

## **An Exploration of the Communication Dynamics of the Hard-to-Reach: Considering Disintegration of a Communication Infrastructure in Old Age**

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Health is influenced by social interactions and resources afforded through connections in our homes, neighborhoods, and communities. As people age, health challenges increase while their social networks decrease. This results in fewer people and resources being available to help older individuals cope with life changes and manage their health and homes where they want to age in place. We explore how communication resources and context constrain or enable connections through the lens of communication infrastructure theory. In this study, we analyze data collected from 865 residents in a Midwestern county through a random sample population survey and in-depth interviews with hard-to-reach residents aged 75 and older. This formative research offers preliminary insight into contextual dynamics that influence social and mediated communication in later life. We discuss the implications of our findings and contribution to communication scholarship and practice and discuss the ways our findings may inform efforts to foster aging in place.

*Keywords: communication infrastructure theory, hard-to-reach, social connectedness, aging-in-community, aging in place, communication resources*

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Health is influenced by social interactions and resources afforded through connections in our homes, neighborhoods, and communities. The majority of older adults manage one chronic health condition, and 60% manage two or more (Ward, Schiller, & Goodman, 2014). Health-enhancing resources, including aging and community-based services, help people cope with adversity and challenges that accrue with age and help them remain in their homes and communities, a priority for many older people. In fact, 90% of people over the age of 65 want to age in place (Hunter & Guest, 2021). Aging in place is defined as “the ability to live in one’s own home and community safely, independently, and comfortably regardless of age, income, or ability level” (Centers for Disease Control and Prevention [CDC], 2009, para. 4). Services, provided through the Older Americans Act, aim to support aging in place. However, they are used at low rates (5% of older adults are registered service users in Michigan), and investigations of nonmedical, health-supporting resources such as aging services have been neglected as an area of study, resulting in an intractable senior-service provider divide (Michigan Department of Health and Human Services [MIDHHS], 2020). Research on community-based services has largely focused on user demographics, attitudes, and awareness, even though such indicators do not predict use (Bacsu et al., 2012; Bell & Menec, 2015; Black, Dobbs, & Young, 2015; Blieszner, Roberto, & Singh, 2002; Denton et al., 2010; Gallagher & Truglio-Londrigan, 2004; Kohon, & Carder, 2014; Schoenberg, Coward, & Albrecht, 2002; Tindale et al., 2011). Researchers have pointed to service the use of impediments posed by the built environment, including geographic proximity and lack of transportation (Hallgreen, McElfish, & Rubon-Chutarro, 2015; Lau, Machizawa, & Doi, 2012; Schoenberg & Coward, 1998). However, single-level studies overlook multilevel interactions and communication streams that may impede aging in one’s home, neighborhood, and community (Alt, Jurkowski, & Eliasson, 2021; Black, 2008). Moreover, having the unprecedented percent of aging population requires a better understanding of the dynamics of interactions between people in their families, neighborhoods and with and among aging service and support agencies (He, Goodkind, & Kowal, 2016). The lack of insight in scholarship and practice has been broadly acknowledged including as a key objective of our national health priorities listed in *Healthy People 2020 and 2030*, to understand *how* to deliver information to the most vulnerable individuals in need of health-enhancing resources, including older adults (U.S. Department of Health and Human Services [USDHHS], 2010, 2020). Likewise, the first goal in the State of Michigan Plan on Aging is to expand the reach of information and awareness of aging services so that people can age in place (MIDHHS, 2020; State of Michigan Advisory Council on Aging [MIACA], 2022).

Such challenges were revealed in a study aimed at assessing older adults’ needs related to community-based aging services access and use (Study 1, referred to as S1) in a Midwestern county. Findings from S1 *prompted* a follow-up study to explore multilevel communication dynamics contributing to residents ages 75 and older that were hard-to-reach (Study 2, referred to as S2). This article explores the complex communication dynamics of people ages 75 and older through the lens of communication infrastructure theory (CIT), an ecological approach to examining community communication problems conceptualized at the micro- (resident) and meso-level (health and service organizations). CIT involves studying the individual’s storytelling network (STN) and the communication action context (CAC) in which the STN is embedded (Kim & Ball-Rokeach, 2006).

### **Ecological Communication**

Research on effective communication between older adults and social service providers is scarce despite a persistent senior-service provider communication gap. Researchers have called for ecological health communication studies to understand how creating connections among communication resources can influence behavior and inform others about their findings (Moran et al., 2016). A disconnection between community-based organizations (CBOs) and residents is not solely an old age issue. Matsaganis, Golden, and Scott (2014) explored the gap between reproductive service organizations and urban African American women through the lens of CIT, which provides a useful framework to understand the communication infrastructure (CI) that people rely on for information to help manage their lives (Wilkin, Stringer, O'Quinn, Hunt, & Montgomery, 2011). A community's CI is composed of a STN and the communication action context (CAC) in which the network is embedded (Kim & Ball-Rokeach, 2006), both of which can affect access to health-enhancing resource information and contribute to health disparities (Matsaganis & Wilkin, 2015).

