suggest that in-person activities would be helpful for older adults and that Facebook and faith-related institution can be good places to advertise social events.

In addition, having people to live with, being married, and having emotional support all help reduce feelings of loneliness (including emotional and social loneliness) and increase social connection (support). Having programs that help older adults have someone to live with, be around, and provide emotional support can be beneficial. Furthermore, reducing the loneliness feelings and providing income support can also improve older adults' health condition and their well-being.

Qualitative Data

Focus groups focused on three broad issues which are 1) factors that contribute to social isolation among rural elderly, 2) formal and informal programs and services are used to address social isolation & social connection and 3) replication of evidence-based programs found from other states and the literature.

Data Analysis

Throughout focus group data collection, a codebook was developed applying open then focused coding, which was reviewed by the researchers following each focus group. Following two norming sessions, two researchers coded all seven transcripts. Coding comparison yielded a percent agreement of 93 percent above the lower limit of 80 percent agreement suggested by Wilson-Lopez, Minichiello, and Breen (2019). The overall Kappa value is .74 which is considered "substantial" and indicates overall good interrater reliability (McHugh, 2012). There were reliability statistics of interest when the researchers computed inter-rater reliability for sub-categories (see Appendix 11). The subcategory "Interventions to reduce isolation or increase social connection" Kappa score was acceptable at .51 indicating moderate inter-rater agreement: however, the percent agreement was 77 percent, which is below the lower range recommended by Wilson-Lopez et al. (2019), and a range of scores among the six transcripts between 66.8 percent to 82.29 percent. This could be explained, in part, by sensitivities associated with variations in unit selection or professional work history and familiarity with older adult populations between coders.

Focus Group Themes

Six themes emerged that case managers believe contribute to social isolation among adults aged 62 and over in rural Pennsylvania including: 1) Role of Family, 2) Transportation, 3) Effects of COVID, 4) Knowledge of Community Programs, 5) Problems Using Technology, and 6) Access to Services.

Role of family. Case managers reported that older adults commonly experience multiple health problems that can limit mobility, increase the risk of falls, and lead to social isolation. In addition, friends move away to be closer to their own families and

older adults are more likely to experience the loss of a spouse. Case managers felt the children of older adults are a protective factor and offer a source of closeness, socialization, attention to health care needs, help with activities of daily living, and provide transportation to and from medical and social appointments. Case managers have noticed younger family members are moving away in search of work opportunities thereby reducing contact, caregiving, and socialization for the older adult. A care manager said, “We have a lot of families, the kids have moved away so they live in other states and have a difficult time getting back.” The busy schedules of the adult children, combined with the geographic distance leads to impaired communication. “...A lot of elderly folks don't text message or email...” Leaving the older adult to depend on others outside of the family system for help and socialization. The following excerpt exemplifies the spirit of the feelings shared by multiple case managers across all focus groups:

> *I feel like we see a lot of that with our seniors especially in the more rural areas that we serve...There aren't a lot of job opportunities available... So, I think a lot of family members, like their children grow up, they move away and then they're kind of alone and only see you know some of their family once or twice a year... the family systems are just kind of scattered.*

The loss of family support means older adults are more dependent on formal supports, such as AAA services that are not designed to substitute for the role of family. Filling the gaps for missing families is a significant challenge for case managers across the state.

Transportation. Difficulty accessing transportation, fear of catching COVID while riding the bus, long ride and wait times, lack of knowledge about bus routes and services, health problems, and buses that do not cross county lines are common barriers identified by focus groups. Health conditions prevent some people from riding either because they need to take medications, or they cannot physically sit for long periods of time. The Medical Assistance Transportation Program (MATP) was identified as a supportive service, however long rides and wait times are common, limiting the number of appointments someone can attend in one day. Moreover, some countries do not provide transportation to social events which limits the ability of older adults to get out of the house and socialize. One case manager summed it up like this:

> *...transportation is available but that's only for medical appointments, shopping, and work but it's not...to drive you to the Senior Center or any community activity events or anything like that.*

Fear of getting COVID or another illness is a barrier for some immunocompromised persons accessing transportation services. Older adults also have difficulty figuring out what transportation services are available, especially if the information is only available online and they do not have access to a paper schedule. Another common barrier mentioned was that transportation does not cross county lines:

> *our transportation won’t cross county lines, so you're kind of stuck if your doctor isn't in [our] county. Transportation information is available online [for] older people [who] are unable to access the information because they are either unable*

to access the technology or they do not know how to use the technology. These two things make it difficult for older rural adults to know about programs that are out there.

Some counties rely on volunteer drivers who use their own vehicles to transport older adults, but these services were generally viewed as inconsistently available.

Effects of COVID. COVID has impacted service providers and older adults alike. Case managers reported that COVID has made it difficult for home health agencies, transportation providers, and mental health agencies serving older adults to find and retain staff, which means the Area Agency on Aging (AAA) cannot find service providers with whom they can refer clients, resulting in long waiting lists for services. Older adults are also afraid of COVID exposure, so they are not willing to attend senior center programs or ride public transportation when these services are available as well as a reduction in volunteer drivers. Case managers report COVID has had a negative impact on mental health and may deter people from attending senior center activities as well as limited programming and space at senior centers due to social distancing. Aging case managers also reported completing fewer in-person home visits because of COVID, which impacts AAA's ability to maintain direct contact and assessment of the person, but this trend is improving.

Knowledge of Community Programs. Knowledge of community programs affects case managers and older adults. Case managers indicate it is difficult to get the word out about available programs and events if the person is not engaged in the senior center or some social group. Many programs advertise online, and older adults have problems managing technology. Case managers identified one way to spread the word about programs among professionals who might have contact with older populations is through the Aging Disability Resource Center (ADRC) Link Meetings, where case managers meet with representatives from multiple agencies to discuss and share activities and interventions. Link Meetings are designed to disseminate information among residents and case managers. It appears most case managers are familiar with Link. Some counties are putting information in with Meals on Wheels, so they have as much information as possible. These programs also advertise the senior resource centers, churches, and civic groups. Case managers felt it was easier to inform the residents living in senior apartments about programs, although these programs are often not well attended. Some case managers said that programs held by state legislators seem to be well attended because the legislator heavily advertised their program and engaged multiple stakeholders to help them get the word out about the nature of the program. Some case managers reported their offices were financially limited in the ways they could advertise programs, which then limits the ability to make the public aware of their services.

Health. Case managers reported that health-related problems are connected to resistance to using public transportation, going to the senior center or other social groups, and increase the risk for falls in the home. As physical health declines, older adults are unable to sit for long periods of time either waiting for a bus or riding the bus, and they

unable to participate in activities with friends because they lack the physical ability. Health problems may affect their ability to meet their basic needs such as feeding and bathing themselves, attending doctors' appointments, and negatively impact their mental health. Case managers also reported fear of COVID as another health-related problem that might lead to social isolation.

Technology. Case managers seemed to agree that technology has the potential to reach more socially isolated older adults, but there are limitations that may make it more difficult for older adults to find the help they need. According to a community-based case manager:

> *Whereas before you could call a number or speak to somebody to schedule a ride...now it's an automated service...you know call and press 37 buttons until you can finally speak to somebody.*

Despite a greater focus on internet use for telehealth and other activities, case managers report older adults do not know how to use technology, do not want to have internet in their homes even when available, as it is expensive and people on fixed income might not be able to afford internet services; some older adults lack someone to help them learn how to use the internet; and internet service is inconsistent or not available in some rural areas. One case manager reported: "...older adults are on a fixed income, so when they are not, you know they have the phone they have TV but adding internet could be up to you know $50, $60, $70 a month, which may not be doable for some older adults." Technology, especially internet use, is expensive, unreliable, and challenging to learn to use for older populations but case managers recognize the potential of technology to connect socially isolated adults to the resources they need.

Access to Services. This section is divided into two subgroups: 1) resistance to seeking help; and 2) the ability of aging case managers to find service providers with openings and an agency's ability to hire staff to maintain programs.

Resistance to seeking help. Case managers reported older adults do not seek help because they feel they should pull themselves up by their bootstraps and be more self-sufficient. Mental health problems are viewed as a personal weakness. Stigma was a common response when focus groups were asked why older adults are not willing to seek help, and case managers believe it is a significant reason why most people do not seek help. One case manager said it is: "...still a stigma and in that aging population with mental health you just don't talk about it." Several case managers agreed that: "...seniors don't want to admit that they have depression or anxiety sometimes... because that showed weakness." Case managers reported that older adults will walk out of mental health educational events at senior centers despite discussing their own mental health concerns with the staff immediately prior to the event. One case manager said: "I talk about mental health services and how to access them. I will get everybody in there...having a really good conversation, and then we actually start the presentation and it's like crickets and people would just sort of walk away...and people will just leave or not talk." Fear was another reason given for older adults not being willing to access services,

especially remotely. Case managers talked about the fear of being scammed: "The...fear of being scammed, you know I have a few that don't answer the phone, they don't want strangers coming to the house, they're afraid they'll be robbed." But social isolation might lead to being victimized: "I actually had a gentleman who was scammed because he refused to answer his phone and, finally... the scammer called 12 times in one day. He really thought it was a legit thing."

Service providers with openings & agencies ability to hire staff. Case managers said they have trouble finding agencies to accept referrals for their older adults because home health and mental health providers cannot find staff to fill open positions. Case managers reported similar accounts such as: "...agencies don't have aides or we can't find additional support to go in and help these people." Most case managers agreed that the low pay for frontline staff at home health agencies makes it difficult for the agencies to compete for employees. One case manager summed up the problem: "I mean you know they want them to work for $10 an hour with no benefits. I don't blame them I wouldn't do it." The lack of staff to fill positions, especially home health staff, affects older adults who depend on home care staff for their social environment. The lack of home care staff also increases the risk for negative health outcomes for the older adult who is unable or unwilling to leave the home either because they lack the ability to make such arrangements, lack transportation, or their health conditions make traveling long distances or for long periods too challenging.

Current Interventions to Reduce Social Isolation

This section identifies current interventions addressing social isolation. Case managers identified formal programs offered by AAA including health education, case management, meals on wheels, aging waiver program, OPTIONS program, protective services, "APPRISE'' health insurance program (now called Pennsylvania Medicare Education and Decision Insights, or PA MEDI), shared housing programs, senior centers, resource fairs, food banks, telephone outreach to socially isolated older adults, and cooperative arrangements with food banks to deliver meals. These are programs funded by the federal government and tend to be offered by every state. Below is a list and brief discussion of programs focus group participants reported utilizing in addition to formal AAA programs.

Senior Centers. Senior centers were referenced the most across all focus groups. Senior centers provide a fixed location for AAA to target services such as congregate meals, education about mental and physical health, exercise programs (yoga, meditation, and tai chi were specifically mentioned), social activities including bingo, puzzles, arts and crafts, group games, and group outings to see plays, and go shopping). Participants in this study were familiar with the function of senior centers and felt these places offered a good way to reach seniors.

Meals on Wheels. Meals on Wheels supports "more than 5,000 community-based programs across the country" that helps to address senior isolation (Meals on Wheels,

2021, p. 10). Meals on Wheels (MoW) allows another pair of eyes to observe the isolated older adult and provides a method for disseminating information to the most vulnerable. For some isolated older adults, the MoW delivery may be the only source of social contact and could be a protective factor in case the older adult needs further assistance from the AAAs. In addition, information about community resources and supports can be added to food deliveries so the older adult has the opportunity to reach out for help if need be.

Resource Fairs. These fairs target caregivers and the public to educate and inform them about the services available in the community to help socially isolated older adults. Focus group respondents reported mixed results for these programs. It was reported that programs offered by local legislators seemed to be better attended by the public. Participants believed that legislators offices did a good job advertising, communicating the event to the public, and partnering with service providers in the local area in a variety of locations.

Faith-based organizations. Faith-based organizations and other social groups are doing volunteer or informal interventions, such as meal prep and helping with transportation. Some also contact older adults or reach out to their families to ask that they check in on their relative. One of the problems identified by multiple focus group participants is that faith-based and other informal supports and programs can have difficulty finding resources to continue year after year.

Shared housing, Elderly Cottages, and Elderly Cottage Housing Opportunity (ECHO)- The ECHO program places a small, manufactured home next to the home of a family member or friend who owns their own home. The utilities for the small home are connected to the main house. The older adult resides in their own small home adjacent to the main house so that family or friends can help the older adult, while still allowing the older adult to maintain their independence. Once the small home is no longer needed, the housing partner who built the home will unhook it from the main house and move it to a new location for the next person on the waitlist for the ECHO program. The ECHO program is relatively new in Pennsylvania and only a few of the focus group participants have heard about the program. Only one county in this study had an active case in which an ECHO home was built. One case manager from a county implementing this program said: "...the ECHO partner...will build it [and] do all the hookups, move the person in, and then, when they go into a facility or pass away... remove it, unhook everything, put everything back." Several case managers discussed difficulty finding matches with non-family members when trying to place an older person in a shared housing or ECHO program.

Telephone and letter writing outreach. The most common intervention identified by AAA case managers was telephone outreach. AAA case managers said they typically keep a list of older adults who were previously engaged with AAA. AAA also collaborates with senior centers to reach out to those unable to come to the senior center due to fear of COVID or because the senior center is closed. Case managers generally agreed that telephone outreach works when the older adult answers the phone. AAA reports some difficulty with telephone outreach because AAA has had a program in place for several

years to educate older adults about phone scams and one of the suggestions is to not answer phone numbers they do not recognize. Two programs mentioned in focus groups were "*The Connection"* and "*RSVP Senior Chat Programs,"* where AAA or a partner agency reaches out to older residents and connects them with their peers to call and talk to each other. The purpose of these outreach calls, according to a case manager, is to connect people who are socially isolated via phone. Interested participants fill out a form and participants are matched based on their interests. The "Are You Okay" program is another outreach program through a local county sheriff's department. The sheriff's department received a grant to perform outreach to socially isolated older adults in the community. This program used an automated call system that would call older adults, who signed up for the service, at a specific time each day. The AAA attempted to recruit older adults to participate but were not successful. The case manager theorized that people were worried that if they missed the call, the sheriff's office would come to their house and they didn't want to be obligated to wait for a phone call at a specific time each day. Another AAA is working with the United Way in their county to provide a "Pen Pal for Seniors" program.

Robotic pets. Two AAA case managers reported a pilot program that started in 2021 using robotic pets. Anecdotal evidence supports the use of robotic pets, however the program is extremely new and most AAA case managers did not know about the program (see *Replicability of Programs*, *Intervention 1: Pets live or robotic* below for more details).

Advertising about services. AAA case managers said they used a variety of methods to get information about events and services to older adults including, websites, pamphlets, direct mailing, and service manuals that are available in public areas that older adults might visit, such as the library and senior centers.

Partnerships with universities. Several case managers said they partner with a regional university that provides the AAA with students who make outreach calls to older people identified as at-risk for social isolation. Case managers identified that the program only addresses isolation among older adults who are involved with the AAA.

Replicability of Programs

This section reviews interventions used by other states that target social isolation, loneliness, and social determinants of health (See Appendix 3).

Intervention 1: Pets live or robotic. Most focus group participants were supportive of robotic pets and live pets. They felt the pets offered support and reassurance although they were skeptical that a robotic pet would be a viable long-term solution. Several counties are currently piloting robotic pets, and those case managers reported anecdotally that the people using the pets like them. Potential barriers were that AAA would need to secure adequate funding to hire and train someone to manage the program as well as train older adults on how to use the robotic pet and troubleshoot technology issues. They also need space to store extra or unused pets as well as a mechanism to purchase and distribute the pets. Focus groups were not supportive of

buying or purchasing live pets for older adults. For both the live and robotic pets, there was concern about the potential for tripping and falling over the pet, older adults becoming bored with the pet, and the potential to infantilize the older adult by using a doll in place of a real animal.

Intervention 2: Grandparenting mentorship. Case managers were familiar with this program and some communities are using versions of a mentorship program. They felt that it would be beneficial to the youth and older adults. This program would require more coordination and collaboration, but it could work if there were staff to administer this program effectively. Potential barriers include problems arranging transportation for the older adult if they do not drive, the older adult's ability to use technology if the program is virtual, ensuring all the proper child abuse clearances are collected and maintained, determining if the school district or AAA will be responsible for program administration, obtaining the support of the school district, and supervision of the child when they are with the older adult.

Intervention 3: AIM: Reduce stress and anxiety/volunteers program. Focus groups were generally supportive of partnering with universities and using their students to implement programs targeting social isolation. They also thought a therapeutic intervention would be helpful for some of their clients. Several AAAs already coordinate with a Pennsylvania State System of Higher Education university social work department to provide services. Case managers share the workload with the university. The university provides supervision, training, and support for the student and the AAA provides the field opportunity for the student, who gets real world experience in a job they might be doing in the future. Since field placements are part of the curriculum, social work programs likely already have policies, procedures, and infrastructure to manage such a program at no or little additional costs compared to hiring more staff or contracting services with outside agencies. Partnering with universities frees up AAA and other case managers to address more serious problems facing older rural adults.

Case managers were not as optimistic about using community volunteers since these tend to be inconsistent and difficult to find. To replicate this type of program the AAA and local volunteer groups or Universities need to clearly define the roles of the volunteer, train volunteers, monitor the program, ensure volunteers do not cross boundaries and keep older adults safe. Potential roadblocks include finding staff with enough time to administer the program, finding a volunteer group or university close enough to the older adult, inconsistent volunteers who do not show up, need for background checks for volunteers, and adequate funding to support the program.

Intervention 4: Telephone calls and visits with elderly socially isolated adults. Focus group case managers report this program exists in most counties either through AAA, senior centers, churches, or volunteer groups and would not need to be replicated. Case managers felt that these programs could be improved if funding were increased to hire someone to focus exclusively on phone and other types of remote outreach rather than adding these duties to existing staff who already have large caseloads. There will also

need to be a way to maintain the system and technology over time. Agencies can leverage existing systems, but these systems need to be adequately funded so the program can be consistently maintained over time.

Intervention 5: VITAL (Virtual Inclusive Technology for ALL). Case managers were not supportive of this program for people living in their own homes but thought it might work in a senior high-rise apartment building that had internet access and a coordinator to help with training older people on the technology. They felt this program would be expensive and labor intensive. Internet connectivity is a problem in rural communities as well and many case managers said they did not think many of their clients had internet service in their homes. This program would likely require hiring additional staff to train older adults about the technology, maintain the technology, and track it while it is in use.

Intervention 6: Letter writing and high school community service requirements. Case managers were very supportive of this program and thought it could be implemented easily in elementary schools if AAA and school districts made community service part of the curriculum and AAA could collaborate effectively. Lesson plan development, implementation of learning objectives and activities, and monitoring the child's work is a process that already exists and may only need to be modified with the help of the AAA. Elementary school children will write letters, teachers will make sure the return letter is age appropriate and AAA would screen potential pen-pals and refer them to the school. They also thought collaborating with elementary schools to help address social isolation through pen pal programs were beneficial to the older adult because they will be able to interact with others through a mode of communication with which they are familiar. Also, case managers anticipated that mandating community service hours as part of the state educational policies may create new relationships between the Pennsylvania Departments of Aging and Education, which have traditionally functioned in silos. Case managers were hopeful that schools will see the AAA as a resource. AAA case managers felt elementary school programs were easier to implement since the teacher and students will be centrally located, the teacher normally supervises the students anyway, and the AAA will be able to leverage assessment and referral processes that are already in use with AAA case managers.

Case managers felt high school community service projects that involve the student traveling to the older adults' home might be more problematic. The student and older adult would need police clearances, someone would need to supervise the child on-site to ensure their safety and the safety of the older adult, and AAA and the schools would need to develop manageable and realistic policies and procedures to get students and older adults engaged. Transportation was also identified as a barrier. Case managers were not sure how transportation would be coordinated, paid for, or provided. This program would be easiest to start at the elementary level but would require more time, energy, and planning if the child were to volunteer at the home of the older adult.

Intervention 7: Meal or teatime gathering. Case managers believed this program is most appropriate in a senior high-rise where the activity could be modified for the

environment, but they were not optimistic this program would work in the high-rise either. Case managers believe these programs are too labor intensive, difficult to coordinate, especially if transportation is needed, too expensive, and unrealistic for older adults living in their own homes. In addition, the uncertainty about COVID, along with fear of catching COVID would likely deter older adults from participating in much the same way senior centers are struggling.

Interventions 8-10: PERMA (Positive Emotions, Engagement, Positive Relationships, Meaning, Achievement); Aging Mastery; Social Connect program (your juniper program); Share Your Life Stories. These interventions are combined here because case managers had similar feedback about all the counseling, training, and therapy interventions. Case managers reported that senior centers already do some version of some of these interventions, and it is difficult to find people willing to commit to multiple weeks of classes or classes that last longer than 45 minutes. Senior centers may struggle to find a consistent volunteer to train and to provide these interventions. Also, these interventions require the older adult to travel to a central location, such as a senior center, and transportation will be a major obstacle. Several case managers said interventions that have a cognitive behavioral therapy component would be helpful, but they did not think most seniors would want to attend nor could they see this intervention being offered to socially isolated adults who cannot or do not want to leave their homes. Implementation was viewed as complicated and probably too expensive to justify the number of people they would be able to reach with these interventions. Case managers thought that people willing to engage in an intervention with some type of treatment component would probably not be socially isolated. Implementing these interventions in the home of socially isolated older adults might be easier if combined with approaches that use the skills and resources of colleges and universities that have a need for practical field experiences to fulfill degree requirements. Nursing and social work were two professional educational interventions suggested as a starting point. It might be helpful to engage these interventions and develop a field intervention that connects the student with an agency that can oversee the field work of the student. The university can offer help managing the learning objectives and activities of the student and coordinate the learning experience with the agency. Several interventions were identified although the case managers were unsure how these interventions work. Social work programs, for example, require a one-year field placement to graduate with a bachelor's degree in social work. Nursing, likewise, has a clinical training program in addition to classroom learning. Many universities, including PASSHE universities, are located in rural communities. Partnering with the PASSHE system leverages the resources of the university and community to focus resources where they are needed while using the pre-existing infrastructure for each group.

