

Special Article

Changes in Older Adults' Social Contact During the COVID-19 Pandemic

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Received: March 15, 2021; Editorial Decision Date: September 3, 2021

Decision Editor: Jessica Kelley, PhD, FGSA

Abstract

Objectives: To understand changes during the coronavirus disease 2019 (COVID-19) pandemic in weekly contact with nonresident family and friends for U.S. adults aged 70 and older in residential care and community settings.

Methods: Participants in the National Health and Aging Trends Study COVID-19 mail supplement ($N = 3,098$) reported frequency of phone, electronic, video, and in-person contact with nonresident family and friends in a typical week before and during the pandemic. We examined less than weekly contact by mode for those in residential care settings and community residents with and without limitations. We estimated multinomial logit models to examine predictors of change to less than weekly contact (vs. maintaining weekly or more contact) by mode, overall, and stratified by setting.

Results: Weekly in-person contact fell substantially (from 61% to 39%) and more so in residential care (from 56% to 22%), where nearly 4 in 10 transitioned to less than weekly in-person contact (doubling to 8 out of 10). Weekly or more contact was largely stable for electronic and telephone modes across settings. Weekly or more video contact increased mainly for community residents without limitations. Compared to community residents without limitations, those in assisted living or nursing homes had more than 5 times the odds (adjusted odds ratio [AOR] = 5.3; $p = .01$) of changing to less than weekly in-person contact; those in independent living also had higher odds of changing to less than weekly in-person (AOR = 2.6; $p = .01$) and video (AOR = 3.4; $p = .01$) contact.

Discussion: The pandemic revealed the importance of ensuring that communication technologies to maintain social ties are available to and usable by older adults, particularly for those living in residential care settings.

Keywords: COVID-19, Disability, Long-term care, Social networks

Lack of social interaction has been established as a risk factor for reduced health and well-being, cognitive declines, and mortality in later life (Berkman et al., 2000; Courtin & Knapp, 2017; Holt-Lunstad et al., 2015; Kelly et al., 2017). Prior to the coronavirus disease 2019 (COVID-19) pandemic, about one in four older adults were considered socially isolated (National Academies of Sciences, Engineering, and Medicine, 2020). During the pandemic, shut-down orders, physical distancing guidelines, and prohibition of visits with older adults in long-term care settings

raised concerns about the extent to which an important aspect of social contact—in-person contact with nonresident family and friends—was curtailed, particularly for those with physical and cognitive limitations (Cudjoe & Katwal, 2020; Hado & Friss Feinberg, 2020; Steinman et al., 2020; Zimmerman et al., 2020).

A handful of studies have investigated social contact and isolation in light of the pandemic. For instance, a study of adults aged 50 and older in the United States found increased physical isolation but not digital isolation during

the outbreak (Peng & Roth, 2021). Some studies have pointed to the distinctive emotional benefits of face-to-face contact during the outbreak relative to telephone and electronic forms of communication (Fingerman et al., 2021; Green et al., 2021; Hu & Qian, 2021; Litwin & Levinsky, 2021; Sommerlad et al., 2021). Others have highlighted the value of connecting with family members in long-term care facilities, especially by telephone, when face-to-face contact is limited (Monin et al., 2020). The benefit of online communications (e.g., social networking) and video calls for mitigating loneliness or depression has also been explored (Hajek & Konig, 2021; Yu et al., 2021; Zamir et al., 2018; Zhang et al., 2020), but findings are mixed.

Despite these important insights, national estimates that assess the impact of the pandemic on in-person contact for older adults with physical and cognitive limitations, particularly those in residential care settings where concerns have been especially acute (Zimmerman et al., 2020), have been lacking. Moreover, differences across residential settings in the extent to which other forms of contact—for example, telephone, electronic methods such as text, email, or social media, or video visits—have substituted for in-person visits during the pandemic remain unexplored.

Using data from the National Health and Aging Trends Study (NHATS), we compare older adults' frequency of social contact before and during the pandemic. We document levels and changes by mode and how these findings differ for three groups: those in residential care settings, in the community with limitations, and in the community with no limitations. We then explore the extent to which setting influenced change by mode after controlling for demographic characteristics, prepandemic need and opportunities for nonresident contact, and openness to technology.