A strong STN is signified by cohesive communication from three sources: local organizations, local media, and residents (Kim & Ball-Rokeach, 2006). When local organizations (e.g., faith based, recreational, neighborhood, and political) and local media (e.g., newspapers, television) communicate similar messages about pressing local concerns, the flow of relevant and useful information increases, building awareness and prompting positive action (Broad et al., 2013; Kim & Ball-Rokeach, 2006; Wilkin et al., 2011). The STN can be an effective channel for disseminating health-related information (Wilkin & Ball-Rokeach, 2011, particularly when the target population's actual and perceived communication dynamics are well understood (Matsaganis & Golden, 2015). CIT-based studies suggest that deeper connections with others in the local STN may positively impact health-related knowledge and information seeking (Kim, Moran, Wilkin, & Ball-Rokeach, 2011; Wilkin & Ball-Rokeach, 2011).

The social environment of the communication action context (CAC) can affect communication among the STN (Broad et al., 2013) where the interactions occur. Elements of the CAC (e.g., transportation and technology infrastructure) become resources when they promote a triangulated STN (Ball-Rokeach, Kim, & Matei, 2001), though the environment where community-based communication happens is under-examined (Villanueva, Broad, Gonzalez, Ball-Rokeach, & Murphy, 2016). CIT research has focused on the availability of communication hotspots and in the CAC, key sites for outreach where people connect to vital information and feel comfortable spending time (Wilkin et al., 2011; Zhang, Motta, & Georgiou, 2018). The public and social environment where residents and neighbors interact and exchange information are key locales for accessing resources that influence older adults' health and ability to age in place (Gardner, 2011; Walker & Hiller, 2007).

The CIT framework has been used in practical applications with hard-to-reach people less integrated in STNs, including community-based health communication outreach, mobilization, and interventions to increase health service use (Matsaganis et al., 2014; Wilkin, 2013; Wilkin & Ball-Rokeach, 2011; Wilkin et al., 2011). Such studies have explored the target population's STN to understand health-related influences and decision-making (Abril et al., 2015; Matsaganis & Golden, 2015). As research has shown, CIT calls attention to weaknesses in the CI, and findings may inform strategies for effectively

reaching hard-to-reach residents (Matsaganis et al., 2014). CIT has been used as a framework in one ethnographic study that explored the ways that the communication infrastructure shaped residents' (identified as older adults though their ages were undefined) conceptions of their community and how they attempted to adapt their CI to age in place (Anderson, 2020). This study explores how communication dynamics play a role in connecting with health-enhancing resources that can help people remain in their home, neighborhood, and community.

### **Context of Site**

The study resulted from an older adult needs assessment initiated by the Commission on Aging (COA) in Monroe County, Michigan (MC). The COA composed of nine county residents, all of whom are mostly older adults served as the S1 Community Advisory Board (CAB). Monroe County is in the southeastern corner of Michigan and classified as 38% rural with a total population of 150,000, 16% of whom are age 65 or older (He et al., 2016). The older population is expected to grow by approximately 69% from 2010 to 2040. The oldest segment (those aged 75 *and over*), who community stakeholders identified as hardest-to-reach, is expected to grow by about 167% during that time (Jankowski & Leach, 2015).

### **Methodology**

Study 1 used a CAB that included Commission on Aging (COA) members who represented each of the nine county voting districts. Data were collected from more than 1,800 people in S1 between 2014 and 2015, including data through focus groups, interviews, and surveys including a county-wide population survey mailed to 2,880 homes based on a random sample drawn from the County Clerks Voters Registration list that we draw on for the present study. We received a 24.4% response rate via returned hard copy (n = 891) and online (n = 68). The 119-item survey focused on the health, social, environmental, and economic circumstances of older residents as well as activity levels, community and service engagement, and care provision and reception. The findings allowed us to characterize the older population, identify their needs, and garner insight representative of the community at large. S1 results were shared incrementally with the CAB, and feedback was incorporated into the 262-page report, with findings categorized into 10 themes accompanied by recommendations for program and policy improvements (Jankowski & Leach, 2015). The recommendations informed a strategic planning process that was entirely community-driven in 2016 and the developed work groups in 2017 per theme, including a three-member Awareness and Outreach work group.