Qualitative Data Conclusion

Case managers describe multiple challenges including health and mental health, the effect of stigma, work displaced families, difficulty accessing and using technology, problems with accessing transportation, staffing problems at partnering agencies that limit the ability to refer people to services, the isolating and limiting effects of COVID on rural elderly that limited space in senior centers, and home care services that address health care and socialization needs of rural elderly, and difficulty getting information to older adults about interventions and how to access them. These problems increase the risk of social isolation for older rural adults.

Fortunately, case managers offered their insights about implementing some of the interventions being used around the United States that address social isolation. In general, case managers felt implementing interventions that partnered with K-12 schools and universities were good ideas. These interventions take advantage of the existing workforce and infrastructure so interventions do not need to be created from the ground up and tap into existing processes that may only need minor modification at the school and agency level, but these interventions utilize the existing strengths of both groups. Schools have policies, practices, processes designed to implement learning activities such as letter writing, mentoring, and community service interventions. The AAA case managers reported that partnerships with K-12 schools allows them to flex their strengths by focusing their attention on screening, referral, follow-up, and program monitoring. They also think it is critical for the Departments of Health and Education to coordinate state level policies that will guide the implementation of these interventions. Finally, the focus group guide developed for this study was based, in part, on a literature review of evidence-based interventions.

Conclusions and Policy Considerations

This study identified a number of areas of need that, if strengthened, could reduce social isolation and loneliness. Some specifically identified needs included: funding to develop new outreach interventions; additional funding to support current interventions; enhanced transportation services; increased broadband access; increased outreach about resources and services for older adults; and overall collaboration between service providers and community outreach interventions.

Legislation

At the time of the research, state legislation to prevent the financial exploitation of older adults or care dependent people was passed (Act 48 of 2021).

There are a number of proposed bills at both the federal and state levels to benefit older adults. Federal bills, such as *Strengthening Social Connections Act of 2021*, *Improving Social Determinants of Health Act of 2021* and *Addressing Social Isolation and Loneliness Act of 2021,* all propose funding current and new interventions to enhance

services and coordinate resources among agencies that provide support services for older adults (as of October 2022, these bills have not become law).

This study identified funding of services and coordination of providers as roadblocks to providing for the needs of older adults in rural communities. If signed into law, these bills would provide financial support for current and new interventions, and further studies on social determinants of social isolation and loneliness and support strong agency and community coordination of services. Lack of sufficient broadband internet was identified as a roadblock for older adults in rural Pennsylvania trying to engage new social connections and maintain their current social connections using social media or some other online format. *Accessible, Affordable Internet for All Act*, specifically addresses the infrastructure needs to provide accessible and affordable internet service. Support and passage of this bill would provide older adults in rural areas the means to not only communicate and socialize with family and friends but also receive information on how to participate in services and activities in their community that may decrease social isolation. Lack of information about available social opportunities was identified as a barrier to participation in current services available for older adults. Older adults have increased risk of abuse and financial exploitation and subsequently, social isolation and loneliness. A number of the identified bills target abuse and exploitation of older adults. Passing these bills may provide older adults an increased sense of safety when determining if they wish to trust an individual providing support and outreach or participate in an intervention that may decrease their social isolation and loneliness. The following is a list of key legislation with a brief description of the target problem each addresses (as of October 2022, these bills have not become law):

S.410 Strengthening Social Connections Act of 2021 (Federal) - Seeks to provide supplemental funding to programs to address social isolation and loneliness due to the COVID 19 pandemic

S.104/H.R. 379 Improving Social Determinants of Health Act of 2021 (Federal) - Allows the CDC to create and fund programs to study social determinants of health, improve health outcomes and reduce health inequities

S.745/H.R. 1783 Accessible, Affordable Internet for All Act (Federal) - To make high-speed broadband internet service accessible and affordable to all Americans

S.2674/H.R. 4969 Elder Justice Reauthorization and Modernization Act of 2021 (Federal) - To reauthorize funding for programs to prevent, investigate, and prosecute elder abuse, neglect, and exploitation, and for other purposes

HB 1681 Act to amend Older Adults Protective Services Act (Pennsylvania) - To expand on agency reporting, duties, and protection for elder abuse reports

HB 2425 Communication of Older Adult Abuse Act (Pennsylvania) - To support agency coordination of elder abuse investigations

Expanding and Funding Telehealth and Case Management Services

Due to the COVID-19 pandemic, Pennsylvania's Office of Mental Health and Substance Abuse Services (OMHSAS) temporarily suspended provisions related to the requirements of face-to-face contacts with beneficiaries if it is clinically appropriate to use telehealth/telephone plan development and revisions. House Bill 642 would allow telemedicine to remain a billable modality for treatment beyond the COVID emergency which benefits older adults by reducing their need to access transportation and makes access to medical care easier for the older adult who may have multiple comorbidities and should be approved to allow greater access to services.

Using Senior Centers

Senior centers offer socialization, activities, and free, nutritious meals in a congregate setting, a range of informative programs, creative arts, exercise, volunteer opportunities, community services, and other special events that are unique to individual centers. Focus groups were supportive of senior center programs, but those programs require funding for staff training regarding interventions that can be helpful for older adults. The Pennsylvania Department of Health should explore how grant money, made available to senior centers for training, through the federal Older Americans Act of 1965 as amended by Public Law 116-131, could be allocated to target training that address social isolation.

The Center for Rural Pennsylvania-sponsored research, *Evaluation for Senior Community Centers in Rural and Urban Pennsylvania,* identified important policy considerations for the Pennsylvania Department of Aging that included "improved transportation service provision, revitalization of congregate meal offerings, funding, program flexibility, staffing, the sharing of information across programs on a regional and state level, and centralized marketing initiative to promote senior community centers across the state" (Melnick et al., 2020). The recommendations support much of what this study has also identified: for example, need for flexible transportation policies in rural communities that cross county lines.

Improving Collaboration between Aging Services and Mental Health Services

Aging services and mental health and substance abuse disorder services provide distinct supports. Results from the focus groups indicate there may be a gap between ensuring older adults have easy access to mental health and substance abuse services. Policy makers should target funding for senior centers to provide education and prevention programs to older rural adults to normalize the discussion of mental illness and treatment.

Partnering with Colleges and Universities

Policy makers could consider leveraging colleges and universities located in rural communities. Colleges and universities with social work, nursing, counseling, and psychology programs usually require field work as part of the learning process. This field work could be done in conjunction with the Area Agencies on Aging or senior centers to provide education, prevention, assessment, and/or intervention for older adults in the community. For example, a partnership between AAA and Slippery Rock's social work department already exists and could be replicated at other campuses, which could make implementation across the state a little easier. Legislators could target legislation and funding for a demonstration project to pilot such a program.

Department of Education

Policy makers could consider revising educational regulations to specify community service hours required at each grade level and further specify that a portion of those hours are dedicated to older adults. Moreover, the Departments of Education and Aging could identify existing strengths, resources, needs, and challenges associated with collaborative work that engages school-aged children in outreach and community service with older adults guided by the AAAs.

At the state level, policy makers can evaluate how to best implement programs that use the strengths inherent in schools and AAAs. It is important that these efforts are funded appropriately and integrated into the budgets of AAAs and school districts. It would be helpful to establish a working group with stakeholders from AAAs, school districts, older adults, and parents of children in public school.

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Appendix 1: PRISMA Outline

This checklist has been adapted for use with protocol submissions to *Systematic Reviews* from Table 3 in Moher D., et al.: Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews* 2015 4:1

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
ADMINISTRATIVE INFORMATION					
Title					
Identification	1a	Social Isolation Among Rural Pennsylvanians age 65 and older: protocol for a systematic review	☐	☐	
Update	1b	Not an update	☐	☐	
Registration	2	If registered, provide the name of the registry (e.g., PROSPERO) and registration number in the Abstract	☐	☐	
Authors					
Contact	3a	Christopher Harris, Ph.D., Kutztown University, Assistant Professor of Social Work, Harris@Kutztown.edu FangHsun Wei, Ph. D., Kutztown University, Professor of Social Work, Wei@Kutztown Mary Rita Weller Ph.D. Kutztown University, Assistant Professor of Social Work, Weller@Kutztown.edu. Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	☐	☐	
Contributions	3b		☐	☐	
Amendments	4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	☐	☐	
Support					
Sources	5a	This systematic review is funded by The Center for Rural Pennsylvania	☐	☐	
Sponsor	5b	Kutztown University and the Department of Social Work at Kutztown University.	☐	☐	
Role of sponsor/funder	5c	The Center for Rural Pennsylvania defined the terms “rural” and the age range for the population of this study. This definition is used in the systematic review as a search item thereby influencing scope of the data collected for this review. The principle investigators are employed by Kutztown University, the sponsor of the research, and are bound by the rules of the institutional review board (IRB). The IRB has not participated nor commented on the process or procedures represented in this systematic review. Kutztown University’s role in this review is limited to employing the principle investigators but the university did not weigh in on the procedures for this systematic review.	☐	☐	
INTRODUCTION					
Rationale	6	By 2030, 20 percent of the U.S population will be 65 years of age or older (Hogan et al., 2015) which translates into	☐	☐	

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
		an estimated 2.2 million adults 65 years of age or older in Pennsylvania. This population is steadily increasing and will require ongoing support and services to insure healthy lives. Social isolation increases the risk of early death and disability (Wesołowska et al., 2017). Individuals who lack social connections or report frequent feelings of loneliness tend to suffer higher rates of serious health problems such as heart disease, cancer, and stroke that disproportionately affect rural residents compared to their urban counterparts (Brummett et al., 2001; Holt-Lunstad et al., 2015; Kulshreshtha et. al., 2014; Seeman, 2000; Stahl et al., 2017; Wildman et al., 2019). In addition to higher risks for depression, socially isolated older adults are 1.5 times more likely to attempt suicide than their urban counterparts (Ivey-Stephenson et al., 2017; Repke & Ipsen, 2020). Social isolation is associated with a 50 percent increased risk of dementia (Centers for Disease Control & Prevention, 2020), cognitive decline (Barnes et al., 2004; Wilson et al., 2007), and age-related health conditions such as hypertension, diabetes, cardiac conditions, various cancers (Cornwell et al., 2014; DiNapoli et al., 2014). These chronic health conditions increase the mortality risk associated with COVID19 (Katz, 2020). Indeed, in March 2020, 89 percent of hospitalized COVID19 patients had one or more chronic medical conditions such as diabetes, hypertension, cardiovascular disease, lung disease or obesity that complicated their recovery and increased morality (Roberts & Tehrani, 2020). Social isolation may lead to a lack of social connection. Social connection may be a protective factor guarding against depression, anxiety, and cognitive decline (Finlay & Kobayashi, 2018; Winterton, 2020). Eagle et al. (2019), found that the number of people in your social network is weakly associated with reduction in depressive symptoms; however, people who felt closer to their social networks, even if the network was small, were associated with lower levels of depression. This seems to indicate it is not the number of people with whom the person has contact but the quality of those relationships. The rural elderly population of Pennsylvania is at an added disadvantage of being able to routinely socialize due to geographical distances between communities and neighbors, and limited transportation services. All of these factors may increase the risk of social isolation for an aging population, especially when they live in smaller communities that often have less resources and support. The Pennsylvania Department of Aging offers a range of formal services and supports in every county via the Area Agency on Aging. Programs such as adult protective services, ombudsman services, senior centers, senior			

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
		community centers, health and wellness education programs, meals on wheels, advocacy, and legal assistance (Commonwealth of Pennsylvania, 2020). In addition, the Pennsylvania Department of Labor and Industry's Disability Services division provides a host of formal services such as hearing aids, employment services, visual aids, and Veterans' registry that provides information about other supportive services (Pennsylvania Department of Labor and Industry, 2020). The Pennsylvania Department of Aging (PDA) creates a State Plan on Aging every four years in order to provide a vision and direction for Pennsylvania's network of aging services. The current state plan remains effective through September 30, 2020 and so, the process has begun to shape and develop the next State Plan on Aging for the Commonwealth of Pennsylvania. There are five state plan goals designed to address all initiatives that the department has or will undertake to improve aging services in Pennsylvania. The goals include strengthen aging network's capacity, promote innovation and best practices, and building efficiencies to respond to the growing and diversifying aging population; improve services for older adults and the ability to advocate for them by using evidence-informed planning, committing to data integrity and being accountable for results; establish and enhance efforts to support healthy living, active engagement and a sense of community; emphasize a citizen-first culture that provides outreach, embraces diversity, and honors individual choice; advocate for the rights of older adults and ensure their safety and dignity by raising awareness of and responding effectively (Pennsylvania Department of Aging, 2020). The Pennsylvania Department of Aging initiatives correlate with the undertaking of this study while addressing factors related to social isolation and connectedness, while also identifying potential health outcomes that may improve the lives of elders. As part of developing the State Plan on Aging, the Pennsylvania Department of Aging (2020) surveyed community stakeholders that identified primarily six factors related to better ensuring age-friendly communities over the next five years that includes the provision of the following supports: affordable prescription medications, access to in-home care and services, available/affordable housing, available/affordable transportation, dementia-capable/dementia-friendly communities access to mental health services. All these areas outlined in the Pennsylvania's Department of Aging plan show up in the literature as protective factors that may increase socialization for rural elderly populations.			

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
		The purpose of this study is to analyze the extent of social isolation among rural Pennsylvanians 65 years of age or older. This study will identify evidence-based programs and services that minimize social isolation, evaluate the determinants of social isolation among residents 62 years of age or older, and evaluate the programs and services that currently exist in rural Pennsylvania to determine replicability in Pennsylvania and make policy recommendations. This study will be conducted in three phases which include a systematic literature review, followed by a telephone survey, and focus groups with Area Agencies on Aging.			
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO) To identify and synthesize the existing evidence related to interventions addressing social isolation and loneliness among rural elderly 65+.	☐	☐	
METHODS					
Eligibility criteria	8	Specify the study characteristics (e.g., PICO, study design, setting, time frame) and report characteristics (e.g., years considered, language, publication status) to be used as criteria for eligibility for the review **Study Designs** **Inclusion Criteria:** This study is particularly interested in interventions targeting older adults experiencing social isolation who reside in rural areas of the United States. Inclusion criteria for this study are studies published between 2015-2021, reporting "social isolation" and/or "loneliness" as the dependent variable and an intervention method to address social isolation or loneliness. Studies can use any research design. Studies must also identify the population of interest as primarily older adults ≥65 years of age. **Exclusion Criteria:** Studies published in languages other than English, conference abstracts, books, book chapters, editorial letters, scoping reviews, systematic reviews, and studies in which full text of the article was not available were excluded. Scoping reviews and systematic reviews were excluded because these types of studies rely on data from studies outside of the date range identified for inclusion in this study. **Participants** We will include studies that investigate adults ≥62 residing in rural communities in the United States. **Interventions**	☐	☐	

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
		We are particularly interested in older adults experiencing social isolation and who reside in rural areas of the United States. Studies must identify types of services or programs used to address social isolation, examine social isolation, social connection, the effects of social isolation on mental and physical health, and social programs of interest that reduce social isolation.			
Information sources	9	Describe all intended information sources (e.g., electronic databases, contact with study authors, trial registers, or other grey literature sources) with planned dates of coverage We examined the Department of Aging websites in the 48 states in the continental United States and peer reviewed journal articles using the following electronic databases: PubMed, Scopus, CINAHL complete, MEDLINE, Psychology and Behavioral Sciences Collection, Web of Science, Social Work Reference Center, PsycINFO, Sociological Collection, Socioindex with full text, and Social Work abstracts plus. The date ranges for this review includes only studies published between 2015-2021.	☐	☐	
Search strategy	10	Our search strategy has two phases. The first phase will identify the categories of services and programs states may use to list their services and programs. The second phase will utilize a keyword search to identify services and programs in use in each state in the United States. Since the purpose of the systematic study is to identify services or programs that address social isolation and social connection and determine if Pennsylvania can replicate these programs or services. Phase 1: To identify services currently in use in the contiguous United States, the research team will use the Pennsylvania's Department of Aging ``Aging Services" categories listed on their website (https://www.aging.pa.gov/aging-services/Pages/default.aspx) as a sample frame from which to identify the categories of services for this study. The following categories of services are listed on the Department of Aging website as "Aging Services'': "Caregiver support", "employment", "Help at home", "Housing", "Legal assistance", "Meals, health and wellness", "Medicare counseling", "ombudsman", "Pace-prescription assistance", "protective services", and "Transportation". The researcher will enter each link and perform a keyword search using "Social Isolation" and "Social Connection" to identify services and programs for each category. The researcher will gather a description of the program, a web link to the program description, and the payor source, if any. The researchers will use these	☐	☐	

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
		Aging Services categories to search the Departments of Aging in the contiguous United States. Phase 2: A list of keywords, terminology, services, and programs, identified in Phase 1 will be combined with key words identified in our study instrument for our questionnaire including loneliness [AND] older adults [AND] aging [AND] aging [AND] elderly [AND] older adults [AND] seniors [AND] social determinants of health [AND] social isolation [AND] social support [AND] mental health [AND] health [AND] public health [AND] prevention [AND] intervention [AND] aging services [AND] Area Agencies on Aging [AND] mental health. Social isolation in rural areas or rural communities. The list of keywords for this search will be broadened as the systematic review progresses and more information is uncovered. Expressions in the related literature will be used as keywords.			
STUDY RECORDS					
Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review The 3 researchers will independently extract the abstract and entire article from the initial search and save these files to an electronic folder on the Kutztown library database. The library database provides a mechanism to save articles for literature review queries but does not allow multiple users for the same file. Therefore, each researcher will export their saved data files to a common folder that the group will use to screen the files for inclusion or exclusion for this systematic review.	☐	☐	
Selection process	11b	State the process that will be used for selecting studies (e.g., two independent reviewers) through each phase of the review (i.e., screening, eligibility, and inclusion in meta-analysis) Studies collected independently by the 3 researchers and placed in an electronic file folder to be uploaded to Nvivo 12.	☐	☐	
Data collection process	11c	Describe planned method of extracting data from reports (e.g., piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators One researcher will apply a text search using “social isolation” and “loneliness” to the list of unique articles collected. The search terms “social isolation” and “loneliness” must appear in the title or abstract and the study must also identify an intervention that is being tested or evaluated.	☐	☐	
Data items	12	List and define all variables for which data will be sought (e.g., PICO items, funding sources), any pre-planned data assumptions and simplifications	☐	☐	

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
		The researchers plan to identify interventions that address social isolation and/or loneliness. No statistical data will be extracted or analyzed for this study.			
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale The primary outcome is the identification of interventions that target or affect social isolation or loneliness in people 65+.	☐	☐	
Risk of bias in individual studies	14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis The researchers have research expertise in the field of aging, mental health, substance abuse, community assessment, and intervention. The researchers will meet to discuss potential bias related to keyword search terms and articles included in the extraction portion of this study. Since the systemic review is intended only to identify studies that address social isolation and loneliness, the risk of interpretive bias is low. In the event the researchers disagree about which intervention should be used in our focus groups, the researchers will discuss the disagreement and attempt to reach a consensus about whether to include the intervention or not.	☐	☐	
DATA					
Synthesis	15a	Describe criteria under which study data will be quantitatively synthesized The output are simple counts of the number of studies that meet the inclusion criteria and screening criteria in Nvivo. No data will be analyzed at this step in the process.	☐	☐	
	15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data, and methods of combining data from studies, including any planned exploration of consistency (e.g., I^2, Kendall's tau) This does not apply to this study.	☐	☐	
	15c	Describe any proposed additional analyses (e.g., sensitivity or subgroup analyses, meta-regression) Interventions will be categorized once the total number of interventions are identified. The categorization method will use a grounded theory approach.	☐	☐	
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned The researchers plan to list the types of interventions, procedures of the intervention, and anticipated treatment time.	☐	☐	
Meta-bias(es)	16	Specify any planned assessment of meta-bias(es) (e.g., publication bias across studies, selective reporting within studies)	☐	☐	

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
		This does not apply to this study.			
Confidence in cumulative evidence	17	Describe how the strength of the body of evidence will be assessed (e.g., GRADE) The evidence will be evaluated by key stakeholders, during focus groups, using their past professional experience and knowledge of the service systems in which these interventions may take place in their community.	☐	☐	

Appendix 2: Search Procedures

Search Strategy

The search strategy used key words developed during a brainstorming session between the three researchers. This study used peer reviewed journal articles from the following electronic databases: PubMed, Scopus, CINAHL complete, MEDLINE, Psychology and Behavioral Sciences Collection, Web of Science, Social Work Reference Center, PsycINFO, Sociological Collection, Socioindex with full text, and Social Work abstracts plus. Grey literature searches included the Department of Aging websites in each of the 48 contiguous United States and databases and websites linked through the Departments of Aging websites.

Initial Key words were developed following a brainstorming session with the 3 researchers and review of several studies from an earlier study. Key words generated included loneliness, older adults, aging, elderly, older adults, seniors, social determinants of health, social isolation, social support, mental health, public health, prevention, intervention, aging services, Area Agencies on Aging. Social isolation, rural areas, rural communities. Following the first round of searches, thesaurus terms and subject headings suggested by the search engine were added and include older adults or elderly or seniors or geriatrics or older people or aged or senior citizens, social isolation or loneliness or social exclusion or social deprivation social support or social networks or social relationships or social inclusion or social exclusion or social isolation, mental health or mental illness or mental disorder or psychiatric illness, prevention or intervention or treatment or program, aging services, rural areas or rural, communities or rural populations, social determinants of health or social risk factors or social, needs or health related social problems.