On invite, the Awareness and Outreach group began regular meetings in 2017 with the lead author to discuss a follow-up study to explore the communication divide between service providers and residents ages 75 and older identified in S1. The broadened focus beyond Awareness and Outreach informed S2 partners forming an Awareness, Communication, and Engagement (ACE) Council that co-developed a qualitative study (IRB #055718B3X). A process of maximum variation sampling was used to select participants with the primary goal of having geographic representation from each of the nine COA voting districts so that the results would include the voices of their constituents (Arcury & Quandt, 1999; Lindlof & Taylor, 2017; Tracy, 2013). This approach aligned with partner concerns and study goals to engage the oldest residents, especially those who live alone. We began recruitment by calling 33

interview and focus group participants from S1 with no success. We made concerted efforts to recruit participants in various circumstances, not for generalization, rather for information richness and maximization (Moser & Korstjens, 2018) so that the findings would help to illustrate the complexities of aging and the heterogeneity of the communication dynamics people experience with age. Because of our deep involvement during S1, we were welcomed throughout the county by many individuals and aging service providers who were instrumental for recruiting participants of varying gender, living conditions, age, income, marital status, and education (Table 1). Despite our best efforts, connections, and many phone conversations, we were unable to recruit from one of the nine COA voting districts and interviewed at least two participants from the other eight areas.

Two hours were allotted for in-depth, face-to-face, semi-structured interviews (averaged 82 min.; ranged 55–117 min.) with residents ages  $\geq 75$  in a setting they identified which required 830 miles of travel. Questions were asked about personal networks and knowledge, communication, and opinions about community-based and aging services (see Appendix A). After each interview, the lead author imported the audio recordings (1560 minutes total) into ExpressScribe, and they were transcribed verbatim. Transcripts (340 pages) were then uploaded into ATLAS.ti qualitative analysis software, and the immersion phase continued with first-level coding *in vivo*, drawing on field notes, writing memos, and organizing the data for co-analysis. In total, 443 excerpts were organized broadly using an ecological communication frame taking into account, and self-reports and impressions at the intrapersonal level as well as dynamics of interpersonal communication, organizational interactions, and community context (Moran et al., 2016). Co-analysis with community partners helped to determine "key codes, definitions, and examples" to focus on the analysis (Tracy, 2013, p. 191). Community insight was integrated with the data and second-level coding involved an iterative process of drawing on the literature, returning to notes, community, and back again in a cyclical process of fragmenting the data into finer distinctions. Second-level coding informed several interviews conducted as novelty slowed during analysis. During coding, we continued to check in to make sure that the data aligned with and contributed to the "research foci in an interesting and significant way" (Tracy, 2013, p. 195). CIT was used as a frame to explore how multilevel dynamics interacted and formed a communication infrastructure. Based on interview findings, we analyzed data from the population survey to explore elements of the CI of people as they age. Respondents' demographics sufficiently matched census data on the same population to suggest the sample was representative of older county residents. All reported cross tabulations produced by SPSS statistical software were significant at the  $<0.05$  level.

## Results

Descriptive statistics of study participants are presented in Table 1. Although 959 individuals responded to the survey, only 845 were included due to missing data. The findings are organized by elements of the CIT which frequently included reflections of the past in comparison to how participants experienced changes to their communication infrastructure in the present including first, stories that participants told about their STN. Next, findings about the CAC are presented, followed by insight we gleaned about local companions that participants referred to as key micro- and meso-level conduits.

**Table 1. Socio-Demographic Profile of Study Participants.**

	<i>Interviews</i>			<i>Survey</i>		
	Female	Male	Total	Female	Male	Total
	10	10	20	477	368	845
<i>Age (mean)</i>	83.6	81.4	82.5	71.6	71.0	71.4
<i>Range</i>	77–96	75–93	75–96	60–100	60–94	60–100
60–64				109	77	186
65–69				122	111	233
70–74				98	70	168
75–79	1	4	5	60	57	117
80–84	6	2	8	50	27	77
85 and older	3	4	7	38	26	64
<i>Education</i>						
Less than 9 <sup>th</sup> grade				7	5	12
9 <sup>th</sup> –12 <sup>th</sup> grade		1	1	61	26	87
High School/GED	2	1	3	123	60	183
Some college, no degree	4	6	10	106	77	183
Trade/vocational school				26	74	100
Associate's degree	1		1	36	24	60
Bachelor's degree	1		1	42	65	107
Graduate/Professional	2	2	4	69	35	104
<i>Income (per month)</i>						
<\$800				9	2	11
\$800–<\$1,200	1		1	13	7	20
\$1,200–<\$1,700	5		5	34	19	53
\$1,700–<\$2,100		4	4	38	21	59
\$2,100–<\$2,500	1		1	40	25	65
\$2,500–<\$2,900		1	1	35	36	71
\$2,900–<\$3,400		1	1	54	42	96
\$3,400 or more	3	4	7	175	177	352
<i>Marital Status</i>						
Single/Divorced	5		5	66	33	99
Widowed	3	2	5	97	35	132
Married/Partnered	2	8	10	303	296	599
<i>Household</i>						
Live alone	7	4	11	116	62	178
Live w/ spouse/partner	2	5	7	308	280	598
Live w/ others	1	1	2	40	20	60