Department of Aging website search procedure. An iterative search process using the following categories of services are listed on the Pennsylvania Department of Aging website as “Aging Services,” “Caregiver support,” “employment,” “Help at home,” “Housing,” “Legal assistance,” “Meals, health and wellness,” “Medicare counseling,” “ombudsman,” “Pace-prescription assistance,” “protective services,” and “Transportation.” The researchers entered each search term and performed a keyword search using “Social Isolation” and “Social Connection” to identify services and programs for each category. The researchers met via email or zoom to discuss and update the

search process. In addition to the aforementioned search process, the researchers decided to use an open approach since the websites from other states are not laid out the same as they are in Pennsylvania and program terminology did not seem to be uniform across websites. When a program linked to a partner outside of the State Aging website, the researchers followed the link and applied the search criteria. All searches were conducted between April 4, 2021 and April 21, 2021. The three researchers independently extracted the entire article from their search and saved these files to a shared electronic folder on the University computer network.

Search Date: 4/4/21

loneliness [AND] older adults [AND] aging [AND] aging [AND] elderly [AND] older adults [AND] seniors [AND] social determinants of health [AND] social isolation [AND] social support [AND] mental health [AND] health [AND] public health [AND] prevention [AND] intervention [AND] aging services [AND] Area Agencies on Aging [AND] mental health. Social isolation rural areas or rural communities

Search Date: 4/18/21 New search terms added

social support or social networks or social relationships or social inclusion or social exclusion or social isolation, [AND] older adults or elderly or seniors or geriatrics or older people or aged or senior citizens, [AND] social isolation or loneliness or social exclusion or social deprivation, [AND] mental health or, mental illness or mental disorder or psychiatric illness, prevention or intervention or treatment or program, [AND] aging services, [AND] Area Agency on Aging

Study Selection

Inclusion criteria for this study are studies published between 2015-2021, reporting "social isolation" and/or "loneliness" as the dependent variable and an intervention method to address social isolation or loneliness. Next, the search parameters were specified as the following: (1) A study of any type, (2) published in the United States, (3) written in English, (4) populations that include older adults/elderly individuals (62+). The target minimum age was lowered to 62+ because some states have programs that include people 62+ in their study. Exclusion criteria included studies published in languages other than English, conference abstracts, books, book chapters, editorial letters, scoping reviews, systematic reviews, and studies in which full text of the article was not available were excluded. Scoping reviews and systematic reviews were excluded because these types of studies rely on data from studies outside of the date range identified for inclusion in this study. All grey materials were put into a list by state.

Selection process

The collected studies were uploaded to Nvivo 12. One researcher applied a text search using "social isolation" and "loneliness" to the list of unique articles collected. The search

terms “social isolation” and “loneliness” must appear in the title or abstract and the study must also identify an intervention that is being tested or evaluated.

Synthesis

Each researcher reviewed the search results from the grey material list to identify interventions targeting social isolation on the Department of Aging (DoA) websites and corresponding linked materials from DoA websites (see APPENDIX 3). Inclusion criteria are programs that appear to be unique and address social isolation and/or social connection. Exclusion criteria are programs that are routinely offered in each state which are typically part of Medicaid, Medicare, or other federal funding sources (see APPENDIX 3 for a discussion of typical state programs). Three researchers met on two days to discuss which studies and/or intervention programs meet criteria for inclusion in the study. A majority vote was used to settle inclusion and exclusion disagreements.

Data Categorization

Two researchers met to identify thematic categories for all interventions identified in the literature review. The interventions were placed into 4 categories based on the professional experience and knowledge each researcher has with community service systems for older adults and the focus or goal of each intervention (see APPENDIX 4). Once the interventions were categorized, all 3 researchers identified which interventions would be used to represent each category. The researchers decided to include 4 representative interventions in each category to accommodate the 90 minute length of focus groups in this study.

Appendix 3: Programs Across the States/OAA

In an effort to compile interventions targeting social isolation that focus primarily on supporting social connections for older adults in all 48 contiguous states, Department of Aging websites were reviewed. The states are arranged in alphabetical order. Some state websites were easier to navigate than others, therefore, this information is not considered exhaustive as no doubt other initiatives were not clearly identified within each of the sites; for example, through our focus groups with representatives of aging services in Pennsylvania, we learned about the use of Robotic pets.

Aging programs that are standard and available in all states include the following: senior centers with congregate free meals, home delivered meals, Ombudsman services, free legal services, nursing care, home and community-based services (personal care, homemaker services, chore services), case management, Adult Protective Services, Senior Medicare Patrol, guardianship support, advocacy, agency links, home delivered meals, adult day care/health, case management, congregate meals, nutrition counseling, assisted transportation, legal assistance, nutrition education, information and assistance, outreach, and caregiver support services (counseling, respite, supplemental services,

access assistance, and information services), Aging and Disability Resource Center (ADRC), No Wrong Door (NWD), protection from abuse and neglect, Senior Community Service Employment Program **(**SCSEP).

Those interventions targeting social isolation identified to support social connection include the following: caregiver information, disaster preparation specifically addressing needs of seniors, personal choice programs, prescription help, healthy living, chronic disease self-management programs, state funded insurance programs specifically targeting seniors, personal emergency response system, free legal assistance, environmental modifications, health promotions programs that include unique nutritional supports (besides congregate and home-delivered meals), activities and balancing supports, community outreach programs including pen pals and volunteer opportunities, providing networking opportunities and resources for unique older populations such as grandparents as parents and the LGBTQ and/or non-English speaking elders, support and education for pain management and opioid abuse, alternative housing options, caregiving support including for dementia and Alzheimer's, friendly visitors and telephone reassurance, telecommunications support, art programs such as music and memory activities. All these programs require further investigations to determine effectiveness in supporting social connectedness while mitigating loneliness and supporting improved health and quality of life for older adults.

Alabama

The Alabama CARES Program: https://alabamaageline.gov/alabama-cares/

Caregiver Information: A service for caregivers that provides the public and individuals with information on resources and services available to individuals within their communities. 2) Caregiver Assistance: An individual service that assists caregivers in obtaining access to the services and resources available within their communities. 3) Caregiver Respite: Services that offer temporary, substitute supports, or living arrangements for care recipients to provide a brief period of relief or rest for caregivers. 4) Caregiver Education: Individual counseling, support groups, and caregiver training to caregivers to assist them in making decisions and solving problems relating to their caregiver roles. 5) Caregiver Supplemental Services: Services provided on a limited basis to complement the care provided by caregivers.

Disaster Preparation: https://alabamaageline.gov/disaster-preparedness/

Senior citizens are particularly vulnerable during emergency situations – hurricanes, floods, tornadoes, even heat waves. Provide safe centers to serve as places of refuge for seniors during climatic events

The nutrition education program promotes better health by providing accurate and culturally sensitive nutrition, physical fitness, or related health information and instruction. Written nutrition and health education information is provided quarterly by a registered dietitian for use in the local community senior centers.

The Personal Choices Program is Alabama's option for self-directed home and community-based services and is based on a national model of self-direction called the

Cash and Counseling program. It is designed to offer seniors and people with disabilities more choice and flexibility in the type of care they receive.

Alabama Community Transition (ACT) is designed to provide services to individuals with disabilities or long-term illnesses, who live in a nursing facility and who desire to transition to the home or community setting.

Technical Assisted Waiver (TAW) is designed to allow adults who are ventilator dependent or who have a tracheostomy and who would otherwise require care in an institutional setting to remain in the community.

Prescription help: https://alabamaageline.gov/seniorx/ SenioRx is a program for Alabamians who are age 55 and older and for persons with disabilities who are diagnosed with chronic medical conditions requiring daily medication.

Statewide independent living council (SILC): https://alabamaageline.gov/silc/ The Council and the Centers for Independent Living (CILs) within the state develop a State Plan for Independent Living (SPIL).

Alaska

It provides a comprehensive plan for senior services including **meals, transportation, homemaker and family caregiver, safety and protection, adult day services, senior housing, vocational training, legal assistance, the Senior Voice newsletter** and more.

Senior home and community grant funded services provide expanded services for older adults who need assistance to remain independent, but who do not qualify for other publicly funded programs and are intended for individuals who are at risk for institutionalization and wish to remain in their own homes.

Alaska's Roadmap to Address Alzheimer's Disease and Related Dementias

Alaska Core Competencies for Direct Care Workers in Health and Human Services

Alaska Workforce Innovation and Opportunity Act (WIOA) 2018

Comprehensive Integrated Mental Health Program Plan

Advocated for programs serving vulnerable older Alaskans including the **"Silver Alert," reauthorization of the Senior Benefits program: Medicaid Adult Dental; Designated Caregiver education; modernization of the Power of Attorney statute; and other successful legislative efforts** promote public awareness about the role of unpaid natural support caregivers and their needs, especially for dementia caregivers.

Senior In-Home Services Grant Program. Senior In-Home Services provides funding for the following services: Case Management, Chore, Respite, and Extended Respite.

Alzheimer's Disease & Related Dementia (ADRD) Education and Support provides statewide information and education to providers, caregivers, and individuals about the signs, symptoms, causes, diagnosis, and effects of ADRD on an individual and their family.

ADRD Mini-Grants: The Alaska Mental Health Trust Authority provides mini-grants up to $2,500 to individuals who experience ADRD.

Senior Residential Services grant program oversees three grants to rural/remote providers for supported residential living services to frail elders who do not have access to the Pioneer Homes or other assisted living facilities in their community or region.

General Relief Assistance (GRA): provides for the most basic needs of many Alaskans without the personal resources to meet an emergent need and are ineligible for assistance from other programs

Arizona

Healthy Living: https://des.az.gov/services/older-adults/healthy-living The Arizona Department of Economic Security helps older adults live a healthier life. Services and programs include providing access to nutritious meals and help with management of chronic disease.

Arizona Commodity Senior Food Program (CSFP): https://des.az.gov/services/basic-needs/food-assistance/az-commodity-senior-food-program works to improve the health of low-income persons who are at least 60 years of age by supplementing their diets with a monthly package of nutritious food at no cost. CSFP foods are purchased by the state from the United States Department of Agriculture (USDA) Food and Nutrition Service (FNS) division.

Chronic Disease Self-Management Program: https://des.az.gov/services/older-adults/healthy-living/chronic-disease-self-management-program self-management workshops for people with ongoing health problems to provide information for managing those problems more effectively. Workshops are guided by trained leaders who live with chronic conditions and offered in community settings. Topics covered include: Dealing with difficult emotions; Managing symptoms; Nutrition; Increasing strength and stamina through better fitness; Problem solving; Understanding medications; Making informed treatment decisions; and Goal setting.

Caregivers or family members who serve as caregivers are welcomed.

State Health Insurance Program (SHIP): is a free health benefits counseling service for Medicare beneficiaries.

Arizona's Legal Assistance Program The goals of the program are to promote and preserve the autonomy, dignity, independence, and financial security of older persons, provide access to the system of justice, and advocate for the preservation of the rights and benefits of older persons.

Family Caregiver Support: https://des.az.gov/services/older-adults/family-caregiver-support provide most of the assistance that enables older Arizonans and those with disabilities to live independently in their homes and communities. Caregivers can also include grandparents raising grandchildren.

The program offers five direct services to Caregivers that best meet the range of their needs, including: Information about available services. Assistance in gaining access to supportive services. Individual counseling, organization of support groups, and training to assist caregivers in making decisions and solving problems relating to their roles. Respite care to enable caregivers to be temporarily relieved from their caregiving responsibilities. Supplemental services, on a limited basis, to complement the care provided by caregivers.

Arkansas

PACE – (Program of All-Inclusive Care for The Elderly) is a comprehensive health and social services program that provides and coordinates primary, preventive, acute and long-term care services for individuals 55 years of age or older who need nursing facility care. Services are provided in PACE Centers, in the home and in inpatient facilities.

Personal Emergency Response System (PERS) – A call button you can use to get help in an emergency.

Facility-Based Respite Care – Short Stays in a facility so your caregiver can go on vacation.

In-Home Respite Care – Someone to stay with you in your home for a short time so your caregiver can get some rest.

Environmental Modifications – Changes to your home that will help you get around more easily and safely like grab bars or a wheelchair ramp.

Money Follows The Person: https://humanservices.arkansas.gov/divisions-shared-services/aging-adult-behavioral-health-services/find-home-community-based-services-for-adults-seniors/money-follows-the-person/ is a federal program that helps Medicaid-eligible people — the elderly, adults with physical and developmental disabilities, and adults with mental illnesses — currently living in long-term care facilities; such as nursing homes, and other qualified institutions, transition back into to the community and receive home and community-based services.

Living Choices: https://humanservices.arkansas.gov/divisions-shared-services/aging-adult-behavioral-health-services/find-home-community-based-services-for-adults-seniors/living-choices/ is an assisted living program that enables you to live on your own in an assisted living facility, to do the things you enjoy, and to be healthy.

California

HICAP (Health Insurance Counseling and Advocacy Program):
https://aging.ca.gov/Programs_and_Services/Medicare_Counseling/ provides free, confidential one-on-one counseling, education, and assistance to individuals and their families on Medicare, Long-Term Care insurance, other health insurance related issues, and planning ahead for Long-Term Care needs. HICAP also provides legal assistance or legal referrals in dealing with Medicare or Long-Term Care insurance related issues.

Health promotion:
https://aging.ca.gov/Programs_and_Services/Health_Promotion/ Learn techniques and strategies to prevent or mitigate the effects of chronic diseases including osteoporosis, hypertension, obesity, diabetes, and cardiovascular disease. Programs promote healthier living through alcohol and substance abuse reduction, smoking cessation, weight loss and control, stress management, fall prevention, and managing depression.

CalFresh Healthy Living (SNAP-ED):
https://aging.ca.gov/Programs_and_Services/Nutrition_and_Exercise_(CalFresh_Healthy_Living)/ is a program designed to assist individuals with leading a healthy lifestyle by providing nutrition education and physical activities.

Dignity At Home Fall Prevention Program
https://aging.ca.gov/Programs_and_Services/Dignity_At_Home_Fall_Prevention_Program

/ is to reduce the number of debilitating falls suffered by older adults and persons with disabilities. Services may include: Fall prevention information and education; Referrals and provision of fall and injury prevention resources; In-home environmental assessments; Home modifications; Instruction on behavioral, physical and environmental aspects of fall prevention; Purchase of injury prevention equipment, services, materials and labor costs

CBAS (Community-Based Adult Services): https://aging.ca.gov/Programs_and_Services/Community-Based_Adult_Services/ is a community-based day health program that provides services to older adults and adults with chronic medical, cognitive, or behavioral health conditions and/or disabilities that make them at risk of needing institutional care. The Program stresses partnership with the participant, the family and/or caregiver, the primary care physician, and the community in working toward maintaining personal independence. Offers:

Professional nursing services
Physical, occupational and speech therapies
Mental health services
Therapeutic activities
Social services
Personal care
Hot meals and nutritional counseling
Transportation to and from the participant's residence

Aging and disability resource connection: https://aging.ca.gov/Programs_and_Services/Aging_and_Disability_Resource_Connection / A variety of supportive services are available. These services may include: Enhanced Information and Referral Services - Comprehensive resource information, follow-ups, and referrals via "warm hand-offs"; Options Counseling - Assist in identifying goals and needs through person-centered counseling and coordinating access to public and private-funded long-term services and supports in the community; Short-Term Service Coordination - Expedited access to services and supports for individuals at risk of institutionalization, generally for 90 days or less, until a longer-term plan is in place; Transition Services - – For people who are currently in a hospital, nursing facility, or other institution and wishes to receive long-term services and supports at home or in a community-based setting. Anyone regardless of age, income, and disability

Multipurpose Senior Services Program (MSSP): https://aging.ca.gov/Programs_and_Services/Multipurpose_Senior_Services_Program/ provides both social and health care management services to assist individuals remain in their own homes and communities. Offers: Care management; Adult day care; Minor home repair/maintenance; Supplemental in-home chore, personal care, and protective supervision services; Respite services; Transportation services; Counseling and therapeutic services; Meal services; and Communication services.

Colorado

Support Services for Older Adults provides transportation; outreach to identify homebound or isolated people in need of services; care coordination to provide a single

point for information services; in-home services, home health care, and friendly visitors and telephone reassurance; and provides in-person or telephone contact for older adults who are home-bound or live alone.

Caregiver support: https://cdhs.colorado.gov/our-services/older-adult-services/state-unit-on-aging/caregiver-support aiding older adults, as well as grandparents over age 60 raising grandchildren. Services provided through the NFCSP fall into five categories:

1. Information to caregivers about available services
2. Assistance to caregivers in gaining access to supportive services
3. Individual counseling, organization of support groups, and caregiver training to assist the caregivers in making decisions and solving problems relating to their caregiving roles
4. Respite care to enable caregivers to be temporarily relieved from their caregiving responsibilities
5. Supplemental services, on a limited basis, to complement the assistance provided by caregivers, including:
    - Home modifications
    - Assistive technologies
    - Emergency response systems
    - Equipment/supplies

Support services for older adults: https://cdhs.colorado.gov/our-services/older-adult-services/state-unit-on-aging/support-services-for-older-adults: Transportation; Outreach programs use door-to-door canvassing and extensive public announcements to familiarize people with available services;

Friendly visitors and telephone reassurance: Personal or telephone contact is provided for older adults who are home-bound or live alone. Besides developing friendships, volunteer visitors have the ability to identify needs of the individual as they occur and notify those who can help them.

Connecticut

Congregate Housing Services Program: provides supportive services and coordinates professional services to the elderly and disability population who live in rural areas to help them remain safe and independent at home.

Grandparents as Parents: provides networking opportunities and support groups for grandparents who have the care of their grandchildren.

LGBT Resources for Older Adults: provides support groups, resources, advocacy, and so forth, for the elderly LGBT population.

CHOICES (Connecticut's program for Health insurance assistance, Outreach, Information and referral, Counseling, Eligibility Screening) helps Connecticut's older adults and persons with disabilities with Medicare understand their Medicare coverage and healthcare options and offers enrollment assistance.

Connecticut Partnership for Long-Term Care: This alliance between the State of Connecticut, Office of Policy and Management and the private insurance industry through which Connecticut residents can purchase quality, affordable long-term care insurance designed to help older adults pay for long-term care without depleting their assets. The

partnership provided one-on-one counseling; distributed education materials and conducted outreach through community forums.

Connecticut Tech Act Project Increases independence and improves the lives of people with disabilities by making assistive technology more accessible for work, school and community living.

Grandparents as Parents Support focus is to share information amongst the network of over 150 agencies, individuals, and community organizations.

Delaware

Personal Emergency Response System: provides a device that allows a person at high risk (for example an older person who lives alone and has a health problem) to get immediate help in the event of an emergency.

Assistive Devices:
https://www.dhss.delaware.gov/dhss/dsaapd/assisttech.html Some examples of assistive devices include kitchen utensils with large grips, seats for the shower or bath, wheelchairs, and specialized computers.

Attendant Services: https://www.dhss.delaware.gov/dhss/dsaapd/attendant.html is a self-directed program in which participants serve as employers of their own attendants. The service provides support to persons with disabilities who need assistance with the functions of daily living, self-care or mobility. Specific support may include help with activities such as bathing, dressing, personal hygiene, meal preparation, shopping, housekeeping, transportation, communication, on-the-job functions, or other related tasks.

Caregiver Resource Centers:
https://www.dhss.delaware.gov/dhss/dsaapd/resource.html serve as access points for information on a variety of caregiving topics; provide information, assistance and support that can be helpful in a caregiver's individual situation. They help caregivers navigate services systems, find solutions to individualized concerns, and make appropriate referrals. Many Caregiver Resource Centers also have support groups. In addition, each center has materials that can be reviewed on site or checked out for home use.

Home Modification:
https://www.dhss.delaware.gov/dhss/dsaapd/homemod.html pays for modifications (or changes) to be made to the home of a person with a physical disability. The changes are made to allow a person to move around more freely in the home. An example of a home modification is the installation of a wheelchair ramp. Modifications are made to permanent residences only.

Nursing Home Transition Program:
https://www.dhss.delaware.gov/dhss/dsaapd/passport.html The goal of the program is to identify, inform and assist nursing home residents, especially those who are Medicaid-eligible, who want to move to a community-based setting. The program offers individualized case management to accomplish this goal.

Options Counseling:
https://www.dhss.delaware.gov/dhss/dsaapd/options_counseling.html helps people

understand the service options available to them and make decisions about their care. It can also help them get enrolled in the long term care services that they need.

Personal Care: https://www.dhss.delaware.gov/dhss/dsaapd/perscare.html

Personal Emergency Response System: https://www.dhss.delaware.gov/dhss/dsaapd/ers.html is a device that allows a person at high risk (for example an older person who lives alone and has a health problem) to get immediate help in the event of an emergency. The person who is using the system wears a button that he or she can push if needed. The button connects electronically to the person's phone, which is programmed to send a signal to a response center or other contact persons who can then carry out a series of actions to help the person in need.

Florida

Grandparents as Parents: provides networking opportunities and support groups for grandparents who have the care of their grandchildren.

LGBT Resources for Older Adults: helps older adults to manage pain and improve their time spent with friends and family and to avoid misusing pain prescription medicine.

Disaster Preparation: provides a safe place for the elderly during climatic events, prepares for natural disasters, provides post-disaster support, and builds supportive networks.

Elder Helpline: http://elderaffairs.state.fl.us/doea/elder_helpline.php Information regarding elder services and activities is available through the Elder Helpline Information and Assistance service within each Florida County.

Elder Update: http://elderaffairs.state.fl.us/doea/elder_update.php is the Florida Department of Elder Affairs' bimonthly newspaper directed to Florida seniors.

SHINE (Serving Health Insurance Needs of Elders): http://www.floridashine.org/ is a free program offered by the Florida Department of Elder Affairs and your local Area Agency on Aging. Specially trained volunteers can assist you with your Medicare, Medicaid, and health insurance questions by providing one-on-one counseling and information. SHINE services are free, unbiased, and confidential.

Americorps is a network of national service programs that engage members and community volunteers in intensive service to meet critical needs in education, public health, and the environment.

Senior vs Crime: is a non-profit organization of senior volunteers working to right civil wrongs for Florida seniors and to educate seniors about scam, consumer fraud, con games and other criminal acts.

Georgia

Forensic Special Initiatives Unit (FSIU): https://aging.georgia.gov/programs-and-services/forensic-special-initiatives-unit-fsiu provides support to the Georgia Department of Human Services (DHS), Division of Aging Services (DAS) and other local, state and federal partners by identifying and addressing system gaps and developing process improvements to protect Georgia's at-risk adults from abuse, neglect, and exploitation. The Forensic Special Initiatives Unit supports local, state, and federal agencies serving at-

risk adult crime victims through technical assistance, case consultations, case reviews, and At-Risk Adult Crime Tactics (ACT) certification.

Georgia Abuse Neglect Exploitation (GANE) App: was developed for law enforcement and other professionals who need quick access to tools and resources in the field when responding to crimes involving vulnerable adults. The GANE App (when activated with a special code available only to law enforcement, Adult Protective Services, and Healthcare Facility Regulation) allows access to:

1. Georgia Law – A list of crimes specifically related to vulnerable adults, with an identification of crimes with enhanced penalties
2. Reporting Agencies – A list of social service and regulatory agencies to report suspected abuse, neglect, and exploitation of a vulnerable adult
3. Financial Capacity Screening Tool – A quick evaluation of the financial capacity of a vulnerable adult
4. TERF - Temporary Emergency Respite Funds (TERF) is a resource only for law enforcement, social services and regulatory agencies to assist in the emergency placement, for up to seven (7) consecutive days of abused, neglected and exploited at-risk adults whose caregivers have been removed because of illness, arrest, or other reasons.

Resources for Older Adults and Caregivers in Georgia: including **Grandparents Raising Grandchildren:** https://aging.georgia.gov/tools-resources/grandparents-raising-grandchildren

Resources for kinship caregivers are available at the following links:

1. one-stop shop for information, resources and support for kinship caregivers.
2. offer support groups for kinship caregivers and can provide referrals to services across the state.

Hawaii

Services contracted include:

Hawaii Healthy Aging Partnership (HHAP): Initiative offers the Chronic Disease Self-Management Education and Enhance Fitness workshops.

Community Living/ Participant Direction and Veterans Directed Care Participant Direction (PD): is a service model in which participants are their own case managers and are responsible for self-directing their Long-Term Services and Supports (LTSS). Two types of PD: 1) Participant direction for persons eligible for publicly funded LTSS; and 2) Veterans Directed Choice (VTC) for veterans eligible for nursing home placement

Idaho

Disaster Preparation: provides a safe place for the elderly during climatic events, prepares for natural disasters, provides post-disaster support, and builds supportive networks.

Commodity Supplemental Food Program (CSFP): Monthly Food Boxes Distributed to Low Income Seniors and provides nutrition education.

Chore - Home Maintenance & Repair Assistance: maintaining

1. Installation of grab bars and wheelchair ramps
2. Seasonal yard work

3. Heavy cleaning
4. Minor household maintenance

Caregiving for People with Dementia: focuses on enhancing the quality of life for persons with dementia and their caregivers.

Disease prevention and health promotion programs focus on keeping seniors healthy and engaged. They empower us to choose healthy behaviors and make changes that reduce the risk of chronic conditions. If we or someone has a chronic condition such as diabetes, heart disease, arthritis, stroke, or cancer, there are workshops available that can provide us with the tools to:

1. Build our own support network
2. Learn relaxation and strategies to deal with pain, fatigue, and frustration
3. Discover how healthy eating can improve your condition
4. Create an exercise program that works for you
5. Understand new treatment choices
6. Communicate effectively with our doctors and families about our health

Illinois

Coalition of Limited-English-Speaking Elderly: provides the services and accessibility to limited-English-speaking older adults.

Automated Medication Dispenser Service: is a portable, mechanical system that can be programmed to dispense or alert the participant to take non-liquid oral medications in the participant's residence or other temporary residence in Illinois through auditory, visual or voice reminders; to provide tracking and caregiver notification of a missed medication dose; and to provide 24-hour technical assistance to the participant and responsible party for the AMD service in the home. The service may provide additional medication, specific directions or prompts to take other medications via other routes such as liquid medications or injections based on individual need.

Emergency Home Response Service (EHRS) is a 24-hour emergency communication link to assistance outside the home for older adults with documented health and safety needs and mobility limitations. This service is provided by a two-way voice communication system consisting of a base unit and an activation device worn by the client that will automatically link the older adult to a professionally staffed support center.

The Senior Community Service Employment Program, under Title V of the Older Americans Act, is a federally funded program designed to assist adults aged 55 and older in entering or reentering the job market. The program is administered by the Illinois Department on Aging through the Area Agencies on Aging, which are responsible for implementation at the local level.

Grandparents Raising Grandchildren Program: Illinois Department on Aging, in cooperation with the Illinois Task Force on Grandparents Raising Grandchildren, works to locate, assist and promote awareness of older caregivers who are currently raising their family's children.

Comprehensive Care in Residential Settings (CCRSs): is a demonstration project that offers a social model of affordable assisted living in the state of Illinois. These facilities

combine affordable rent with state-assisted care services provided through the Department on Aging's Community Care Program (CCP). The actual services are tailored to each individual resident through assessment completed by a Care Coordination Unit (CCU). Services include but are not limited to: three meals per day; Housekeeping; 24-hour Security; Emergency Response System; Laundry Service; and Senior Companion agencies provide an array of assistive, supportive companionship services.

Indiana

Program of All-Inclusive Care for the Elderly (PACE®) model is centered on the belief that it is better for the well-being of seniors with chronic care needs and their families to be served in the community whenever possible.

Delivering all needed medical and supportive services, a PACE program is able to provide the entire continuum of care and services to seniors with chronic care needs while maintaining their independence in their home for as long as possible. Services include the following:

1. adult day care that offers nursing, physical, occupational and recreational therapies, meals, nutritional counseling, social work, and personal care;
2. medical care provided by a PACE physician familiar with the history, needs, and preferences of each participant;
3. home health care and personal care;
4. all necessary prescription drugs; social services; medical specialties, such as audiology, dentistry, optometry, podiatry, and speech therapy;
5. respite care;
6. hospital and nursing home care when necessary; and
7. transportation

Golden Hoosier Award: was established to recognize outstanding older Hoosiers for service to their communities. The award often acknowledges unsung heroes who have represented a lifetime of dedication, ingenuity, perseverance and compassion to positively impact the lives of others while building up their communities. This award is sponsored by the Office of Indiana Lieutenant Governor in collaboration with the Indiana Family and Social Services Administration's Division of Aging.

The following links are resources for information on the following subjects:

- Physical activity
    - National Institute on Aging, How Older Adults Can Get Started with Exercise
    - U.S. Department of Health & Human Services, Move Your Way Activity Planner
    - National Council on Aging Falls Free CheckUp
    - National Institute on Aging, A Good Night's Sleep
- Mental Health
    - Be Well Indiana

Iowa

Disaster Resources During COVID-19: connects individuals to virtual classes, conversations, and other activities and are accessible by telephone. Programs are available in both English and Spanish, facilitated by volunteers and professional staff members.

Iowa café: is a new, innovative partnership between local Area Agencies on Aging and licensed food services establishments like restaurants, food trucks, cafés, convenience stores, and grocery stores with hot and cold food options. Meals are provided on a voluntary contribution basis, and individuals will be given the opportunity to contribute towards the cost of the meal.

Kansas

Disaster Preparation: provides a safe place for the elderly during climatic events, prepares for natural disasters, provides post-disaster support, and build supportive networks.

Disease Prevention and Health Promotion Services provides grants to support any of the 15 health-related services, such as health risk evaluations, screening, nutrition counseling, health promotion programs, physical fitness and exercise programs, home injury control screening and the screening for the prevention of depression.

The Senior Care Act (SCA) program: was established by the Kansas Legislature to assist older Kansans who have functional limitations in self-care and independent living, but who are able to reside in a community based residence if some services are provided. The program provides in-home services to persons who contribute to the cost of services based on their ability to pay. Services are offered on a sliding fee scale based on income and assets for customers who functionally qualify. A plan of care outlining the services needed is developed based on a functional assessment.

Senior Health Insurance Counseling for Kansas (SHICK) a free program offering Kansans an opportunity to talk with trained, community volunteers and get answers to questions about Medicare and other insurance issues. SHICK provides you with many resources that will help you with your questions about Medicare.

Alzheimer's disease task force: task force members divided into committees that studied, researched and documented the following topics for the plan: Public Awareness, Access to Care, Family Caregivers, Training and Workforce, Safety and Legal, Research and Data, Dementia Care, and Rural.

Client Assessment, Referral and Evaluation (CARE) program: more commonly referred to as nursing facility assessment, was created in 1994 by the Kansas Legislature as the Kansas response to the Federally mandated Pre-Admission Screening and Resident Review (PASRR) program. The goals of the assessment are to provide customers individualized information on long-term care options, determine appropriate placements in long-term care facilities, and collect data regarding individuals being assessed for possible nursing facility placement.

Spousal Impoverishment Law, sometimes called Division of Assets, changes the Medicaid eligibility requirement for couples in situations in which only one spouse needs nursing home care. It allows the spouse remaining at home to protect a portion of income

and resources. The spouse needing care can receive Medicaid sooner and without the spouse at home being reduced to poverty.

Program of All-Inclusive Care for the Elderly (PACE) program: promotes quality, comprehensive health services for older adults. The primary care physicians and interdisciplinary team of professionals provide and coordinate all services for the individual, providing a "one-stop shop" for the individual's needs. Most services are provided in-home and at the PACE Center.

1. Primary Care Physicians
2. In-Home Care
3. Physical Therapy
4. Occupational Therapy
5. Recreational Therapy
6. Activities and Exercise
7. Nutrition and Dietary Services
8. Laboratory / X-ray Services
9. Social Services Guidance
10. Dental Services, Including Dentures
11. Hearing and Vision Services
12. Medications
13. Durable Medical Equipment
14. Medical Transportation
15. Medical Specialty Services

Kentucky

Kentucky Homecare program offers in-home support and services to individuals 60 years of age and over who have functional disabilities and are at risk of long-term institutional placement. Services include personal care, home management, home health aide, home delivered meals, home repair, chore, respite, escort, and assessment. **The following expenses may be considered by the case manager in requesting a waiver to the sliding scale fee:** Doctor Bills, Hospital Bills, Prescription Medication, Over-the-counter Medication, Medical Equipment, Medical Transportation, Other care required due to mental or physical disability (ex. Physical, Occupational, or Speech Therapy), Counseling, Monthly payments for major home repair (roof, plumbing, electrical), Burial Expenses, Custodial Care (private duty nurse, home health services), Special schooling for spouse or minor dependent child (Ex. School for the Blind), Premiums for supplemental health insurance, Hired help for transportation, shopping, cleaning, etc., Eyeglasses – one time deduction only, Out of pocket durable medical equipment, Medical supplies (ex. support hose, diabetic test strips, and bandages), Home modifications, (ex. ramp, grab bar installation– this is a onetime deduction).

Louisiana

Information and Assistance - A service for older individuals that provides the individuals with current information on opportunities and services available to the

individuals within their communities, including information relating to assistive technology.

Nutrition Counseling - Provision of individualized advice and guidance to individuals, who are at nutritional risk, because of their health or nutritional history, dietary intake, medications use or chronic illnesses, about options and methods for improving their nutritional status, performed by a health professional in accordance with state law and policy.

Nutrition Education—A program to promote better health by providing accurate and culturally sensitive nutrition, physical fitness, or health (as it relates to nutrition) information and instruction to participants or participants and caregivers in a group or individual setting overseen by a dietitian or individual of comparable expertise.

Counseling - Counseling by a professional counselor in either an individual or group session.

Crime Prevention Services - Efforts to educate citizens in ways to protect their property and persons.

Home Repair/Modifications - Repairs and/or changes to existing structures to include accessible modifications and minor repairs, e.g., handrails, ramps, door locks, electrical fixtures, appliances. Time spent in actual modification repairs shall be counted as a unit of service.

Material Aid - Issuing assistive devices and other goods, e.g., Walkers, wheelchairs, fans, commodities, personal hygiene items.

Medication Management - Activities designed to provide services which will support and/or improve the older persons mental and/or physical well-being, e.g., exercise/physical fitness, health screening.

Medical Alert - Providing Emergency Response Systems (ERS) to older persons.

Public Education - Basic, remedial, or continuing education services to assist individuals to acquire knowledge about services and/or skills suited to their own needs and/or caregiving role and needs.

Recreation - Providing individual and group activities that promote social interaction and wellbeing.

Sitter Services - A supervisory and companion service provided in a home setting to ensure the health and safety of the individual. It includes observing, conversing, providing food for the individual, etc.

Telephoning - Contacting individuals by phone on a routine basis to determine physical status, to provide comfort and help.

Utility Assistance - Determining an older individual=s need for utility assistance and providing financial assistance to the individual.

Visiting – Visiting in the home of older individuals providing comfort, encouragement, listening, fellowship, etc.

Wellness - Activities designed to provide services which will support and/or improve the older person's mental and/or physical well-being, e.g., exercise/physical fitness, health screening.

NFCSP (National Family Caregiver Support Services) Public Education – Basic, remedial, or continuing education services to assist individuals to acquire knowledge about services and/or skills suited to their needs and/or caregiving role and needs. This service is in a group setting. It includes contacts with several current or potential clients/caregivers. Examples of activities that qualify as this service are providing educational seminars or the lending or showing of educational tapes and distributing brochures.

NFCSP (National Family Caregiver Support Services) Individual Counseling – Counseling to caregivers to assist them in making decisions and solving problems relating to their caregiver roles. This includes counseling to individuals, support groups, and caregiver training (of individual caregivers and families).

NFCSP (National Family Caregiver Support Services) Support Groups – A group of persons who meet together for fellowship and to share their experiences, strengths, hopes and difficulties with each other so that they may solve common problems and help fellow caregivers.

NFCSP (National Family Caregiver Support Services) Adult Day Care – Provision of personal care for dependent adults in a supervised, protective, congregate setting during some portion of a **twenty-four hour day.** Services offered in conjunction with adult day care typically include social recreational activities, training, counseling, and meals.

NFCSP (National Family Caregiver Support Services) Material Aid – Issuing assistive devices and other goods, e.g., walkers, wheelchairs, fans, commodities, personal hygiene items.

NFCSP (National Family Caregiver Support Services) Sitter Service – A supervisory and companion service provided in a home setting to ensure the health and safety of the individual. Includes observing, conversing, providing food for the individual, etc.

NFCSP (National Family Caregiver Support Services) Chore – Providing assistance to persons having difficulty with one or more of the following instrumental activities of daily living: Heavy housework, Yard work or sidewalk maintenance

NFCSP (National Family Caregiver Support Services) Home Repair / Modifications – Repairs and/or changes to existing structures to include accessible modifications and minor repairs, e.g., handrails, ramps, door locks, electrical fixtures, appliances. Time spent in actual modification repairs shall be counted as a unit of service.

Maine

Pain Management and Opioid Misuse Prevention: helps older adults to manage pain and improve their time spent with friends and family and to avoid misusing pain prescription medicine.

Chronic Disease Self-Management Program: designed to help participants deal with chronic conditions. Topics include techniques to deal with frustration, fatigue, pain, and

isolation; appropriate exercise for maintaining and improving strength, flexibility, and endurance; appropriate use of medications; communicating effectively with family, friends, and health professionals; nutrition; and how to evaluate new treatments.

Enhance Wellness: helps the elderly to set up health actions and goals.

Enhance Fitness: provides a 5-week, low-cost fitness class.

UNE Legacy Scholars Program: invites older adults to work with university faculty and students to share the scholarship on aging issues.

A Matter of Balance (MOB), Managing Concerns About Falls is a program, specifically designed to reduce fear of falling, stop the fear of falling cycle, and improve activity levels among community-dwelling older adults.

Savvy Caregiver Workshop is a six session training series for informal caregivers. For most family caregivers, caregiving itself is a new role, one for which training is needed, just as a person would receive training for any new job. The Savvy Caregiver Program helps caregivers better understand the changes their loved ones are experiencing, and how to best provide individualized care for their care recipients throughout the progression of Alzheimer's or dementia.

Maryland

Senior Call Check Program (SCC): Every day a telephone call is placed to a participant at a regularly scheduled time.

Share Your Life Stories: provides older adults throughout the state a chance to engage and connect with others in a safe and creative environment.

Telecommunications and Socialization Resources: gets people connected to the community virtually with resources to help access and use the Internet, programs, and resources to socially engage and reduce social isolation, and platforms to manage mental and behavioral health through telehealth usage.

Caregiver Services Corps (CSC): new statewide with the goal of enabling older adults to remain in their homes with the support systems in place to do so. The service is designed to address pressing needs that are temporary, such as: an older adult determines they won't have food to make it through the end of the week, or a family member who cares for their elderly loved one can't check in on them the next day

Health Promotion and Disease Prevention: promotes preventive health, wellness, and physical fitness.

Social Engagement Resources to engage socially through support groups, volunteering opportunities, educational activities, and a range of interactive classes, from physical activity to performance (https://aging.maryland.gov/pages/tsr.aspx).

Massachusetts

Age-Friendly Communities describes a movement to make communities more welcoming and livable for older residents and people of all ages. It describes efforts we can take together to create places where people can grow up and grow old together.

Innovation and Technology Workgroup focuses on launching the In Good Company: Optimal Aging Challenge to find innovative solutions to address loneliness and isolation in older adults. GE Healthcare hosted and resourced this challenge, including prize money, with additional support from the MIT AgeLab and Benchmark Senior Living. It provides older adults with tablets and training.

Councils on Aging & Senior Centers are the 350 municipal agencies that provide local outreach, social and health services, advocacy, information and referral for older adults, their families, and caregivers. Councils on Aging & Senior Centers provide support services to elders, families, and caregivers in the community. As a local agency, the Councils on Aging & Senior Centers serve as an elder advocate, offering services, and activities for elders**.** Help with social isolation.

1. **Options Counseling** is a free service. It can help an older person, an adult of any age with a disability, their family members or caregivers make decisions on supportive services if they don't know where to turn.

Michigan

Foster Grandparent (**https://americorps.gov/serve/americorps-seniors**): provides a way for volunteers aged 55 or older to stay active by serving children and youth in their communities.

Senior Companion: provides a way for volunteers aged 55 or older to make a difference by providing assistance and friendship to adults who have difficulty with activities of daily living, helping them maintain their independence.

FRESH/Market FRESH: seasonal nutrition program provides qualified older adults with coupons to be used as cash to purchase fresh, locally grown produce from authorized Michigan farmers' markets and roadside stands.

Minnesota

Enhance Wellness helps the elderly to set up health actions and goals.

Juniper is a statewide network operating under Innovations for Aging, has partnered with Blue Cross Blue Shield of Minnesota (BCBS MN) to offer evidence-based wellness programs and address social isolation. It offers nine unique classes, structured to help people live well, get fit, and prevent falls.

Mississippi

Senior Companion Program Jackson County Senior Companion Program provides grants to qualified agencies and organizations for the dual purpose of engaging persons 55 and older, particularly those with limited incomes, in volunteer service to meet critical community needs; and to provide a high-quality experience that will enrich the lives of the volunteers.

Outreach Coordinators – seek out older adults to educate and connect the individual with available services. This is an essential tool for linking individuals in need with available programs and services which they may not be previously aware of.

Missouri

Social Isolation and Engagement Issues: provides the resources/website link to help the elderly reduce social isolation.

COVID Related: conducts telecommunicate avenues such as phone calls, virtual events, conversations, classes via phone or the internet.

Montana

Innovation and Technology Workgroup: focuses on launching the In Good Company: Optimal Aging Challenge to find innovative solutions to address loneliness and isolation in older adults. It provides older adults with tablets and training.

Big Sky Waiver Program consists of a nurse and social worker and provides a holistic approach to care planning. They look at each individual's medical and psycho-social needs and then develop a plan of care based on the person's needs and choices. Each Case Management Team has a fixed number of individuals they can serve per year. (https://dphhs.mt.gov/sltc/csb#147868309-montana-big-sky-waiver-program)

Nebraska

Aged Medicaid waiver, care management, caregiver support program, homemaker program, MOW, Senior centers, Personal care services

New Horizons Newspaper-Community Newspaper (https://enoa.org/?page_id=13)

Nevada

Community Advocates (Case Management) DSD Community Advocates increase awareness of community resources to all Nevadans across the lifespan. Creating opportunities to educate, inform, and connect those individuals seeking help to access programs and services to meet their needs.

New Hampshire

New Hampshire Alliance for Healthy Aging https://nhaha.info/strategic-priorities/.

New Jersey

Fall Prevention: prevents the elderly from falling and encourages older adults to improve activity levels such as with a tai chi class. Moving for Better Balance (TJQMBB) is an evidence-based exercise training program that was designed for older adults at risk of falling and/or people with balance disorders. TJQMBB is a 24-week program consisting of 60-minute sessions that meet 2–3 times per week in groups of 8–10 participants.

Stress-Busting for Family Caregivers is a grant-supported initiative by Rowan University's New Jersey Institute for Successful Aging in collaboration with the NJ Division of Aging Services (DoAS).
https://www.state.nj.us/humanservices/doas/services/stressbusting/

Project Healthy Bones This exercise and education program for people with, or at risk of osteoporosis includes exercises that target the body's larger muscle groups to improve strength, balance, and flexibility.

HealthEASE was created in New Jersey to coordinate and expand health promotion and disease prevention services for older adults at the local level, with the goal of promoting, supporting, and sustaining older adults in living healthier, more independent lives. https://www.state.nj.us/humanservices/doas/services/healthease/index.html.

New Mexico

Senior Social Hour: sets up coffee and Facebook meetups.