### ***Stories of a Fragmented STN***

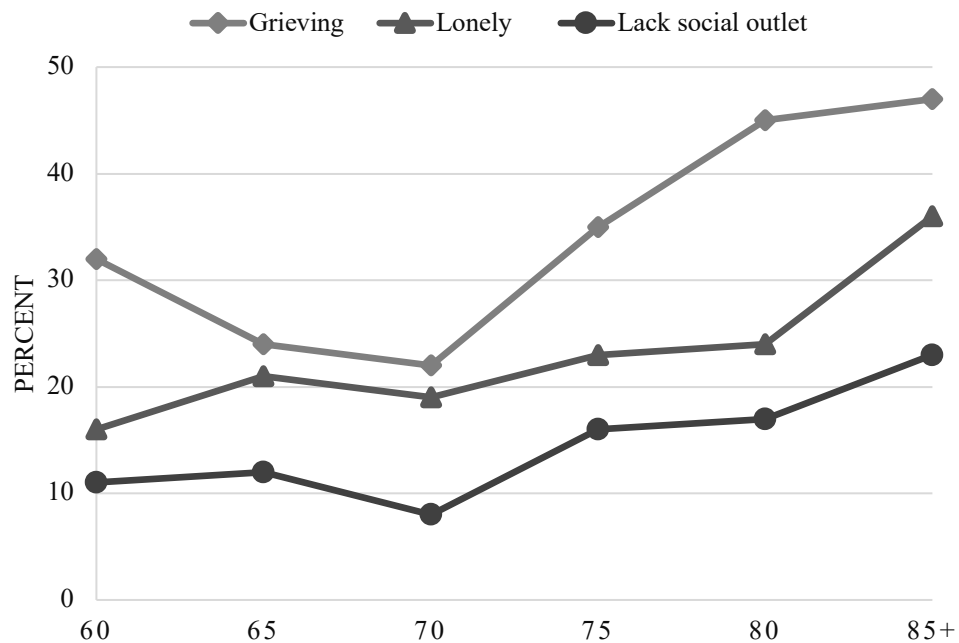
The microsystem is an important communicative resource for people throughout the lifespan, though participants rarely referred to close others as information resources. Instead, they were referred to most frequently as geographically dispersed, as this statement illustrates: "[It's] different now, it's hard to find a family that doesn't have a child or two living across the country or across the sea." Participants reminisced about family members living closer together, in some cases in one home, and spending time visiting which they contrasted with reports of busyness that impeded family connections: "Kids in this day and age don't have time for their parents, they're busy working. They have kids of their own. Yes, I grew up where I took care of parents and had my own kids. But now that doesn't work."

Likewise, stories about loss and death of friends, spouses, and family members were shared in nearly every interview as this comment demonstrates: "All our friends and kids we grew up with and knew and all this, they're all passed away. And I'm the last surviving member of my family." Contemporary norms of busyness impeded connecting with neighborhood storytellers:

When I first lived in the mobile home park, you know, everything was just like regular community. But then a whole bunch of young people moved in, and I was much older, and they didn't, they were too busy all the time to even talk.

Participants reminisced on the past when "having company" and "visiting" was a priority which was starkly contrasted with stories they told about unfamiliar neighbors, as this comment illustrates: "Years ago, used to talk with your neighbors and get acquainted, now you don't even know who they are. . ."

Residents spoke most often about how their social networks were shrinking, which appeared to be detrimental for the oldest residents who reported more problems with: (1) grieving the loss of a loved one; (2) feeling lonely, left out, or isolated from other people; and (3) having a social outlet or chance to interact with others as people got older (see Figure 1). The reported problems with loss, grief, and loneliness increased by age, and this situation exacerbated already poor health outcomes of the oldest-old adults (Child, Nicklett, Stauber, & Ward, 2021) and called attention to importance of their diminishing pool of communication resources in the microsystem to draw on for stories to help them cope and manage.



**Figure 1. Problems with grieving, loneliness, and social outlet by age group.<sup>2</sup>**

Participants contrasted current housing circumstances of living separately from their families with the past when households were intergenerational and people remained in place until they died, as this comment illustrates: "Years and years ago when I was growing up that's the way it was . . . You stayed home, you usually took care of your grandchildren and then you stayed home until you died." When participants spoke about being separated from family, they frequently referred to technology (e.g., smartphones and in-home cameras), though it was often viewed as a unidirectional communication device for family members, mainly children who lived far away and sent photos via text message or wanted to monitor their parent in the home. Inexperience with and reluctance to use computers and smartphones were common, as this comment illustrates: "There's a lot of people my age and older that don't want to touch a computer."