The Create & Connect Campaign is a collaboration started by the Aging and Long-Term Services Department to get uplifting letters and engaging social media programming into the homes of New Mexicans with disabilities and to seniors. Three different platforms will be used to encourage seniors and individuals living with disabilities during this season of isolation: http://www.nmaging.state.nm.us/create-connect.aspx.

Health, Fitness and Wellness at Senior Centers Provides fitness and exercise activities such as weight training facilities and exercise classes such as Enhance Fitness, Tai Chi, Zumba, and much more. Availability of services offered varies throughout the state. https://www.nmaging.state.nm.us/healthy-aging-and-prevention.aspx.

New York

Friendly Visiting and Friendly VOICES: runs two volunteer programs that are designed to build friendships and limit social isolation.

Letters to Seniors: matches its existing volunteers with older adults and caregivers, allowing them to develop a new friendship over email.

Senior Companion Program: provides an array of assistive, supportive companionship services to frail seniors by utilizing volunteers.

Foster Grandparent: is part of the National Senior Corps program, which places low-income older adults in community settings, including hospitals, day cares, elementary schools, after-school programs, Head Start, and more. Volunteers are paid a modest stipend to mentor and care for infants and children with special needs. They often help with math, reading, and other subjects. Volunteers must be 55 or older and be able to give 20 hours of their time each week.
https://www1.nyc.gov/site/dfta/services/volunteer.page.

North Carolina

Support programs that increase the availability of **subsidized and moderate-income housing for seniors** and those with disabilities by writing letters of support, assisting with grant applications, providing data, technical assistance, and training.

Increase opportunities among aging networks and workforce partners to expand participation among older adult workers.

In partnership with the Department of Transportation (DOT), **expand public awareness of driver safety resources and promote safe driving among older adults.**

North Dakota

Volunteers: provides volunteer opportunities for elders to participate in community events and uses the volunteers to help the elderly in daily activities.

Tribal Home Visits: provides periodic visits to isolated older individuals residing on a reservation to monitor their health and well-being and to identify service needs with an emphasis on referral and linkage to available services. The service is provided on two reservations.

Health Maintenance Program: Provides services to assess and maintain the health and well-being of older individuals. Funded services include: blood pressure/pulse/rapid inspection; foot care; home visits; and medication set-up. Services are provided through regional competitively bid contracts. Services are provided at 129 sites, primarily senior centers, and district health units.

Community elder service networks continue to promote health and wellness activities through 'wellness adventures'. The networks also provide a forum for service providers to collaborate with non-traditional partners to raise awareness on health issues, prevention, services, service needs, and other aging issues.

Senior Companion Program: Provides periodic companionship and non-medical support by volunteers (who receive a stipend) to adults that require assistance. The DHS contracts to provide this service on each of the American Indian Reservations and the Tribal Service Area.

Adult Foster Care Program: The administration of adult foster care is a joint effort by the Medical Services and the Aging Services divisions, county social services agencies, and regional human service centers. Aging Services, county social services, and the regional human service centers each have a role in the home study and licensure process. Medical Services is responsible for enrollment of qualified service providers and payment. Adult foster care provides a safe, supervised family living environment 24 hours per day. The service is accessed through county social services.

Telecommunications Equipment Distribution Service: The service provides specialized telecommunications equipment to communication-impaired individuals

Service Payments for the Elderly and Disabled (SPED): A state-funded program that pays for services for individuals with a physical disability who have difficulty completing tasks that enable them to live independently. Services include adult day care, adult foster care, case management, chore, emergency response system, environmental modification, family home care, home-delivered meals, homemaker, non-medical transportation, personal care, respite, specialized equipment, and extended personal care/nurse education. Services are accessed through county social service agencies.

Volunteer Activities: The aging network provides many opportunities for volunteer activities. State and regional staff members continue to coordinate efforts with local agencies including faith-based organizations to promote volunteerism. Staff serve in an advisory capacity for the Retired and Senior Volunteer Program and the Foster Grandparent Program. The Aging Services Division provides an opportunity for volunteerism as volunteer ombudsman.

Options Counseling: Individuals are provided information on community options, benefits counseling and/or futures planning; consumers are involved in the development and implementation of the action plan and linked with appropriate agencies or services.

Ohio

Telecommunications and Socialization Resources: gets people connected to the community virtually with resources to help access and use the Internet, programs and resources to socially engage and reduce social isolation, and platforms to manage mental and behavioral health through telehealth usage.

Letters to Seniors: AAAs across the country are looking to pen pal programs and letter writing campaigns as a creative way to combat social isolation during the COVID-19 crisis.

The Committee on Aging, which is funded in part by the Area Agency on Aging in Northwest Ohio, created a way for older adults in their **community to play virtual Bingo**. A Bingo card template was shared on Facebook. In order to achieve Bingo, several tasks had to be completed related to health/wellness-promoting activities listed vertically, horizontally, or diagonally. These activities include connecting with friends/family, learning, doing something creative and listening to music. When a player thinks they have achieved bingo, they contact the Committee's staff via Facebook messenger or email. Bingo winners then receive raffle tickets, and they can receive a maximum of five raffle tickets per week. Raffles are conducted live on Facebook once a week. Prizes include mystery gift bags and grocery store gift cards. Given the benefits of social engagement, this is a game that everybody wins!

Oklahoma

Car Bingo for Oklahoma Elders Area Agency on Aging, Good Shepherd Hospice and the five Title VI programs used casino parking lots as a space for cars to gather, with casinos closed due to the pandemic. After the casinos re-opened, a church parking lot was used to hold Car Bingo. To ensure adequate physical distancing, program staff asked attendees to park in every other space and stay in their cars for the entire event. Staff distributed goody bags, tickets and bingo cards to attendees and each Car Bingo event included four rounds of bingo, drawings for door prizes, prizes for decorated cars and signs, and other surprises for the elders like musical guests and an ice cream truck. While Car Bingo paused as the weather got colder, it was a big hit among all elders who participated.

Oregon

Aging and Disability Resource Centers: provide information on counseling, education, programs, services, events, and benefits for elderly and disability populations. In Oregon, individuals may access the ADRC in person, by telephone, and via the Internet to learn about community resources and programs that may be able to provide support.

Pennsylvania

AAAs across the country are looking to **pen pal programs and letter writing campaigns** as a creative way to combat social isolation during the COVID-19 crisis. In Chambersburg, PA, the Franklin County Area Agency on Aging is working with the United Way of Franklin County on a Pen Pals for Seniors program. This new program invites members of the community to send notes, poems, stories and drawings to the Franklin County AAA, with the AAA staff delivering the letters to older adults in the community facing increased social isolation.

Program Description Art has long been a way to bring people together through creative expression. Created by the Appalachian Agency for Senior Citizens (AASC) for individuals living with dementia who participate in the agency's Program of All-Inclusive Care for the Elderly (PACE) program, Art at Your Own PACE provides older adults with art therapy and activities to help them express themselves creatively. AASC's Occupational Therapist Assistant uses art techniques, activities, and projects to engage participants and strengthen their cognitive, visual and sensory skills. Following the program's 2018 launch, Art at Your Own PACE has since evolved into an intergenerational program that serves AASC's older adult and child day care center program participants. Art projects include painting flowerpots, canvases and murals; decorating award winning holiday floats for parades; creating live murals using sidewalk chalk; and crafting a Christmas ornament to adorn the Governor's tree at the Executive Mansion. Clients who do not have the motor skills necessary to complete traditional art projects are provided with an iPad that allows them to participate in the program using art apps

Rhode Island

Area Agencies on Aging provide assistance with senior benefit programs, social security, Medicare, eligibility for low-income senior programs including home and community services (some states will provide part-time caregiving in the home through their home and community services program), along with: Transportation - Home-delivered Meals - Prescription Drug Programs - Healthy Aging Programs - Case Management - Caregiver Training - Senior Activities - Support Groups - Volunteering

Senior Health Insurance Program (SHIP): is a free counseling service for seniors and pre-retirees and is part of a federal network of State Health Insurance Assistance programs located in every state. SHIP counselors answer questions about Medicare, Medicare Supplement Insurance, Medicare Advantage and Medicaid along with prescription coverage and low-income assistance.

South Carolina

Community Resources Division: is responsible for coordinating a broad array of aging programs, as well as home and community-based services, directed toward enhancing the quality of life for older persons, persons with disabilities and their caregivers. These include federal Lifespan Respite grant programs, senior employment, insurance

counseling, the ElderCare Trust Fund grant initiative, the Geriatric Loan Forgiveness Program, transportation services, in-home supportive services, Evidence-Based Health and Wellness Programs, and assessment services. Additionally, the Community Resources Division houses the Supportive Services and Outreach Unit, which serves senior adults, adults with disabilities, their families, and professionals through outreach; partnerships; information and referral/assistance; data collection and dissemination; training; and advocacy.

South Dakota

Area Agencies on Aging provide assistance with senior benefit programs, social security, Medicare, eligibility for low-income senior programs including home and community services (some states will provide part-time caregiving in the home through their home and community services program), along with: Transportation - Home-delivered Meals - Prescription Drug Programs - Healthy Aging Programs - Case Management - Caregiver Training - Senior Activities - Support Groups - Volunteering

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Tennessee

Information and assistance; case management; home and community based services; transportation; senior centers; legal assistance; congregate meals; home-delivered meals; evidence-based health promotion; programs for family caregivers; ombudsman; elder abuse prevention; and overall program monitoring.

Texas

Program to Encourage Active and Rewarding Lives (PEARLS) Connect: is a national evidence-based depression management program for older adults and their caregivers that uses problem-solving treatment and activity planning as its foundation of intervention. PEARLS Connect provides older adults who are socially isolated and/or depressed with social support and opportunities to utilize the PEARLS methodology, helping them maintain the improvements in mental health they achieved through their participation in the core PEARLS program.

Utah

Weber-Morgan Senior Art Gallery: The online gallery helps connect older adult artists to their community, motivates the participating artists to continue to produce artwork to be shared, and serves as a class promotion tool that inspires and encourages other older adults to join the art classes and engage with participants.

Vermont

OAA services are provided through Vermont's five Area Agencies on Aging (AAA) and include case management; nutrition services and programs; health promotion and disease prevention; information, referral, and assistance; legal assistance; and family caregiver support. The Adult Services Division is responsible for monitoring services and funding according to federal requirements in partnership with the Administration on Community Living.

Virginia

Because all **congregate meal sites** in the area are closed, Mountain Empire Older Citizens (MEOC) has increased its home-delivered meal services. MEOC staff **conduct well checks during meal deliveries and over the phone through "Good Morning, Wise County,"** a program of local law enforcement in which officers call frail older adults every morning to learn whether they have a problem or need any assistance. MEOC partners with the local sheriff's department and their dispatchers for these calls. Their AAA and transit department provide law enforcement with a list of people who are frail who they then call to check in on. These checks help MEOC learn about and address the ways increased social isolation is affecting older adults in its community

AAAs across the country are looking to **pen pal programs and letter writing campaigns** as a creative way to combat social isolation during the COVID-19 crisis. Jefferson Area Board for Aging (JABA) in Charlottesville, VA is matching its existing volunteers with older adults and caregivers, allowing them to develop a new friendship over email. Before matching, an intake call is held to help connect an older adult or caregiver to a volunteer with common interests.

Washington

Telecommunications and Socialization Resource: gets people connected to the community virtually with resources to help access and use the Internet, programs, and resources to socially engage and reduce social isolation, and platforms to manage mental and behavioral health through telehealth usage.

Feeds the Pets Program: provides pet foods to prevent older adults from sharing their food with their pets and encourages social engagement.

Telephone Reassurance and Wellness Checks expanded its outreach and began making additional telephone reassurance calls to vulnerable older adults. Through a new partnership with Washington State University's nursing program, older adults in the community can receive calls from a member of the agency's staff or a nursing program student. Older adults receiving the calls are asked a series of questions to determine how they are coping and whether they have any needs or concerns. If needs are identified, a member of the agency's staff will follow up with additional resources.

Washington, DC

Transportation: Connects with local transportation providers and other government agencies and provides transportation services to reduce social isolation. Call-N-Ride

Coupon Program: a cost-sharing program in which seniors pay a sliding fee based on their income.

DCOA: In partnership with DC Public Schools (DCPS) and Jumpstart, DCOA connects seniors with early childhood students to read to the students, provide one-on-one tutorials, and facilitate special activities.

West Virginia

LIFE (Legislative Initiative for the Elderly): is a state-funded program and part of the senior center array of services. Services vary by county but are modeled after those provided by the Older Americans Act.

Create the Good Create: connects seniors with volunteer opportunities and project ideas to share your life experiences, skills, and passions in their community. createthegood.aarp.org

Counseling Connection: is a clear choice to help meet needs. Whether someone is experiencing problems at home, in school or in the workplace, they can assist with counseling.

Wisconsin

Dementia-Friendly Communities: people come together to support their families, friends, and neighbors living with dementia.

Music & Memory Program: Helps people with dementia to communicate with friends and family again.

Family Care for Frail Elders: a Medicaid long-term care program for frail elders and adults with physical, developmental, or intellectual disabilities. People in the program receive long-term care services to help them live in their own home whenever possible. IRIS (Include, Respect, I Self-Direct) Wisconsin is a self-directed program for Wisconsin's frail elders and adults with disabilities. The services include communication aid, education, day services, meals, and others.

My Meal–My Way model, a public-private partnership between the AAA of Dane County's congregate nutrition sites and seven local restaurants, was launched in the spring of 2015 after the AAA of Dane County recruited restaurants, negotiated meal costs and piloted the model. The model offers a choice of breakfast and lunch menu options at restaurants featuring a variety of cuisines and with locations in rural, suburban, and urban settings across the AAA's planning and service area. The meals are provided during two-to-four-hour windows, which allows participants to choose what, when, where and with whom they will dine. The model offers choice, intergenerational dining, and flexibility, as no reservations are required. Each My Meal–My Way site has a nutrition program site manager, either staff or a trained volunteer, who greets participants, completes all paperwork, and receives any meal donations. The AAA of Dane County provides transportation to each site. Restaurants are paid $5 or $6 per meal, which includes gratuity, with the restaurants assuming the costs associated with the facility, equipment, meal prep and labor. From the program's 2015 launch to 2019, participation

in the program grew by 22 percent. The model has inspired replication in nine other counties throughout the state.

Promoting Social Engagement: The My Meal–My Way model provides social engagement for older adults by structuring dining with and among others at the restaurants, allowing them to naturally socialize within a community setting. Reconnections with old acquaintances and new friendships are a common occurrence among participants. When dining at these locations, participants are provided with information about the activities and services available to them through the senior centers, helping them engage in other activities of interest they may not have been aware existed.

Dementia-Friendly Communities: https://www.dhs.wisconsin.gov/dementia/dementia-friendly-comms.htm The people of Wisconsin are coming together to support their families, friends, and neighbors living with dementia. Whether someone lives in a small town or a large city, whether they are young or old, anyone can get involved in helping their community to become dementia friendly.

Dementia Care in Wisconsin: Employer Resources: https://www.dhs.wisconsin.gov/dementia/employers.htm Caregiving creates many life changes for caregivers. Serving as a caregiver can impact a person's physical health, create financial strain, and increase general stress levels, which can lead to depression. These changes have the potential to affect an employee's job performance, but with the proper workplace support, employed caregivers can successfully manage both their caregiving and workplace responsibilities.

Dementia Care in Wisconsin: Individuals and Families: https://www.dhs.wisconsin.gov/dementia/individuals-and-families.htm When someone notices confusion or changes in memory in themselves or someone they love, it can be difficult to know what to do next. Understanding what plans to make for yourself or a family member who has dementia is important early in the progression of dementia. Knowing what types of support and assistance are available throughout the progression of the disease can enable you and your loved ones to successfully navigate the challenges posed by the journey with dementia.

Falls Prevention for Older Adults: https://www.dhs.wisconsin.gov/injury-prevention/falls/index.htm. A key part of the plan linked above, highlights the partnership of state agencies, aging service providers, public health workers, health care professionals, and families interested in reducing falls.

Four main goals form the basis of the plan:

1. Shape systems and policies to support fall prevention.
2. Increase public awareness about fall prevention.
3. Improve fall prevention where people live.
4. Improve fall prevention in healthcare settings.

Music & Memory Program: https://www.dhs.wisconsin.gov/music-memory/index.htm trains and supports staff in the program as part of the DHS effort to improve the care of residents with dementia and decrease the use of harmful medications.

Wyoming

Disaster Preparation: provides a safe place for the elderly during climatic events, prepares for natural disasters, provides post-disaster support, and builds supportive networks.

Veteran Services: encourages veterans to participate in fitness, spiritual support, counseling, and home services.

Disease Prevention & Health Promotion: https://health.wyo.gov/aging/communityliving/older-americans-act-programs/dphp/

The Diabetes Empowerment Education Program (DEEP) program through the Mountain Pacific Quality Health Foundation (MPQHF) is an effective intervention for empowering persons with diabetes to take an active role in controlling their disease. When working with licensed peer instructors to acquire the knowledge and skills necessary to improve the quality of their life; participants may prevent/lessen the severity of complications resulting from diabetes.

The Matter of Balance (MOB) and Tai Chi for Arthritis (TCA) Programs under Wyoming Department of Health, Injury Prevention, are proven effective in improving balance, and in reducing the risk of falling and fear of falling among older adults. These programs focus on practical coping strategies to reduce fear of falling and to diminish the risk of falling. Participants learn about the importance of exercise in preventing falls, practice exercises to improve strength, coordination, and balance, identify how to conduct home safety evaluations, and learn to get up and down safely.

The Healthy U – Stanford Chronic Disease Self-Management Program (CDSMP) administers by University of Wyoming, Wyoming Center on Aging (WyCOA) trained lead trainers to hold classes in their communities to educate other eligible individuals, with chronic disease(s) on how to manage and self-monitoring of their chronic disease. CDSMP makes it possible to disseminate, evaluate, and bring the program to scale, and provides participants with the education and tools they need to help them to better manage their chronic conditions such as diabetes, heart disease, or arthritis.

Evidence-Based Programs The Wyoming Department of Health collaborates with Wyoming providers to offer evidence-based programs such as:

1. **Centenarian Program**: https://health.wyo.gov/aging/communityliving/community-living-section-programs/centenarian-program/ The Centenarian Program recognizes those individuals who have reached the age of 100 or older. The Wyoming Department of Health will generate a Centenarian certificate for high level staff to sign and a letter for the Governor to sign.

Personal Emergency Response Systems – Electronic warning device informing emergency personnel of an accident or safety hazard to a client in their home.

Appendix 4: Categories of Interventions

Categories

Companionship - Defined as someone or something who is with the older person with whom the older person interacts with in-person (i.e., robotic pet, friendly visitor: school children visiting or college student outreach through an educational program, real pets that are being cared for by the elderly person with assistance). This can be in or out of the home.

Activity - Defined as the older person engaged in an activity outside of the home or virtual programs with and around others that offers an *opportunity to socializ*e with others (i.e., senior center groups, exercise, mediation, education, bingo, grand parenting mentoring in schools or other location program etc.)

Counseling/Therapy/Training – Defined as any program that follows a manualized program or has a mental health treatment component using a recognized therapeutic process. The purpose of these programs are to change behavior, thinking, or improve interpersonal skills.

Outreach/check-in - Defined as a person or organization that calls an older adult in their home to check on them about how things are going without the older adult leaving the home or socializing with anyone else. They are not developing a larger social network. Outreach is initiated by the person/organization. Passive participation by the older adult that relies on the others to engage them.

Programs from Literature Review

Companionship

1. **Florida and Alabama -** AAA is purchasing **robotic pets** and distributing them. **Measure:** The deJong Gierveld Loneliness Scale is being used at delivery, this loneliness scale is being completed by either the person to receive a companion pet or a caregiver with the help of a representative from the AAA distributing the pet and again at three, six and twelve months to assess if feelings of loneliness and isolation have been reduced.
2. **Florida-Robotic pets** -The department began delivering over 750 robotic pets to socially isolated seniors and adults living with ADRD. The interactive pets help combat social isolation and depression among these individuals by improving overall mood and quality of life. The pets are meant to be an alternative to traditional pet therapy and can help give a reprieve to caretakers who are stressed about caring for a loved one with Alzheimer's or another dementia during the COVID-19 crisis, according to the department. Researchers say robotic pets can be a good alternative for people with dementia who fear animals or live in a home or healthcare facility that does not accept animals for fear of infections or other issues, such as allergies, bites, or scratches. Robotic pets have been used in various countries since 2003 and have previously shown positive results like those of real animals, according to a 2016 study published in the *Journal of Alzheimer's Disease*,

which looked to assess the effectiveness of robotic pet therapy in treating dementia-related symptoms such as anxiety and depression. The study found that the robots helped decrease stress and anxiety and caused a reduction in the use of psychoactive medications and pain medications for patients with dementia.

- Saragih, I. D., Tonapa, S. I., Sun, T.-L., Chia-Ju, L., & Lee, B.-O. (2021). Effects of robotic care interventions for dementia care: A systematic review and meta-analysis randomized controlled trials. *Journal of Clinical Nursing*. https://doi.org/10.1111/jocn.15856.
- Inoue, K., Wada, K., & Shibata, T. (2021). Exploring the applicability of the robotic seal PARO to support caring for older persons with dementia within the home context. *Palliative Care & Social Practice*, 1–10. https://doi.org/10.1177/26323524211030285.