Technology impeded connections with local CBOs and aging service agencies. People told stories about calling an organization that required navigating automated systems and convoluted menus: "Older

<sup>2</sup> Survey respondents could indicate, "No problem, Minor problem, Moderate problem, and Major problem" for the following matrix overarching question, "In the last 12 months, how much of a problem, if any, have you had with each of the following?" The data graphed in Figure 2 represent these specific variables, "Grieving or mourning the loss of a loved one;" "Feeling lonely, left out, or isolated from other people;" and "Having a social outlet or chance to interact with others." The indicators were recoded into two categories, the first category was "No problem" and the second "Problem" category is the sum of responses for all other response options collapsed.



people hate the fact that they can't talk to a person." They told stories about human services organizations that had removed the human element from the service that they perceived as "so impersonal, I mean we won't even know when they switch over to robots." Many shared stories of frustration, in that CBOs needed to employ "a real person to talk to . . . That's very critical," and that their practices prioritized efficiency over people: "It's usually just, yeah, let's just get this done as efficiently as possible." Connections with CBOs were fleeting even when a person answered the phone, particularly when calling about assistance or services and were asked immediately about their income: "You call up and their first thing is, you know, what's your income? You know, just show *some* interest in the person and their problem, and then pop the question."

Participants advocated for increased efforts toward a coordinated STN and cross-communication among a range of local organizations (e.g., schools and churches), so they could learn more about services and programs in their community as this comment illustrates: "I get the church bulletin every week, but you never see anything about what's going on in the county." Participants frequently shared sources of local media (e.g., local newsletters and local newspapers) that were key storytelling resources for staying connected with their community, particularly print media sent through the post office or hand delivered to their homes, that some were worried about being discontinued: "I think that maybe [technology is] going to replace newspapers ultimately. But for the older folks that like to have a paper in their hand and read what's going on, I think it'd be a loss if they do." Technology was a perceived threat that impeded rather than facilitated connections to the STN, as this comment demonstrates:

Communication. There's got to be communication through the paper, actually the churches, even through the schools . . . I don't know the answer. Actually the technology. Technology is taking over, and technology does not give communication.

Home-delivered print media was particularly important for the oldest and those who were homebound. For example, one participant, who had undergone a recent surgery, shared a newsletter from the local senior center that was mailed to her home as an important communication resource for feeling "plugged in" and informed about her community. Without being prompted, the local senior center also included a flier about the present study to which she responded, revealing meso-level communication activities.

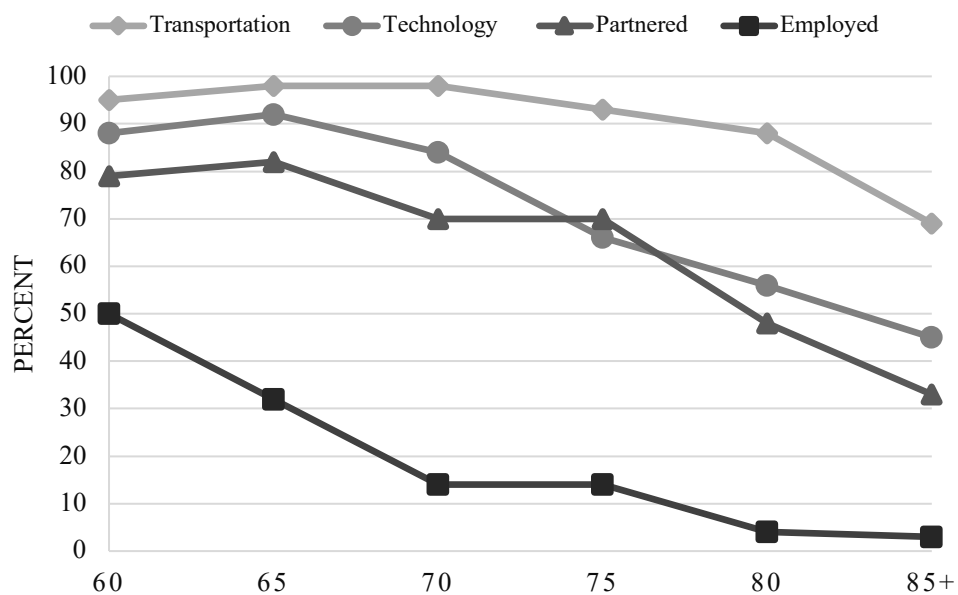
### ***Communication Environment (Dis-)Integration With Age***

Participants reflected on key sites where they spent time story sharing such as the Veterans of Foreign Wars (VFW), or American Legion Hall, and Knights of Columbus. The oldest participants reflected on times when they could come to those places and frequently described challenges that hindered their ability to get to the sites. As described by one participant, getting to the sites meant that they would engage in storytelling about their community: "Those organizations are good because we [would] sit and talk about stuff," which included stories about collaboratively developing solutions to problems that came up in conversation, including referrals to local services. Many described the ways in which their health (e.g., poor eyesight so they didn't drive, knee surgery) impeded activities such as serving on the school board, volunteering, and getting to familiar social hot spots where they could read bulletin boards or chat with

other older people over a congregate meal and how it impacted their ability to remain integrated in a STN. The CAC impeded STN integration for the oldest residents who were no longer able to drive which meant they were homebound and unable to get out to public places (Kim & Ball-Rokeach, 2006) and that storytelling occurred: "Only if someone comes to visit, take us someplace, we're uh, pretty isolated." That comment was made by an individual who lived in a part of the county that did not offer transportation for residents.