3. **Caregiver Support-** Support groups and education for caregivers of elderly who have a Dementia.
   Wennberg, A., Dye, C., Streetman-Loy, B., & Hiep Pham. (2015). Alzheimer's Patient Familial Caregivers: A Review of Burden and Interventions. *Health & Social Work*, *40*(4), e162–e169. https://doi.org/10.1093/hsw/hlv062.
4. **Oklahoma:** *Foster Grandparent Program* - Persons 60 and over provide valuable assistance to children with special needs in the public school system;
5. **Oklahoma:** *Senior Companion Program* - Volunteers 60 and over provide companionship to individuals confined to their homes or limited mobility can assist them with daily living tasks. This is not hands on personal care, but a friend to share their life or day with.
6. **Washington:** *AASC Feeds the Pets program* promoting Social Engagement Recognizing the link between pet ownership and improved COVID-19 Response In response to the COVID-19 pandemic, the AASC provided food to more than 1,000 older adults and approximately 700 pets, a tremendous increase over the number of participants the program had served in all of 2019.
7. **Arkansas**- a DHS staff called every personal care and long-term services and supported waiver beneficiaries for a check-in and to ensure their care aides were continuing to provide care in the home. Beneficiaries are called at least once per week. **Measures**: None cited
8. **California**—(https://www.californiavolunteers.ca.gov/get-involved/COVID-19/neighbor-check-ins/) Created Neighbor-to-Neighbor (Not just for elderly) that encourages neighbors to connect using the Nextdoor website or app. Volunteers will be able to use the site to share ways to safely connect and ensure neighbors have necessities during California's stay at home order.
9. **Delaware**- Leveraging Managed Care: *Health plans providing managed LTSS programs* have been proactive in making arrangements to keep in touch with their members, including *connecting members with social groups, making additional phone outreach, and setting up Microsoft teams for face-to-face meetings*.

10. **Washington, D.C.-** Department of Aging and Community Living (DACL) created a new "Call & Talk" program. Older adults can sign up to be paired with staff and volunteers for regular conversations, whether that is every day or weekly. The program has enjoyed celebrating birthdays and even hosted a double date so far. *DACL has also requested all their grantees call their participants on a daily basis, Monday through Friday, to check in while grant-funded programs are limited to remote work.*
11. **Florida-** Project: **VITAL** (Virtual Inclusive Technology for ALL). 150 care communities were identified and supplied two tablets per community, as well as virtual training on how to use the equipment and platform. The tablets are preloaded with software programming from iN2L, enabling residents to connect with their loved ones via video chat with a simple tap on the home screen. The tablet further fosters connection with family by creating individual profiles for every resident, with the added ability for family to add personal photos and videos to those profiles for residents to view whenever they like. Also included on the tablet is an expansive, easily personalized library of applications that supports cognitive, emotional, social, physical, and spiritual wellness for the ultimate person-centered engagement experience. **MP3 players – There may be some evidence to suggest this might be helpful**. DOEA began delivering over 1,000 preloaded MP3 players to socially isolated seniors and adults living with Alzheimer's Disease and Related Dementia (ADRD). The gift of music is made possible through a donation from the Florida Alzheimer's Association. Each unit will be mailed to the caregivers and families of those living with ADRD. Each device is pre-loaded with various musical genres ranging from patriotic and country to Broadway tunes and gospel. The distribution of music will be matched to the preference of the recipient, or with input provided by the caregiver whenever possible.

    Bonillo, C., Marco, J., Baldassarri, S., & Cerezo, E. (2020). KitVision toolkit: supporting the creation of cognitive activities for tangible tabletop devices. *Universal Access in the Information Society*, *19*(2), 361–389.
12. **Massachusetts-** The aging services network, including ASAPs/AAAs and Councils on Aging, are conducting *telephonic wellness checks with older adults and family caregivers*. They are also deploying volunteers to provide home delivered meals, grocery delivery and care packages.
13. **Minnesota-** Minnesota's information and referral service, the Senior LinkAge Line, is utilizing specialists to reach out to older adults and their caregivers.
14. **New Jersey**- Telephone Reassurance; this volunteer role will allow volunteers to engage older adults in conversation and assess their needs including but not limited to access to meals, groceries or essentials, and medications
15. **New York:** *Friendly visiting and Friendly VOICES* In partnership with ThriveNYC, DFTA runs two volunteer programs that are designed to build friendships and limit social isolation. Called Friendly Visiting and Friendly VOICES, both programs train

and match volunteers with older adults to connect on a weekly basis. https://www1.nyc.gov/site/dfta/services/friendly-programs.page.

a. **The Friendly VOICES** program is for older adults who are isolated for reasons other than individual health challenges (such as COVID-19). Volunteers are matched with older adults and keep in touch by calling them via phone or video calls. The older adult also has the option to join a virtual group or be matched with a peer close to their age.
b. **Friendly Visiting** is for homebound older adults, who have health challenges. Volunteers visit the older adult in their home to talk about shared interests and experiences, forming friendships in the process. Due to COVID-19, volunteers are currently maintaining social distancing guidelines and are connecting with their matches by phone and video calls. https://www1.nyc.gov/site/dfta/services/volunteer.page.

National Programs not associated with a state:

Lifetime Connections Without Walls by Family Eldercare - Telephone activities program providing opportunities for older adults to connect with others in their community and across the country using a telephone conference call system. Referral: (888) 500-6472, lcww@familyeldercare.org.

Techboomers.com is a free educational website that teaches older adults basic computer skills about websites that can help improve their quality of life. Over 100 free courses are available. Topics include online entertainment, shopping online, and social websites and apps. Includes tips and videos on how to stay connected using Skype and Facetime

Friendship Line by Institute on Aging - The Friendship Line is both a crisis intervention hotline and a warmline for non-emergency emotional support calls. It is a 24-hour toll free line and the only accredited crisis line in the country for people aged 60 years and older, and adults living with disabilities. Toll-Free Line: (800) 971-0016

Happy – A free app that provides emotional support 24/7. Recommended by the American Heart Association, Mental Health America, and others

Counseling/Therapy/Training

Connecticut: *Grandparents as Parents Support Groups*: The main focus of the GAPS network is to share information amongst the network of over 150 agencies, individuals and community organizations. There are support groups across five regions in Connecticut.

The Chronic Disease Self-Management Program, from the Self-Management Resource Center, is a workshop given once a week, for six weeks, for two and a half hours per session. Subjects covered include techniques to deal with problems such as frustration, fatigue, pain and isolation; appropriate exercise for maintaining and improving strength,

flexibility, and endurance; appropriate use of medications; communicating effectively with family, friends, and health professionals; nutrition; decision making, and; how to evaluate new treatments. The process in which the program is taught is what makes it effective. Classes are highly participative, where mutual support and success build the participants' confidence in their ability to manage their health and maintain active and fulfilling lives.

Healthy IDEAS (Identifying, Depression, Empowering Activities for Seniors) incorporates four evidence based components into the ongoing delivery of care-management or caregiver-support services to older individuals in the home environment: screening for symptoms of depression and assessing their severity, educating older adults and caregivers about depression; linking older adults to primary care and mental health providers; empowering older adults to manage their depression through a behavioral activation approach that encourages involvement in meaningful activities. It is implemented over a 3-6-month period, through at least three face-to-face visits in the client's home and at least three telephone contacts. Healthy IDEAS ensures older adults get the help they need to manage symptoms of depression and live full lives.

Aging Mastery Program® (AMP), a comprehensive and fun approach to aging well developed by the *National Council on Aging (NCOA*), is addressing social isolation issues among older adults during the COVID-19 pandemic. The workshop, which has empowered more than 22,000 older adults to age well, is now being offered virtually at nonprofit organizations nationwide. (https://www.ncoa.org/article/welcome-to-aging-mastery)

Grow to Eat Sessions delivered in the community providing practical advice on growing fruit and vegetables at home (even without a garden). Each session includes seeds and plants to take home. Delivered by volunteers using the 'Grow to Eat' toolkit.

Wildman, J., VaLTORTA, N., Moffat, S., Hanratty, B., (2019). What works here doesn't work there': The significance of local context for a sustainable and replicable asset based community intervention aimed at promoting social interaction in later life.

PERMA (Positive Emotions, Engagement, Positive Relationships, Meaning, Achievement) - AIM: to determine the effectiveness of a wellbeing intervention, delivered by trained community staff, to increase older adults' levels of wellbeing, resilience, optimism, and perceived social isolation.

The project consisted of a pre- and post-intervention survey, an 8-week wellbeing intervention, and optional post-intervention mentoring and peer support. All participants received a personal wellbeing report following each completed survey outlining their PERMA (Positive Emotions, Engagement, Positive Relationships, Meaning, Achievement) wellbeing scores. Logistical challenges associated with implementing a new community

project, and confusion on the part of some participants regarding the purpose of the surveys, meant that stringent pre-post assessment of training participants, and subsequently linking data, was not possible.

The intervention itself was an 8-week face-to- face wellbeing training program, delivered in groups, one session each week. The duration of each session ranged between 90 minutes and 120 minutes. Each session was designed to teach the participants one of ten evidence based skills to improve their wellbeing and resilience. Post-training, participants were able to access mentoring, and peer-to-peer support to help them implement and practice the ten skills in their daily lives. Participants were also able to access monthly support groups where wellbeing and resilience goals could be discussed, and course content was reviewed. The training program is an adaptation of the TechWerks Resilience Training Program (www.technologywerks.com & www.4-9-north.com), which combines content derived from positive psychology interventions (Bolier et al., 2013) and psychological treatment methods such as Cognitive Behavioral Therapy (Butler, Chapman, Forman, & Beck, 2006) and Mindfulness (Gu, Strauss, Bond, & Cavanagh, 2015). The training is a multicomponent program consisting of a set of techniques designed to increase one's sense of wellbeing and resilience. The ten wellbeing and resilience skills taught in the current study

California, (Joosten-Hagye et al, 2020) the Keck School of Medicine collaborated with a program that was created by l*inking 115 interprofessional graduate students with older adults*. It was emphasized that despite the better psychological functioning of older adults compared to young adults during the pandemic, various types of assistance, including stress reduction, should be implemented to improve the psychological resources that promote quality of life in the elderly. *Methods that focus on the body, such as breath meditation and Autogenic Training, and methods based on cognitive behavioral therapy were suggested.* In conjunction with this program implemented in this study, the next basic steps to develop future programs, it is suggested to include older adult demographics (expectations, attitudes, perceived benefits, etc.). It is emphasized that the inclusion of loneliness and isolation reports from such students and older adults will provide a stronger evidence base for similar programs.

Minnesota: *Juniper* (https://yourjuniper.org/) offers nine unique classes, structured to help people live well, get fit, and prevent falls. During the pandemic, Juniper knew it was imperative to continue to support community members with evidence-based programs.

Montana: *Lifelong Connections*: to train older adults on using technology and to purchase the technology that is ready to be used. MAS was joined by several generous donors, notably the Montana Geriatric Education Center, State of Montana Business Innovations Grants, and the May & Stanley Smith Charitable Trust.

North Carolina: *Living Healthy with Chronic Conditions* evidence-based program, which typically is offered in person and in community settings, to be offered through a mailed toolkit and weekly phone calls. The program, called Living Healthy at Home, focuses on healthy eating, appropriate use of medication, being active and developing communication skills to help participants take charge of their health and make connections from home. Offered at no cost to consumers at several different times and days, the p*hone calls are held in small groups of four participants and one trained facilitator for an hour once a week for six weeks to walk participants through the toolkit. T*he mailed toolkit includes a book for the program, a relaxation CD, an exercise CD and a self-test to determine focus area.

North Carolina: *Senior Companion Program:* Provides periodic companionship and non-medical support by volunteers (who receive a stipend) to adults that require assistance. The DHS contracts to provide this service on each of the American Indian Reservations and the Tribal Service Area.

Texas: *PEARLS: Program to Encourage Active and Rewarding Live*s (PEARLS) Connect. The PEARLS program is a national evidence-based depression management program for older adults and their caregivers that uses *problem solving treatment and activity planning as its foundation of intervention*. P*EARLS Connect offers a monthly newsletter sent to enrolled clients that includes opportunities to connect on social media, opportunities to give back to the community— such as making treat bags for children— and information on a series of events focused on older adults, including social engagement, mindfulness and self-care, holiday themed gatherings and technology classes.* Clients who complete the PEARLS program are enrolled in PEARLS Connect, a peer-to-peer continued care model. PEARLS Connect offers ongoing social engagement opportunities by providing ways for older adults to connect with peers, increase social connections, maintain behavioral health improvements, practice new skills and build networks after the completion of PEARLS

Activity

TEXAS: 'Seniors in Motion' (SIM), is a physical exercise center for the elderly located in north Texas. The center has a small, but relatively stable enrolled population for whom benefits and services are customized; a relatively stable budget within which care is delivered; and a salaried workforce in which friendly and supportive health care providers supervise customized exercise routines tailored to the physical limitations of elderly participants that improve mobility and prevent further injury. For the participant, the center provides a therapeutic exercise program, an emphasis on improved mobility and injury prevention, and low out-of-pocket costs. Members include retired professionals and local seniors aged 50 years and above who come to the center for physiotherapy based on a medical practitioner's advice, or simply because of their own interest in maintaining a

regular exercise routine. Most members reside within a 10-mile radius of the facility, and either drive to the facility, use public transportation, or carpool with other members. The center was established in 2003 by a licensed physical therapist with a mission of "fitness through exercise and wellness through education". Staffed by licensed physical therapists and supervised physical therapy student interns, the center offers the unique advantage of clinically supervised exercise to participants. Members pay privately either $40 or $50 per month based on visit frequency. In addition, the facility offers payment on a sliding scale, based on the economic status of the participant.

Minnesota: *Social Connect program (https://yourjuniper.org/)*: The program, now available both in-person and online, consists of *six classes that run 45 minutes each*. Mixture of activity and CBT type intervention guided by a trained facilitator.

To start the class, a Juniper-trained instructor leads participants in a series of gentle seated movements based on either *Tai Ji Quan or yoga.*

Next, the class shifts to stress management practices to help participants learn to recognize emotions as they crop up and how to interrupt the cycle of stress and anxiety.

Then participants are welcome to *share their experiences*, concerns and self-care strategies with each other, guided by the Juniper instructor to keep the conversations safe and non-judgmental.

New Jersey: *Tai Ji Quan: Moving for Better Balance (TJQMBB)* is an evidence-based exercise training program that was designed for older adults at risk of falling and/or people with balance disorders. The program was developed at Oregon Research Institute by Fuzhong Li, Ph.D. TJQMBB is a 24-week program consisting of 60-minute sessions that meet 2-3 times per week in groups of 8-10 participants. Unlike traditional Tai Ji Quan routines that are used as a martial art or recreational activity, TJQMBB focuses on improving balance and preventing falls by addressing common, but potentially debilitating, functional impairments/deficits.

Canada: Jog Your Mind is a community-based program aiming to promote cognitive vitality in seniors without known cognitive impairment. The program is composed of 10 2-hour sessions offered on a weekly basis to groups of 5 to 15 seniors. It is designed to be led by community and recreational practitioners, health professionals, or volunteers and to be implemented in a variety of settings, including community organizations (e.g., seniors' club, activities centers), health institutions, or public locations (e.g., community rooms, libraries).

UK: EnhanceFitness is an ongoing class, held three times per week in hourly sessions. Classes include the exercises commonly used to maintain and build physical health in older adults – warm up, cardiovascular workout, cool down, dynamic and static balance exercises, posture and strength training, and stretching. Strength training focuses on

upper and lower body muscles, using soft cuff wrist and ankle weights. Cardio training can be anything from walking for 20 minutes to having 20 minutes of more intense exercises, with (optional) music. Classes are appropriate for near frail to more active adults with exercises adapted for those who are more frail.

UK: *A Matter of Balance* is a community-based, small-group program that helps older adults reduce their fear of falling and increase activity levels. It is a train-the-trainer program with highly trained Master Trainers training the Coaches (lay leaders). Coaches work in pairs to lead small group community classes consisting of eight two-hour sessions. The program includes behavior change strategies, as well as practical exercises. The behavior change curriculum helps participants to view falls and the fear of falling as controllable.

UK: Lunch Clubs- Monthly lunch clubs take place in 'non-traditional' settings, including community colleges, local government premises, a leisure center, a sports ground, cafes, pubs, restaurants and hotels and local business canteens. Lunch is generally followed by an activity (e.g., a quiz or a talk).

Wildman, J., VaLTORTA, N., Moffat, S., Hanratty, B., (2019). What works here doesn't work there': The significance of local context for a sustainable and replicable asset based community intervention aimed at promoting social interaction in later life.

California: REMOTE Senior Center Without Walls (SCWW)
https://www.comeshare.ca/community-support--3/seniors-centre-without-walls

Canada - *Design and Implementation of a Community Program to Promote Cognitive Vitality Among Seniors* (2015) Manon Parisien,a Agathe Lorthios-Guilledroit,b Nathalie Bier,b Norma Gilbert,a Kareen Nour,c Danielle Guay,a Francis Langlois,d Baptiste Fournier,b and Sophie Laforestb

Colorado-The AAAs in Colorado are providing reassurance calls for many of their clients receiving in-home services. Weld County Area Agency on Aging. This AAA held a "Drive-In Dinner & Concert" for older adults. Meals were brought to attendees in their vehicles while a jazz band provided live music.

Delaware-Virtual social activities: In collaboration with Delaware's Senior Centers, offering activities such as virtual chair aerobics, education classes, social hours, etc.

New Jersey- Telephone Reassurance; *Some senior buildings* have begun to offer "Doorway Coffee and Cake," which includes coffee urns brewing in the hallway to spread smell of coffee while residents sit in doorways that are more than six feet apart and have

coffee, tea, and cake served to them. Other senior buildings have begun a slight variation called "*Doorway Bingo*" where a staff person in the hall calls numbers to people in the apartment doorways. CB radios are placed in the hallway as makeshift speakers

New Mexico- Virtual Programming: Innovations focusing on the ability to connect those in isolation to our programs via an On Demand virtual application and web-based connectivity, using the emergency funding from ACL. This program will include the ability for Ombudsman on Demand, Information and Assistance on Demand, and Protective Services on Demand.

New Mexico: *The Create & Connect Campaign* is a collaboration started by the Aging and Long-Term Services Department to get uplifting letters and engaging social media programming into the homes of New Mexicans with disabilities and to seniors. Three different platforms will be used to encourage seniors and individuals living with disabilities during this season of isolation: http://www.nmaging.state.nm.us/create-connect.aspx.

Maryland: Share Your Life Stories Share Your Life Stories is designed to give older adults throughout the state a chance to engage and connect with others in a safe and creative environment.

Maryland: Telecommunications and Socialization Resources Get connected to the community virtually with resources to help access and use the Internet, programs, and resources to socially engage and reduce social isolation, and platforms to manage mental and behavioral health through telehealth usage. The program is intended to help address the issues of social isolation by creating a resource guide to assist Maryland older adults to access various platforms and organizations. Also Social Engagement Resources to engage socially through support groups, volunteering opportunities, educational activities, and a range of interactive classes, from physical activity to performance (https://aging.maryland.gov/pages/tsr.aspx).

Ohio: *VIRTUAL BINGO*, =the Area Agency on Aging in Northwest Ohio. A Bingo card template was shared on Facebook. In order to achieve Bingo, several tasks had to be completed related to health/wellness-promoting activities listed vertically, horizontally or diagonally. These activities include connecting with friends/family, learning, doing something creative and listening to music. When a player thinks they have achieved bingo, they contact the Committee's staff via Facebook messenger or email. Bingo *winners then receive raffle ticket*s, and they can receive a maximum of five raffle tickets per week. Raffles are conducted live on Facebook once a week. Prizes include mystery gift bags and grocery store gift cards. Given the benefits of social engagement, this is a game that everybody wins!

Oklahoma: *Car Bingo program* for elders to participate in during the spring and summer used casino parking lots as a space for cars to gather, with casinos closed due to the pandemic. After the casinos re-opened, a church parking lot was used to hold Car Bingo. To ensure adequate physical distancing, program staff asked attendees to park in every other space and stay in their cars for the entire event. Staff distributed goody bags, tickets and bingo cards to attendees and each Car Bingo event included four rounds of bingo, drawings for door prizes, prizes for decorated cars and signs, and other surprises for the elders like musical guests and an ice cream truck. While Car Bingo paused as the weather got colder, it was a big hit among all elders who participated.

Tennessee: *Care Through Conversation,* Outreach calls to older people in the community. The purpose of the Tennessee Commission on Aging and Disability Care Through Conversation program is to provide support to all older adults and caregivers. This volunteer role will allow volunteers to engage older adults in conversation and assess their needs including but not limited to access to meals, groceries or essentials, and medications.

RESOLV: Development of a telephone-based program designed to increase socialization in older veterans (C. E. GOULD ET AL.) https://eric.ed.gov/?id=EJ1142630

The Recreation, Education, and Socialization for Older Learning Veterans (RESOLV) program was developed to use a comprehensive socialization program to decrease loneliness and target social risk factors for depressive symptoms. We collaborated with the Episcopal Senior Communities (ESC), a nonprofit community organization 1 that sponsors a telephone-based community called Senior Center Without Walls (SCWW). SCWW is a free telephone program for California residents aged 60 or older who find it difficult to participate in activities in their communities. SCWW was created in 2004 and modeled after a New York based program, DOROT's2 University Without Walls, which offers classes by telephone to older adults. SCWW provides opportunities for social connections on the calls and offers a comprehensive interactive program including leisure activities (e.g., BINGO, trivia), friendly conversation, educational classes, psychoeducational and support groups, and health and well-being presentations conducted by telephone. Older adults participate in activities by calling a toll-free number, entering the two-digit code uniquely assigned for each activity, and then connecting to the group call. Facilitators ensure privacy by limiting introductions to first name only and monitoring disclosure of personal information during the call. Facilitators participate in mandatory training about telephone group facilitation and etiquette, privacy, and ethics. More than 90 volunteers annually serve as facilitators for SCWW in addition to SCWW staff facilitators. Many volunteers are older adults who first were SCWW participants. SCWW serves as the model for RESOLV and will provide the infrastructure and services for the program. The RESOLV program is to be delivered via an

established community-based program (ESC) that provides socialization services (SCWW) to older adults with limited access to senior centers or other opportunities for socialization.

UTAH: The *WeberMorgan Senior Art Gallery* is an artwork website that showcases the incredible talent of older adult artists who produce artwork in *senior center art classes in Weber and Morgan counties*

Wisconsin: *Tai Chi and gentle exercise programs* to help older adults stay physically active. Staff embraced the virtual environment by sharing links to virtual field trips, concerts, and brain activities to help older adults remain engaged. Madison Senior Center also created a program, Pandemic Pen Pals, which matches volunteers with older adults to exchange written communications by mail or email, to help older adults stay connected and reduce social isolation throughout the COVID-19 pandemic.

Wyoming: *WALKING PROGRAM,* A walking program has been established by individuals and an organized group has walking activities. Residents also have access to the Johnson County YMCA three times each week.

Appendix 5: Introduction Letter / Survey Consent Form / Survey

Dear Ms. or Sir,

My name is Chris Harris Ph.D., and I am a faculty researcher at Kutztown University. Many of us have found their social life significantly affected by C. We are exploring social connection among rural Pennsylvanians 65 years of age or older. I am writing to request your participation in our study. Everyone who completes a survey is eligible to be entered into a random drawing for a $40 Walmart gift card. Your response will be used by the Centers for Rural Pennsylvania to inform the Pennsylvania legislature about the needs of rural Pennsylvanian's 65 years of age and older. **All survey responses will be kept confidential**. We included a self-addressed stamped envelope to return our survey.

We are incredibly grateful for your assistance with this project. Your participation will help to inform policy discussions among members of the Pennsylvania General Assembly and other state and local lawmakers.

Please feel free to contact me if you have any questions at all. Thank you again for participating.

Respectfully,

Christopher Harris, Ph. D.
Assistant Professor, Department of Social Work
Kutztown University of Pennsylvania
356 Old Main | PO Box 730 | Kutztown, PA 19530
Phone Cell: 717-222-9262 | www.kutztown.edu
E-mail: Harris@kutztown.edu

SURVEY CONSENT FORM

We ask that you read this form and ask any questions you may have before you decide whether or not you want to participate in the study. This study is being conducted by Christopher Harris, Ph.D. (Principal Investigator), Assistant Professor of Social Work at Kutztown University of Pennsylvania.

You are invited to participate in a research study being conducted through Kutztown University. The purpose of this study is to analyze the extent of social isolation among rural Pennsylvanians 65 years of age or older. This study will identify evidence-based programs and services that minimize social isolation, evaluate the causes of social isolation among residents 65 or older, evaluate the programs and services that currently exist in rural Pennsylvania to determine replicability in Pennsylvania, and make policy recommendations.

Title of the Study: Social Isolation in Rural Pennsylvania

Procedures: In order to participate in this study, you must be 65 years of age or older. You will need to complete the enclosed survey, place the completed survey in the self-addressed stamped envelope, and place the envelope in the mail. Do not sign your name or address on the survey or the return envelope.

Risks or Discomforts, and Benefits of Being in the Study: There are no risks associated with this study. While there is no direct benefit from participating in this study, participants might find it rewarding to share their viewpoint that ultimately could contribute to policy and mental health service provision changes in rural Pennsylvania.

Confidentiality and Anonymity: Records will be kept private and will be handled in a confidential manner to the extent required by law. In any report or presentation, we will not include any information that will make it possible to identify a research study participant. You will remain anonymous.

Voluntary Participation: Your participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. Completing the enclosed survey constitutes your agreement to participate. Because this survey is anonymous, it is not possible to revoke it once it is submitted.

Contacts and Questions:

If you have questions later regarding the research study, you can call Dr. Christopher Harris at (717) 222-9262. If you have any questions or concerns about the rights of research participants, you can contact the IRB Committee at Kutztown University at 484-646-4167.

Christopher Harris Ph.D., Assistant Professor,
Department of Social Work, Kutztown University of Pennsylvania
E-mail: Harris@kutztown.edu
Phone: 717-222-9262
Old Main 337, PO Box 730, Kutztown, PA 19530

	Circle the answer that best fits					
1	Gender	**Male**	**Female**			
2	What year were you born?_____					
3	How many people currently live in your home?_____					
4	Marital Status?	**Single**	**Married**	**Divorced**	**Widowed**	**Separated**
5	Highest level of Education? _____					
6	Approximate annual household income?	**Response**	_____			
		Never	**Rarely**	**Sometimes**	**Usually**	**Always**
7	I experience a general sense of emptiness.	**1**	**2**	**3**	**4**	**5**
8	I miss having people around me.	**1**	**2**	**3**	**4**	**5**
9	I often feel rejected.	**1**	**2**	**3**	**4**	**5**
10	There are plenty of people I can rely on when I have problems.	**1**	**2**	**3**	**4**	**5**
11	There are enough people I feel close to.	**1**	**2**	**3**	**4**	**5**
12	I have someone who will listen to me when I need to talk.	**1**	**2**	**3**	**4**	**5**
13	I have someone to confide in or talk to about myself or my problems.	**1**	**2**	**3**	**4**	**5**
14	I have someone who makes me feel appreciated	**1**	**2**	**3**	**4**	**5**
15	I have someone to talk with when I have a bad day.	**1**	**2**	**3**	**4**	**5**
16	I use the internet to stay in contact with friends and/or family.	**1**	**2**	**3**	**4**	**5**
17	Do you have internet access in your home?	**YES**	**NO**			
18	If **NO**, why?					
19	I can afford internet in my home.	**YES**	**NO**			
20	I am comfortable using the internet.	**YES**	**NO**			
21	Is internet or broadband services available in your area?	**YES**	**NO**			
22	Do you participate in faith-based activities?	**YES**	**NO**			
23	If **YES**, what types of faith-based activities have you participated in the past **30 days**?					
24	Do you have a valid driver's license?	**YES**	**NO**			
25	I mostly drive my own vehicle to get to where I need to go.	**YES**	**NO**			
26	I mostly depend on family or friends to drive me where I need to go.	**YES**	**NO**			

27	I mostly use public transportation (bus, cab, uber, senior transportation) to get to where I need to go.	**YES**	**NO**			
28	If **YES**, which types of public transportation do you use?					
29	Public transportation is affordable for me.	**YES**	**NO**			
30	I find technology is useful in my life.	**YES**	**NO**			
31	I feel confident about my ability to use technology to stay in contact with friends and family.	**YES**	**NO**			
32	Do you have a social media account (Facebook, Twitter, SnapChat, Instagram, Other?)	**YES**	**NO**			
33	If **YES**, which type of social media accounts do you have?_____	_____	_____	_____	_____	
		Poor				**Excellent**
34	In general, what would you say your quality of life is:	1	2	3	4	5
35	In general, how would you rate your physical health?	1	2	3	4	5
36	In general, how would you rate your mental health, including your mood (feelings, Happy/Sad)?	1	2	3	4	5
37	In general, how would you rate your satisfaction with your social activities and the people you do them with?	1	2	3	4	5
38	In general, please rate how well you carry out your usual social activities and roles. (This includes activities at home, at work and in your community, and responsibilities as a spouse, employee, friend, etc.)	1	2	3	4	5
39	In general, please rate your level of energy.	1	2	3	4	5
40	In general, what would you say your overall health is?	1	2	3	4	5
		Never	**Rarely**	**Sometimes**	**Often**	**Always**
41	To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, getting up from a chair?	1	2	3	4	5
42	How often have you been bothered by feeling anxious, depressed (feeling down) or irritable?	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**
		1	2	3	4	5
		Not Fatigued at All				**Extremely Fatigued**
43	In the past 7 days, how would you rate your fatigue on average?	1	2	3	4	5

		Very Unlikely	Somewhat Unlikely	Not Sure	Somewhat likely	Very likely
44	How likely are you to use the internet for things like telehealth and/or telemedicine?	1	2	3	4	5
45	How likely are you to use the internet for things like video calls with friends/family members, recreational activities online?	1	2	3	4	5
46	On a scale of 1-10 (1=no pain & 10=the most pain you have been in), How would you rate your pain on average?	**Response:**	_____			
47	In the past **week**, approximately how many **days** did you have contact with **friends**?	**Response:**	_____			
48	In the past **week**, approximately how many **days** did you have contact with **family**?	**Response:**	_____			
49	How many miles do you live from the nearest family member outside of your home with whom you have contact?	**Response:**	_____			
		Agree	**Disagree**			
50	I find talking to friends and family on the phone or via the internet just as satisfying as seeing them in person.	1	2			
51	Public transportation is easily available for me.	1	2			
		Cell Phone	**Computer**	**Both**	**Not Applicable**	
52	How do you access the internet most often?	1	2	3	4	
		More Contact	**Less Contact**	**About the Same**		
53	When thinking about the frequency of contact with friends, would you like	1	2	3		
54	When thinking about the frequency of contact with family, would you like	1	2	3		
55	What makes it easier for you to socialize with friends and family? **Please Explain:**					
56	What makes it harder for you to socialize with friends and family? **Please Explain:**					

If you would like to be entered into a random drawing for a $40 Walmart gift card, please list your phone number here: _____

Thank You for Participating!

Appendix 6: Focus Group Guide

Focus Group Process & Script

Introduction:

Hello and thank you for joining today. My name is Chris Harris. I teach in the social work program at KU. I am one of the researchers for this study & I will also be the moderator for this focus group today. I would like to introduce Dr. FangHsun Wei and Dr. Mary Rita Weller (*Introduce research assistants Kelly Smith & Jesse, their role, and any tasks they will manage, if they are present*). Dr. Wei will manage our visual presentation and take notes while Dr. Weller explains zoom and manages the chatroom. In a few minutes Dr. Wei will briefly review some of the basic functions of Zoom.

I will be asking you questions and then encouraging and moderating our discussion. We'll be here for about 90 minutes.

Purpose:

The purpose of this focus group is to explore factors leading to social isolation, formal and informal programs and services used to address social isolation, social connection, challenges related to accessing formal and informal services, and suggestions to improve the service system for older Pennsylvanians. This study is funded by The Center for Rural Pennsylvania: A legislative Agency of the Pennsylvania General Assembly. The data collected will help inform legislation regarding the needs of older rural Pennsylvanians.

*Next, Dr. Wei -- briefly review some of the basic functions of Zoom

Brief Overview of Zoom and Recording
Go over the basic functions and technicalities of Zoom.
Show how to mute/unmute microphone;
Show how to turn on/off the camera;
Raising hand function if camera is turned off;
Show how to use chat.
Q&A
Remember to lockdown the session! 15 minutes in.

Thank You Dr. Wei

This focus group session will be recorded. We are recording audio and video of this group. The recording will help us to capture everything as accurately as possible so that we do not miss anything since we cannot take notes word by word. The identities of all participants will remain confidential. No audio or video will be released to anyone and will be destroyed in accordance with standard research practices. If you do not wish to be recorded, you can exit this Zoom session at any time. While we encourage you to keep your camera on during this session to facilitate rapport and intimate face-to-face interaction, you may turn it off at any time if you feel uncomfortable. We appreciate you taking time to help us learn more about the work you do.

Ground Rules

To allow for a free flowing conversation, I'd like to go over some ground rules.

Only one person speaks at a time. This is doubly important as our goal is to make a written transcript of our conversation today. It is difficult to capture everyone's experience and perspective on our audio recording if there are multiple voices at once. We kindly ask you to mute your computer microphone when not speaking.

We will allow a short pause between questions to allow you to unmute your microphone and speak.

I would like to hear from everyone as the discussion progresses, but you do not necessarily need to answer every question.

This is a confidential discussion and I will not report your names or who said what to your colleagues or supervisors. The final report and/or research papers will not include any names of participants. All identifying data will be removed in the final report, research papers, and presentations and will be used in an aggregate format.

We stress confidentiality because we want an open discussion. We want you to feel free to comment on each other's remarks without fear your comments will be repeated later, taken out of context, or used to identify you in some way.

Please make sure to use "I" statements that reflect your feelings and experiences.

There are no "wrong answers," just different opinions. Say what is true for you, even if you're the only one who feels that way. Don't let the group sway you. But if you do change your mind, let me know.

Let me know if you need a break.

Feel free to enjoy a beverage and a snack, just keep your microphone muted while you eat and drink.

You are consenting to participating in this focus group by participating here today.

Are there any questions?

Alright, let's begin.

Focus Group Introductions:

****Let's start by introducing yourself and your role at your agency but not the agency name*

Thank you for introducing yourselves and I want to remind you that the population we are asking questions about and adults 65 and older. You will hear me mention these age ranges frequently during our talk today.

Focus Group Questions:

The purpose of this focus group is to explore factors leading to social isolation, formal and informal programs and services used to address social isolation, social connection, challenges related to accessing formal and informal services, and suggestions to improve the service system for older Pennsylvanians

When thinking about people over the age of 65, What factors contribute to social isolation among rural elderly?

When thinking about people over the age of 65, what formal and informal programs and services are used to address social isolation & social connection.

How successful are these programs?

What works and doesn't work with these programs?

What are the challenges you deal with when implementing these programs and services?
How are these programs funded?
How are they outreaching to seniors?

For this set of questions, I will describe 4 categories of programs in use in other states to address social isolation or loneliness and give a couple of examples including how these programs are implemented, and ask you to discuss the feasibility of implementing the program in Pennsylvania.

***Discuss each category separately. Read the general description/definition, then give a couple of examples. The person managing the PPT will put up the definition and examples as we go.

Programs are split into 4 types:
Companionship - someone or something who is with the older person with whom the older person interacts with in-person (i.e. robotic pet, friendly visitor: school children visiting or college student outreach through an educational program, real pets that are being cared for by the elderly person with assistance). This can be in or out of the home.

Companionship
Companionship - someone or something who is with the older person & with whom the older person interacts with (i.e. robotic pet, friendly visitor: school children visiting or college student outreach through an educational program, real pets that are being cared for by the elderly person with assistance). This is usually done in the person's home. Some examples are:
Program 1: Pets live or robotic: Pets were given or adopted by the seniors. It requires partnership with the dog training agency to provide the training for pets or agencies that provide food for pets.
Goal: To reduce loneliness.
Measure: The deJong Gierveld Loneliness Scale is being used at delivery, this loneliness scale is being completed by either the person to receive a companion pet or a caregiver with the help of a representative from the AAA distributing the pet and again at three, six and twelve months to assess if feelings of loneliness and isolation have been reduced.

Program 2: Grandparenting mentorship: Grandparenting mentors with children in schools where the older adult goes to the schools or via phone.
Foster Grandparents work one-on-one with at-risk and special needs children and youth. In many cases, these children lack the basic resources at home to help them with their schoolwork and Foster Grandparents can help fill that void. They can serve in schools, childcare centers, or other educational settings, and help children learn to read or provide care to preschoolers. Foster grandparents are role models, mentors, and friends to these children.
Goal: Support at-risk children and maybe increase socialization for seniors.

Program 3: Volunteers Program: Volunteers from Aging or Universities that have students meet with elderly. Students learn to do assessments, but Aging volunteers are through senior centers, churches, or seniors at senior centers. For example, Volunteers (people who are 60 and

over or college students) provide companionship to individuals confined to their homes or limited mobility can assist them with daily living tasks. This is not hands-on personal care, but a friend to share their life or day with.

Outreach/check-in

Outreach/check-in-Defined as a person or organization that calls an older adult in their home to check on them about how things are going without the older adult leaving the home or socializing with anyone else. They are not developing a larger social network. Outreach is initiated by the person/organization. Passive participation by the older adult that relies on the others to engage them.

Program 1: VITAL (Virtual Inclusive Technology for ALL). 150 care communities were identified and supplied two tablets per community, as well as virtual training on how to use the equipment and platform. Tablets are preloaded with software programming from iN2L, enabling residents to connect with their loved ones via video chat with a simple tap on the home screen.

Also included on the tablet is an expansive, easily personalized library of applications that supports cognitive, emotional, social, physical, and spiritual wellness for the ultimate person-centered engagement

Program 2: Telephone calls and visits with elderly socially isolated adults.

How it works: Some programs are staffed by volunteers from local community organizations that partner with AAA while in other states the aging office manages recruitment of volunteers and seniors. In some states at the state level, Dept of Aging hires staff to make outreach calls and referrals for seniors. A referral process is developed in conjunction with community stakeholders who can make referrals to the program. States with paid outreach staff have monthly goals of calling everyone on the Waiver program. Several states allow volunteer visitors to identify needs of the individual as they occur and notify those who can help them.

Program 3: Letter writing and high school community service requirements: Western Idaho Community Action Program (WICAP) has recently formed a youth organization for at-youth risk in their area. Young children are writing letters to be distributed to senior centers and with home delivered meals. Teens are going out and providing lawn care or other needed services. This is currently happening in a handful of rural communities surrounding the AAA office. In order to graduate from high school each student must complete a project that meets certain criteria. The Idaho Commission on Aging (ICOA) is in the process of developing a pilot project that will partner high school seniors with community (elderly) seniors to complete projects needed. Our pilot will benefit both the high school seniors by providing a project, and the community senior by meeting unmet needs.

Counseling/Therapy/Training

Counseling/Therapy/Training These are formal training programs that require a trained facilitator, and you must pay a licensing fee for the program. These programs have a classroom design where the participant goes to the site for an educational, therapeutic, and/or interactive learning experience. The topics are predetermined by the provider of the training materials; require a trained facilitator and a licensing fee. The goal of learning new skills, working through personal problems, education about mental illness; identify and change unwanted behavior

Program 1: Aging Mastery: The curriculum consists of ten weekly 90 min classes. It is a program that combines education with goal-setting, daily practice and peer support. This program helps you identify changes you want to make in your life and helps you develop a plan to change.

How it works: Groups are facilitated by leaders who are trained by the developer of the program. Participants are encouraged to identify new healthy behaviors or practices they want to adopt, develop a plan, and track their progress. Between classes, people are expected to practice new behaviors and track progress.

Program 2: PERMA (Positive Emotions, Engagement, Positive Relationships, Meaning, Achievement): designed to increase older adults' levels of wellbeing, resilience, optimism, and perceived social isolation.

How it works: The curriculum consists of 8 weekly 90-120min group sessions delivered by trained community staff. Each session is designed to teach the participants one of ten evidence-based skills to improve their wellbeing and resilience. Upon completion of the training, participants were able to access mentoring, and peer-to-peer support to help them implement and practice the ten skills in their daily lives. Participants were also able to access monthly support groups where wellbeing and resilience goals could be discussed, and course content was reviewed.

Program 3: AIM: Reduce stress and Anxiety

Methods: Medical school trainees were paired with older adults at-risk for social isolation. The Aging office identified those at-risk for social isolation. that focus on the body, such as breath meditation and Autogenic Training (which is teaching your body to respond to your verbal commands, and methods based on cognitive behavioral therapy were suggested.

Activity

Defined as the older person engaged in an activity outside of the home or virtual programs with and around others that offers an *opportunity to socializ*e with others (i.e., senior center groups, exercise, mediation, education, bingo)

Program 1: Meal or Teatime gathering: Lunch Club, drive in dinner and concert, or doorway coffee and cake. These events provide the opportunity for seniors to go out of their homes and interact with others.

Lunch club: Drive-In Dinner & Concert for older adults. Meals were brought to attendees in their vehicles while a jazz band provided live music. Seniors get the chance to enjoy the music. Some states use it to raise awareness of Dementia or Alzheimer and are sponsored by their association.

Doorway Coffee and Cake: It includes coffee urns brewing in the hallway to spread the smell of coffee while residents sit in doorways that are more than six feet apart and have coffee, tea, and cake served to them.

Program 2: Virtual Events: It is a great way to get connected with others from Seniors' own home! The program offers interactive telephone conference sessions where you can laugh and socialize, learn new skills, and create new connections. The activities can be virtual chair aerobics, education classes, social hours, virtual bingo. It is usually free of charge and runs once a week for 30 minutes to 1.5 hours. Maryland holds a share your stories virtual event: The Maryland Department of Aging, in partnership with Story Tapestries (a local non-profit), is pleased to announce the launch of Share Your Life Stories, an initiative designed to address the issue of social isolation many older adults are experiencing because of COVID-19. Share Your Life Stories is designed to give older adults throughout the state a chance to engage and connect with others in a safe and creative environment. It runs once a month for an hour.

Program 3: Social Connect program (https://yourjuniper.org/): The program, now available both in-person and online, consists of six classes that run 45 minutes each. Mixture of activity and

CBT type intervention guided by a trained facilitator. To start the class, a Juniper-trained instructor leads participants in a series of gentle seated movements based on either Tai Ji Quan or yoga. Next, the class shifts to stress management practices to help participants learn to recognize emotions as they crop up and how to interrupt the cycle of stress and anxiety. Then participants are welcome to share their experiences, concerns, and self-care strategies with each other, guided by the Juniper instructor to keep the conversations safe and non-judgmental.

Goal: process feelings, improve stress management and mental health

Appendix 7 Survey Question Abbreviation and Coding

De Jong Gierveld's Loneliness Scores

For de Jong Gierveld's Loneliness Scale, we included the following questions in our survey. In this scale, three statements are made about 'emotional loneliness'(EL) and two about 'social loneliness' (SL) (De Jong Gierveld & Van Tilburg, 2006).

1. I experience a general sense of emptiness. [Emptiness] [EL]
2. I miss having people around me. [PeopleAround][EL]
3. I often feel rejected. [Rejected][EL]
4. There are plenty of people I can rely on when I have problems. [RelyOn][SL]
5. There are enough people I feel close to. [FeelClose][SL]

We coded the response categories for RelyOn and FeelClose to never (1), rarely (2), sometimes (3), usually (4), and always (5). Emptiness, PeopleAround, and Rejected are reversed scores to never (5), rarely (4), sometimes (3), usually (2), and always (1).

PROMIS Emotional Support Scores

For PROMIS Emotional Support scores, we included the following questions in our survey:

1. I have someone who will listen to me when I need to talk. [Listen]
2. I have some to confide in or talk to about myself or my problems. [Confide]
3. I have someone who makes me feel appreciated. [Appreciated]
4. I have someone to talk with when I have a bad day. [BadDay]

The answers were coded as never (1), rarely (2), sometimes (3), usually (4), and always (5).