Participants shared stories about the past when they were integrated in a rich network of communication resources in the CAC when they had children in schools, volunteered, served in civic roles such as on the local school board, were involved in activities via their employers and with co-workers, and were more present in their community which could be as simple as going to the local grocer, beauty shop, or park.

Longevity results in a diminishing pool of interpersonal resources to draw from (Ajrouch, Fuller, Akiyama, & Antonucci, 2018) and quantitative data depicted in Figure 2 offered insight into ways in which residents were less integrated into a CI as they get older by way of loss of microsystem members and fewer opportunities to capitalize on resources when in the CAC. Figure 2 illustrates the chronological forces that contribute to disconnects and shows that as people get older, they are employed at lower rates and widowed at higher rates, both of which contribute to the fragmentation of connections to other people and resources in the STN and the CAC. As mentioned earlier, participants spoke about technology as an impediment to connecting to stories; survey data showed that technology was used by people at lower rates as they became older (see Figure 2).



**Figure 2. Communication resources by age group.**

Although the discussion guide did not contain questions about health, it was the most frequently occurring topic of discussion. Many participants reported regularly visiting healthcare sites, doctor's offices, and hospitals, which were viewed as a missed opportunity for connecting with information about local health—enhancing resources such as community-based and aging services: "Say you're in the hospital, the hospital dischargers, they don't provide the people with information." Undoubtedly, these challenges increase with age as people accrue health challenges and chronic conditions. In comparison to clinical settings, healthcare activities that occurred in community settings in the CAC, such as health fairs, educational events, and presentations at senior centers, were cited as positively promoting connections and facilitating communication for those who were able to get to those sites.

### ***Local Companions as Bridge Builders***

Participants told stories about storytellers with shared commonalities such as having similar age or being from the area, but not long histories. Rather, these storytellers were newer companions or sources of contact for participants. We refer to these individuals as "local companions," who were bridging storytellers with characteristics of the micro (residents) and meso (aging services retirees, volunteers) level (e.g., a volunteer who delivered Meals-on-Wheels or other low-income senior-housing tenants) that were important communication actors. For example, tenants of a low-income housing site gathered for a "snack and yack" to talk about current events. One of those individuals was a self-appointed micro-social storyteller who wrote about other tenants in the hyper-localized newsletter distributed to residents called *The Taddler*:

You find out who is sick, and who isn't. And who's traveling and who's not. And that's good to know. And all that stuff. And we put all that stuff in the newsletter. And the office always has a page of information, depending on the holiday or some [what's going on] or some information thing, and then they have a page of rules and regulations that they remind us and FYIs, for your information.

Spaces to gather in the low-income housing units enabled greater STN integration and a more communication-rich environment and connection to CBOs and services, as this comment illustrates: "Until I moved here, I did not know anything about any of the services." Local companions were storytellers who offered patience and time to talk, when they delivered Meals-on-Wheels for example and spent some time talking to the person who they were delivering the meal to:

I think older people particularly, they'd like to have you talk to them. They like that. Rather than just drop it off and leave. So, I think you have to just get in there, get in there, and take the time, and let us when we're older, *please let us talk*.

Participants identified bridging characteristics that they equated with being trustworthy and good to talk to which included similarities in age, geographic proximity (being a county resident), shared housing, or religious affiliation.

## Discussion

The purpose of this study was to explore the dynamics that contributed to older residents being hard-to-reach through the lens of CIT, which was construed as a multilevel communication problem among residents (micro-level), and the local health bolstering and aging organizations (meso-level) in this community. We described the dynamics of the STN and the CAC, the ways they impeded or enabled connections with community, and resources including community-based and aging service organizations. We will discuss the implications of our findings and contribution to communication scholarship and practice and then discuss the ways it may inform efforts to foster aging in place (AIP).

Communication infrastructure theory was a useful frame for unveiling why people become hard-to-reach. The results emphasized the hindrances that accrued as people got older in connecting with storytellers, which was impeded by their inability to physically get out and engage in the local communication environment. This included individuals who were no longer able to drive and those who lived in areas where transportation options were not offered in their community. Those who lived in single-family detached homes seemed to experience more limitations imposed by the CAC, especially if they could no longer drive. This contrasted with residents of low-income senior-housing units who seemed to have a richer array of communication resources available in their communication environment, especially when the site offered a space for gathering and chatting. This poses a significant challenge for the community of study and its residents who want to AIP, given that 85% of the county's older population lives in single-family detached homes with few alternatives (Jankowski & Leach, 2015). Even though only 38% of the county is designated rural, many homes where we conducted interviews had rural characteristics that impeded connections in a CAC, despite their designation. For instance, many homes located in designated urban areas did not have share fences or yards, nor were there sidewalks or driveways to gather and exchange stories about their community.