Global Health Scores

For Global Health scores, the team included the following questions in our survey:

1. In general, would you say your quality of life is poor, fair, good, very good, or excellent? [HealthQuality]
2. In general, how would you rate your physical health? [HealthPhysical]
3. In general, how would you rate your mental health, including your mood (feelings, happy/sad)? [HealthMental]
4. In general, how would you rate your satisfaction with your social activities and people you do them with? [HealthSatis]
5. In general, please rate how well you carry out your usual social activities and roles. (This includes activities at home, at work, and in your community, and responsibilities as a parent, child, spouse, employee, friend, etc.). [HealthRoles]
6. In general, what would you say your overall health is? [HealthOverall]
7. To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or getting up from a chair? [HealthActivity]

8. How often have you been bothered by feeling anxious, depressed, or irritable? [Emotional]

9. In the past 7 days, how would you rate your fatigue on average? [Fatigue]

10. On a scale of 1–10 (1 = no pain and 10 = the most pain you have been in), how would you rate your pain on average? [Pain]

For HealthQuality, HealthPhysical, HealthMental, HealthSatis, HealthRoles, and HealthOverall, the answers were recoded as poor (1), fair (2), good (3), very good (4), and excellent (5). For HealthActivity, the answers were recoded as never (1), rarely (2), sometimes (3), often (4), and always (5). The response categories for Emotional were recoded as never (5), rarely (4), sometimes (3), often (2), and always (1). The response categories for Fatigue were recoded as Likert Scale from 1 to 5 with 1 = extremely fatigued and 5 = not fatigued at all. To stay consistent with the other health variables where higher scores equal better health the response categories for Pain were recoded and reverse scored using a Likert Scale from 1 to 10 where 1 = the most pain participants have been in and 10 = no pain.

Internet and Technology

The following questions were used to measure internet and technology use:

1. I use the internet to stay in contact with friends and/or family. [InternetContact]

2. Do you have internet access in your home? [InternetAccess]

3. I am comfortable using the internet. [InternetComfot]

4. I find technology is useful in my life. [TechUseful]

5. I feel confident about my ability to use technology to stay in contact with friends and family. [TechConfident]

6. How likely are you to use the internet for things like telehealth and/or telemedicine? [TeleHealth]

7. How likely are you to use the internet for things like video calls with friends/family members, recreational activities online? [InternetActivities]

8. I find talking to friends and family on the phone or via the internet just as satisfying as seeing them in person. [InternetSatis]

9. Do you have a social media account (Facebook, Twitter, Snapchat, Instagram, Other)? [SocialMedia]

For InternetContact, the answers were recoded as never (1), rarely (2), sometimes (3), usually (4), and always (5). For InternetAccess, InternetComfot, TechUseful, and TechConfident, the answers were recoded as yes (1) and no (2). For SocialMedia, the answers were recoded as yes (1) and no (2). For TeleHealth and InternetActivities, the answers were recoded as very unlikely (1), somewhat unlikely (2), not sure (3), somewhat likely (4), and very likely (5). For InternetSatis, the answers were recoded as agree (1) and disagree (2).

Transportation

The following key questions measured Transportation:

1. I mostly drive my own vehicle to get to where I need to go. [DriveSelf]

2. I mostly depend on family or friends to drive me where I need to go. [TransDepend]

3. I mostly use public transportation to get to where I need to go. [PublicTrans]

4. Public transportation is easily available for me. [PublicTransAva]

For DriveSelf, TransDepend, and PublicTrans, the answers were recoded as yes (1) and no (2). For PublicTransAva, the answers were recoded as agree (1) and disagree (2).

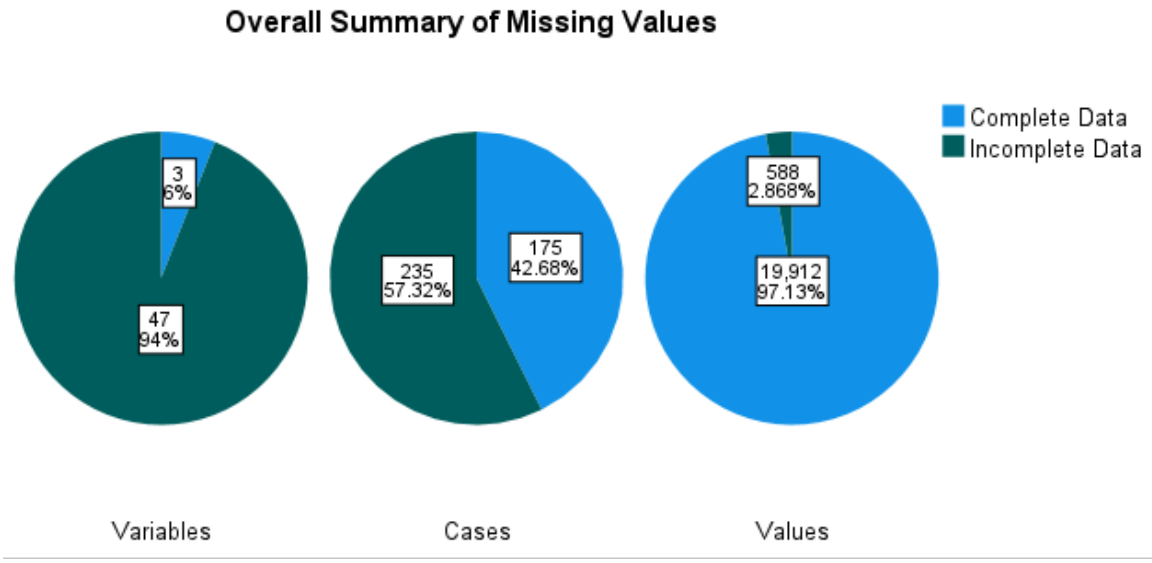
Faith-Based Activities

he following questions measured Faith-Based activities:

1. Do you participate in faith-based activities?
2. If yes, what type of faith-based activities have you participated in in the past 30 days?
For faith-based activities, the answers were recoded as yes (1) and no (2).

Appendix 8: Tables

Table 1. Missingness of data by variable, case, and values with Little's MCAR noted below.



*Little's MCAR $\chi 2(66.71, n = 410) = 98, p = .993$

Table 2. Descriptive Analysis of Resident Demographics

Demographics	Frequency	Percentage (percent)
Gender		
Male	222	54.1
Female	188	45.9
Marital Status		
Single	34	8.3
Married	218	53.2
Divorced	43	10.5
Widowed	114	27.8
Separated	1	0.2
Education		
Others	6	1.5
Middle School	9	2.2
High School	172	42
College	141	34.4
Master	71	17.3
Doctorate	11	2.7

Table 3: *de Jong Gierveld's Loneliness Pearson Correlation Scores*

	Emptiness	People Around	Rejected	Rely On	Feel Close
Experience Sense of Emptiness	1.000	.561	.558	.409	.391
Miss Having People Around	.561	1.000	.434	.332	.315
Often Feel Rejected	.558	.434	1.000	.355	.344
Have People to Rely On	.409	.332	.355	1.000	.711
Feel Close to Enough People	.391	.315	.344	.711	1.000

All variables are significantly correlated with the composite scores ($p < .05$).
All variables had a greater than 95 percent confidence interval (95 percent CI) critical value (.0978).

Table 4: *PROMIS Emotional Support Pearson Correlation Scores*

	Listen	Confide	Appreciated	Bad Day
Have Someone Who Will Listen	1.000	.842	.801	.783
Have Someone to Confide In	.842	1.000	.742	.789
Feel Appreciated	.801	.742	1.000	.718
Have Someone to Talk to When Having Bad Day	.783	.789	.718	1.000

All variables were significantly correlated with the PROMIS Emotional Support composite scores ($p < .05$)

The Pearson correlation value of all variables was greater than 95 percent confidence interval (95 percent CI) critical value (.0978) suggesting these are reliable questions.

Table 5: *Global Health Pearson Correlation Scores*

	Health Quality	Health Physical	Health Mental	Health Satis	Health Roles	Health Overall	Health Activity	Emotional	Fatigue	Pain
Health Quality	1.000	.532	.668	.587	.600	.501	.312	.403	.308	.307
Health Physical	.532	1.000	.480	.460	.449	.779	.499	.268	.363	.343
Health Mental	.668	.480	1.000	.647	.599	.458	.271	.494	.342	.268
Health Satis	.587	.460	.647	1.000	.757	.439	.305	.441	.343	.255
Health Roles	.600	.449	.599	.757	1.000	.487	.396	.422	.358	.226
Health Overall	.501	.779	.458	.439	.487	1.000	.531	.284	.397	.356
Health Activity	.312	.499	.271	.305	.396	.531	1.000	.175	.364	.353
Emotional	.403	.268	.494	.441	.422	.284	.175	1.000	.338	.194
Fatigue	.308	.363	.342	.343	.358	.397	.364	.338	1.000	.339
Pain	.307	.343	.268	.255	.226	.356	.353	.194	.339	1.000

All variables were significantly correlated with the composite scores ($p < .05$). In addition, the Pearson correlation value of all variables was greater than 95 percent confidence interval (95 percent CI) critical value (.0978) suggesting these are reliable measures.

Table 6: *Frequencies for Transportation*

	Yes	No
Drive my own vehicle	383 (93.4 percent)	27 (6.6 percent)
Depend on other for transportation	28 (6.8 percent)	382 (93.2 percent)
Depend mostly on public transportation	9 (2.2 percent)	401 (97.8 percent)
	Agree	Disagree
Public transportation easily available	184 (44.9 percent)	226 (55.1 percent)

Appendix 9: Pennsylvania Program Summary

Pennsylvania Program Summary

The programs and link below are offered in Pennsylvania and may address social isolation and social determinants of health for older Pennsylvanians. Some of the programs are highlighted in the focus groups for this study but many were not mentioned.

1) **Pennsylvania Aging and Disability Resource Centers (https://www.aging.pa.gov/local-resources/pa-link/Pages/default.aspx)**: provide information on counseling, education, programs, services, events, and benefits for elderly and disability populations. In Oregon, individuals may access the ADRC in person, by telephone, and via the Internet to learn about community resources and programs that may be able to provide support.
2) **Areas of Aging in each county across Pennsylvania (www.aging.pa.gov/local-resources/Pages/AAA.asp)**: provides linkage to a wide array of services and programs in each county, creates intervention plans, and advocates for the elderly.
3) **Family Care for Frail Elders**: a Medicaid long-term care program for frail elders and adults with physical, developmental, or intellectual disabilities. People in the program receive long-term care services to help them live in their own home whenever possible. **IRIS** (Include, Respect, I Self-Direct) **Wisconsin** is a self-directed program for Wisconsin's frail elders and adults with disabilities. The services include communication aid, education, day services, meals, and others.
4) **Living Independence for the Elderly** (LIFE) (https://www.dhs.pa.gov/Services/Disabilities-Aging/Pages/LIFE.aspx): LIFE is an option that allows older Pennsylvanians to live independently while receiving services and supports that meet the health and personal needs of the individual.
5) **Housing** (https://www.aging.pa.gov/aging-services/housing/Pages/default.aspx): There are 3 housing programs offered in Pennsylvania including: 1) The **Domiciliary Care** program provides a homelike living arrangement in the community for adults age 18 and older who need assistance with activities of daily living and who are unable to live independently. 2) **Shared Housing and Resource Exchange (SHARE)** is an affordable housing choice that brings together homeowners who want to share their home with home seekers who are looking for housing in exchange for rent, help around the house, or a combination of both. The program is currently available in Pike, Wayne, Monroe, Venango, Crawford, Adams, Union, Snyder and Carbon counties. The Pennsylvania Department of Aging partners with the Pennsylvania Association of Area Agencies on Aging (P4A) to offer the 3) **Elder Cottage Housing Opportunity (ECHO).** Elder cottages are small, separate, manufactured residences for older adults that are temporarily placed in the side or backyard of a host family (relatives or close friends). The arrangement provides independence and privacy for its residents along with easy access to family or friends who can provide assistance. When living requirements of the resident change, the cottage will be relocated to the home of another host family.
6) **Elderly Abuse/Protective Services (https://www.aging.pa.gov/aging-services/Pages/Protective-Services.aspx)**: provides help with older people's physical and emotional needs; financial abuse and neglect; and connects with state departments and law enforcement. The Older Adults Protective Services Act protects Pennsylvanians 60 years of age and older against physical, emotional, or financial abuse as well as exploitation, neglect, or abandonment. Reporting of abuse is mandatory for employees and administrators in care

settings. Reporting abuse is voluntary and anonymous for the general public, and the law protects all reporters from retaliation and civil or criminal liability.

7) **Elderly Nutrition**: provides meals to seniors in community settings such as congregate meals at senior centers or home delivered meals via the meals-on-wheels program to eligible seniors in their homes.
8) **Nutrition Education**: provides information to the elderly and their caregivers in groups or individually about physical fitness, nutrition, and health.
9) **Senior Community Service Employment Program (https://www.aging.pa.gov/aging-services/employment/Pages/default.aspx)**: provides community and worked-based training to seniors and assists in finding unsubsidized employment upon completion. The Senior Community Service Employment Program (SCSEP) is an on-the-job training program for low-income, comes from a US Department of Labor – Employment and Training Administration grant. The other $477,424 (10 percent) is non-Federal and comes from state and local resources. **Commonwealth Workforce Development System** (CWDS) links businesses and individuals to Pennsylvania's workforce development and independent living services offered through PA CareerLink. **Office of Vocational Rehabilitation** (OVR) provides vocational rehabilitation services to help persons with disabilities prepare for, obtain, or maintain employment. **Pennsylvania CareerLink PA CareerLink** is a no-cost job resource. Job seekers can search and apply for job openings across the commonwealth online as well as create and upload a resume. PA CareerLink can also recommend jobs for you based on your preferences.
10) **Health and Wellness Programs** (https://www.aging.pa.gov/aging-services/health-wellness/Pages/default.aspx) including chronic disease self-management program (https://www.aging.pa.gov/aging-services/health-wellness/ChronicDiseaseManagement/Pages/default.aspx), Chronic pain self-management (https://www.aging.pa.gov/aging-services/health-wellness/ChronicPainManagement/Pages/default.aspx), Diabetes Self-management program (https://www.aging.pa.gov/aging-services/health-wellness/DiabetesManagement/Pages/default.aspx), healthy steps for older adults fall prevention program (https://www.aging.pa.gov/aging-services/health-wellness/Healthy percent20StepsFallPrevention/Pages/default.aspx), healthy steps in motion strength and balance programs (https://www.aging.pa.gov/aging-services/health-wellness/HealthyStepsinMotion/Pages/default.aspx), healthy aging topics for older adults (https://www.aging.pa.gov/aging-services/health-wellness/healthy-aging-topics/Pages/default.aspx)
11) **Help at Home (OPTIONS)** (https://www.aging.pa.gov/aging-services/help-at-Home/Pages/default.aspx)commonly referred to as the OPTIONS program, provides assistance to Pennsylvania residents, age 60 and older who would like to stay in their home.

    The program offers 4 fundamental services: **Adult Day Services** - offers supervised, interactive care for older adults with functional impairments or Parkinson's, dementia and related disorders. **Care Management** - ongoing care plan management to ensure the individual's needs are being met **In-Home Meals** - delivered in-home meals. **Personal Care Services** - assistance with daily living activities. **Supplemental services** may also be available based on the local area agency on aging. These services can include: Emergent Services – offers emergency services such as life-sustaining supplies, in-home meals, and overnight

shelter in the event of an emergency. Home Health Services – offers skilled nursing, physical therapy, occupational therapy, speech therapy, and home health aides when not otherwise covered. Home Modifications – offers adaptations to the home to improve safety and accessibility. Home Support – offers basic housekeeping, shopping, and laundry. Medical Equipment, Supplies, and Assistive Devices. Pest Control - offers fumigation as needed. Personal Emergency Response System – offers an electronic device for high-risk consumers in case of an emergency. Specialized Medical Transportation – allows medical transport to consumers who must be lying down and require a stretcher via a non emergency ambulance service.

12) **Adult Day Services**: Services in centers include health monitoring, medication supervision, personal care, and recreational/therapeutic activities.
13) **Legal Services (https://www.aging.pa.gov/aging-services/legal/Pages/default.aspx)**: assists older adults and adults with disabilities with a variety of legal problems concerning housing, consumer fraud, elder abuse, Social Security, Supplemental Security Income (SSI), Medicare, Medi-Cal, age discrimination, pensions, nursing homes, protective services, conservatorships, and other matters.
14) **Pennsylvania Ombudsman Program** (https://www.aging.pa.gov/aging-services/Pages/Ombudsman.aspx): provides an ombudsman who advocates for people who live in long-term care facilities about their rights, including for neglect, isolation, and abuse. This program includes the **Virtual Family Council** offers biweekly online meetings with a local ombudsman and a team of 10 local experts. Anyone can participate and ask questions, share concerns, or just listen to learn and gather information. The meetings will not address specific issues regarding a resident or a facility. Also, **the Pennsylvania Empowered Expert Residents (PEERs)** are individuals living in long-term care settings who have been trained to advocate to improve the quality of life in their homes. After graduating from a Long-Term Care Ombudsman five-part empowerment training, PEERs are equipped to help their fellow residents improve day-to-day life in long-term care facilities. PEERs also advise the Office of State Long-Term Care Ombudsman on the issues affecting all of Pennsylvania's long-term care residents.
15) **Program of All-Inclusive Care for the Elderly (PACE) (https://www.aging.pa.gov/aging-services/prescriptions/Pages/default.aspx):** PACE programs are reimbursed on a per member basis through Medicare and/or Medicaid for eligible individuals. PACE provides adult day care, personal care, home health, medical care, social services, transportation, and other services.
16) **Pennsylvania Medicare Education and Decision Insight** - PA MEDI (https://www.aging.pa.gov/aging-services/medicare-counseling/Pages/default.aspx). Effective July 1, 2021, APPRISE is now Pennsylvania Medicare Education and Decision Insight, PA MEDI – Same Program, Same Services for Pennsylvania's Medicare Beneficiaries, now with a New Name. Pennsylvania Medicare Education and Decision Insight (PA MEDI) offers free Medicare counseling to older Pennsylvanians. PA MEDI Counselors are specially trained to answer your questions and provide you with objective, easy-to-understand information about Medicare, Medicare Supplemental Insurance, Medicaid, and Long-Term Care Insurance.

Appendix 10: Scales

deJong Gierveld Loneliness Scale			
In this 6-item scale, three statements are made about 'emotional loneliness' and three about 'social loneliness'. Social loneliness (SL) occurs when someone is missing a wider social network and emotional loneliness (EL) is caused when you miss an "intimate relationship".			
	Yes	**More or less**	**No**
I experience a general sense of emptiness [EL]			
I miss having people around me [EL]			
I often feel rejected [EL]			
There are plenty of people I can rely on when I have problems [SL]			
There are many people I can trust completely [SL]			
There are enough people I feel close to [SL]			
To score responses and interpret the results: There are negatively (1-3) and positively (4-6) worded items. On the negatively worded items, the neutral and positive answers are scored as "1". Therefore, on questions 1-3 score Yes=1, More or less=1, and No=0. On the positively worded items, the neutral and negative answers are scored as "1". Therefore, on questions 4-6, score Yes=0, More or less=1, and No=1. This gives a possible range of scores from 0 to 6, which can be read as follows: (Least lonely) 0 6 (Most lonely)			
Source: J. de Jong Gierveld and T. Van Tilburg, Research on Aging 2006, 28, 582-598.			

Emotional Support Scale – Short Form 4a PROMIS Item Bank v2.0					
Please respond to each item by marking one box per row.					
	Never	**Rarely**	**Sometimes**	**Usually**	**Always**
I have someone who will listen to me when I need to talk	1	2	3	4	5
I have someone to confide in or talk to about myself or my problems	1	2	3	4	5
I have someone who makes me feel appreciated	1	2	3	4	5
I have someone to talk with when I have a bad day	1	2	3	4	5

Global Health Scale					
PROMIS® Scale v1.2 – Global Health					
Global Health					
Please respond to each item by marking one box per row.					
	Excellent	**Very Good**	**Good**	**Fair**	**Poor**
In general, would you say your health is:	1	2	3	4	5
In general, would you say your quality of life is:	1	2	3	4	5
In general, how would you rate your physical health?	1	2	3	4	5
In general, how would you rate your mental health, including your mood and your ability to think?	1	2	3	4	5
In general, how would you rate your satisfaction with your social activities and relationships?	1	2	3	4	5
Your usual social activities and roles. (This includes activities at home, at work and in your community, and responsibilities as a parent, child, spouse, employee, friend, etc.)	1	2	3	4	5
	Completely	**Mostly**	**Moderately**	**A little**	**Not at all**
To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair?	1	2	3	4	5
In the past 7 days…	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**
How often have you been bothered by emotional problems such as feeling anxious, depressed or irritable?	1	2	3	4	5
	None	**Mild**	**Moderate**	**Severe**	**Very severe**
How would you rate your fatigue on average?	1	2	3	4	5
	No Pain				**Worst Pain Imagin**
How would you rate your pain on average	1 2	4 5	7 8	9	10

Appendix 11: Coding Categories includes entire scale and sub-category Kapp and percent agreement

Coding Categories	Kappa	Percent Agreement
Mean for all transcripts	0.74	93.38
Future programs in other states\Benefits positive for resident	0.64	88.28
Future programs in other states\Potential roadblocks	0.76	93.1
Current Technology Problems	0.92	99.36
Effects of COVID on people, agencies, and services	0.81	95.38
Policy issues and proposed changes	0.74	92.3
Staffing Issue\Agencies hiring staff to maintain program	0.68	94.85
Staffing Issue\Elderly resistance to asking for help	0.79	95.31
Staffing Issue\Finding slots for clients; referrals	0.66	97.4
Role of the family	0.94	99.23
Interventions to reduce isolation or increase social connection	0.51	77.27
Transportation issues	0.63	91.86
Knowledge of community programs	0.71	93.56
Health	0.82	98.02

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