The findings suggest that as people get older, they will increasingly and inevitably face hindrances remaining integrated with a CI. For example, as people get older, they retire and leave the workforce which means they may no longer benefit from interactions in the workplace. Likewise, they no longer have school-aged children in the home and thus do not reap the benefit from connecting to storytellers in the CAC via schools or educational institutions. Health challenges that seemed to accelerate the disconnect from the CAC included surgeries, procedures, hospital stays, and other occurrences that led residents to give up their volunteer position at the senior center, to stop visiting government buildings when they would forego serving on the local school board, or discontinue their habitual visits to the YMCA. CAC impediments seemed to be challenging for the oldest residents, as was connecting with local storytellers, which was also a barrier to remaining integrated in a communication structure. As our findings showed, social disconnection was direr among the oldest residents who reported being lonely at higher rates. Loneliness is as detrimental to one's health as smoking and obesity and is a growing concern among all age groups (USDHHS, 2023). In fact, the U.S. Surgeon General released a report that cited the epidemic of loneliness and social disconnectedness as a public health crisis (USDHHS, 2023). The report outlines a National Strategy to Advance Social Connection including first, to strengthen the social infrastructure of citizens, especially among those who are most at risk, which, given this research, we argue should target people ages 75 and older. Likewise, we advocate for

local improvements that pay special attention to helping residents ages 75 and older remain in their homes and community. The AIP definition suggests that people should be able to remain safe, independent, and comfortable regardless of age, though we theorize that AIP efforts may lead to more impactful outcomes when considering how age and affiliated changes influence connecting with and in one's community. People ages 65 and older are not a homogenous group; rather, they have varying degrees of assistance in managing their daily activities, their health and home, and ultimately their ability to AIP.

The role of communication in AIP is understudied as are investigations that consider how communication resources change over time while living independently in one's home and community, especially in the last quarter of life. We did locate one other study, that we are aware of, that has taken into consideration the role that communication plays and the age-related processes that shape an individual's CI (Anderson, 2020). The quasi-ethnographic study was novel in that it applied CIT to the AIP context; however, interview data were collected from two local city representatives and eight residents, all of whom were married and had an expressed interest in AIP (Anderson, 2020). Because the ages of the eight interviewees was not disclosed, we presume this to be the first study to provide insight about how a CI evolves over time and with age.

This formative research suggests that as people get older and accrue health challenges, their communicative resources for helping to cope with those challenges are diminishing in tandem. This corresponds to research by Wilkin (2013) and colleagues (Wilkin et al., 2011) showing that individuals with the greatest health disparities have the most fragmented connections to a STN. Moreover, they provide insight into the ways in which CIT can be leveraged to develop community-based strategies to lessen the divide. While they highlight the antecedents of becoming hard-to-reach and offer insight into what influences STN integration, they also advise accounting for broader communication resources (Ball-Rokeach et al., 2001; Wilkin, 2013; Wilkin, Katz, Ball-Rokeach, & Hether, 2015) to "determine which resources or combination of resources will lead to the most efficient health communication outreach at the community level" (Wilkin, 2013, p. 189). We discuss key considerations for bridging the gap between older adults and community health bolstering agencies, support, and resources that will help people age in place, considering influences present in an older person's *communication ecology* (Wilkin, 2013).

Through our research, we were able to document an older adults' CI, that can be drawn on to effectively connect people to a STN. We learned that the current structure was inadequate for residents because it excluded a crucial communication connection that occurred outside of the STN, with healthcare professionals and others at healthcare sites. For those who may not be integrated into STNs, communication experts suggest building on the CI to "consider ways to better reach those who are not connecting" (Wilkin, 2013, p. 188). This broadens potential opportunities for connections beyond the current network of communication resources toward contemplating how a more enabling system of communication sources might look (Wilkin, 2013). Health management is a central activity in later life; most participants in our study told stories about their health without being prompted and desired to engage in storytelling about their community with trusted experts, which is how they regard health professionals, with whom they interact frequently (Harwood, 2007). To illustrate, people aged 75 years and older are the greatest consumers of healthcare and average eight outpatient medical visits per year, whereas those aged 18 to 44

years old average two to three (Harwood, 2007, p. 224). CIT is an extension of media systems dependency theory, which regards individuals, their interpersonal connections, social environment, and media in an interdependent relationship (Miller, 2005). As media dependency increases during times of conflict or stress (Miller, 2005), we argue that AIP efforts should address the increasing need for communication and information resources and outlets older people can rely on and access to help them cope with the stress that comes with accrued health and chronic conditions.

Practically speaking, efforts aimed at fostering AIP should focus on bridging meso-level storytellers who are isolated from healthcare professionals and systems. For example, CBOs, aging service providers, medical facilities, and healthcare professionals and networks should work to increase the flow of health bolstering information and community resources by co-developing and co-disseminating content and materials that include tips on managing health and coping with grief and loneliness while also storytelling about local resources, sites, and means for transporting residents to sites where they may congregate. Low-cost strategies would be to disseminate materials through health-related sites such as in doctor's offices, hospitals, and emergency rooms. A costlier approach may be used to target the oldest residents through mailing print media to their homes, or through less costly methods such as using newspaper ads or inserts, or even less cost prohibitive, disseminating the information through existing channels by including the materials with Meals-on-Wheels delivery. Moreover, when print resources are shared by a trusted contact, such as a senior volunteer, in a face-to-face discussion, the "interactive effect" of intervening at more than one level "is greater than the mere additive effect of the two levels" (Moran et al., 2016, p. 136). Training staff and volunteers, who ideally would also be an older person, to be active storytellers about their community may prove effective as well. Health insurers should incentivize health professionals to remove siloes and foster connections with local agencies, media, and service providers who together could improve story cohesion. Healthcare professionals are important, undertapped communication resources that can improve meso-level storytelling about local resources available.

Although the topic of this research has been identified as a concern in many other communities, the results of this study are specific to Monroe County, Michigan, and the findings may not generalize to other communities. Life expectancy has increased dramatically in the last century, but research on the social dynamics of "70- and 80-year-olds is a very new scientific enterprise" (Harwood, 2007, p. 27), particularly as it relates to communication and especially in the context of AIP. The dearth of scholarship on late old age impeded our ability to substantiate the claim that old age weakens one's CI and results in communication inequities. More research is warranted to understand the role that age plays in connecting to one's community and its communication resources in different settings and places.

The involvement of older community members in this research improved our instruments and protocol (in their view) and enabled us to connect with the oldest residents, who lived alone, are underrepresented in research, *and* hard-to-reach. Engaging older adults from the community to co-develop materials, outreach strategies, and communication plans can help ensure that pertinent information is being infused into the STN. Older adults are experts on aging and the dynamics that influence information uptake, and thus they can help shape messages that will resonate with other people their age who need information that can help them to remain in place.

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### Appendix A: Semi-Structured Interview Guide

#### INTERVIEW QUESTIONS

##### Opening Questions. (10 minutes)

###### Factual questions:

- How long have you lived in Monroe County?
- Does anyone live here with you?

###### Experience questions:

- Do you have friends that live nearby?
- Do you have family that lives nearby?
- Do people call you for help with things? What kind of things?
- Do you have family or friends who you can call if you need a hand with anything? Who helps? What do they help you with?

##### Generative Questions. (20 minutes)

I want to learn about your opinion of services especially and how you learn about them, and your interactions with people that work or volunteer there.

Elicitation questions: I have a list of services and programs available for Monroe County older adults.

- Are any of these familiar to you?
- Have you used any of those services?
  - NO
    - Have you attempted to use? What went wrong?
    - Why haven't you?
  - YES
    - How did you learn about the service?
    - What made you want to reach out?
    - What is/was using [insert service] like?
      - What would you say is good about using [the service]?
      - What would you say is bad about using [the service]?
    - How are/were the interactions with staff members?
    - Are you still using?
      - NO
      - Why not? What made you stop?
- Have you attempted to use any other services available in Monroe County? What happened? Can you give me examples?

###### Other people's motives questions:

- Do you know other seniors that use any of those services? Have they told you about how they feel about it?
- How do you think seniors get help if they need it?
- What are some of the reasons that you think people don't get help when they need it?

**Directive Questions. (20 minutes)**

Data-referencing question: 6% of seniors in Michigan use community-based services. These agencies have a hard time reaching seniors, and seniors report having issues getting help.

- What things would help connect seniors and service providers?
- Can you think of things that have helped you get in touch with agencies?
- What are some reasons you think they might have a hard time reaching seniors in Monroe County specifically?
- What could be improved? Do you have tips or advice for these agencies that want to provide support?

**Interview Closing. (10 minutes)**

Special interest question:

- What word or few words would you use to describe yourself?

Catch-all questions:

- Are there questions I didn't ask that are important?
- Is there anything you want to add?

Demographic questions:

- One last thing before we leave, I need to ask you to complete a very brief survey. Please take a minute to fill that out. The purpose is to get a general idea about you and your circumstances.

Thank you for taking the time to meet with me and share your experiences for letting me into your home.

You have my contact information so if ideas come to you after I leave, please call or email me any time. Your input will only strengthen my research. If you'd like results from the study you can contact me and I will happily email you to let you know where the results will be shared.

**APPROVED**

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