Method

Data

We used data from the COVID-19 Supplement to the NHATS linked to the 2019 NHATS interview. NHATS is a nationally representative study of Medicare enrollees aged 65 and older. Annual interviews have taken place in participants' homes from 2011 through 2019 (Kasper & Freedman, 2021). In 2020, NHATS participants who completed a phone interview (response rate 96%) were eligible for a supplemental mail study (response rate 82%) about participants' experiences during the pandemic (Freedman & Hu, 2021). All NHATS participants in 2020 were aged 70 or older. Nearly 90% of 3,257 COVID-19 booklets returned were completed during July and August 2020. We omitted 158 cases (<5%) that did not complete the social interaction items and one case with no 2019 NHATS interview, leaving $N = 3,098$ for analysis.

Outcomes

In the COVID-19 supplement, respondents were asked for the period before and during the outbreak: in a typical week, how

often did you have contact with family and friends not living with you by (a) phone calls, (b) emails, texts, or social media messages, (c) video calls, and (d) in-person visits. Answers included at least daily, a few times a week, about once a week, less than once a week, and never. We examined distributions by mode (Supplementary Appendix Table A1) and then collapsed answer categories into weekly or more versus less than weekly contact for each mode. We created an indicator for each mode of whether frequency changed (e.g., to weekly or more or less than weekly contact) or remained the same before and during (e.g., less than weekly or weekly or more contact).

Comparison Groups

We created three comparison groups ("settings") based on 2019 measures: those who lived in residential care, in the community with physical or cognitive limitations, and in the community with no limitations. These groups enable comparisons by residential setting, taking into account care needs. Physical limitation was defined as receiving any help with four self-care (bathing, dressing, eating, or toileting) or three mobility-related (getting out of bed, getting around inside, and getting outside) activities or with five household activities (laundry, making meals, shopping, banking, or managing medications) for health or functioning reasons (see Freedman & Spillman, 2014 for details). Cognitive limitation was defined as having probable dementia based on reported diagnosis, informant reports of two or more memory-related problems, or cognitive tests scores 1.5 *SD* below the mean on two or more domains reflecting memory, orientation, or executive functioning (Kasper et al., 2013).

Control Variables

Control variables were drawn from the 2019 NHATS interview. Participants' characteristics included age, gender, and race/ethnicity (non-Hispanic White vs. other groups). For those in residential care, we differentiated independent living from assisted living or nursing home settings. We represented need and opportunities for nonresident contact by whether the participant lived alone, had at least one nonresident daughter or social network member (i.e., someone they talked with about important things), and the size of the nonresident network (i.e., sum of nonresident adult children, stepchildren, siblings, and social network members and in a small number of cases a nonresident spouse or partner). Openness to technology was represented by whether the participant had a college education and (for models predicting in-person, telephone, and video contact outcomes) by whether the participant emailed or texted most or some days or if they visited social networking sites.

Methods

We reported p values for χ^2 tests for differences across settings in contact frequency before and during the pandemic

Table 1. Social Contact With Nonresident Family and Friends in a Typical Week Before and During the COVID-19 Pandemic by Type of Contact and Residential Setting, Adults Aged 70 and Older

	Before		During		During vs. Before		Change to less than weekly	Change to weekly or more	p
	Weekly or more	Less than weekly	Weekly or more	Less than weekly	Remained weekly or more	Remained less than weekly			
<i>All</i>									
In person	60.5	39.5	39.0	61.0	++	35.5	36.0	3.5	25.0
Phone	89.2	10.8	86.6	13.4	++	83.5	7.7	3.1	5.7
Electronic	64.8	35.2	62.5	37.5	++	60.0	32.7	2.5	4.8
Video	21.4	78.6	26.0	74.0	++	17.9	70.4	8.1	3.5
<i>By residential setting</i>									
In person									
Residential care	55.8	44.2	21.7	78.3	**	19.5	42.0	2.3	36.3
Community, with limitations	54.6	45.4	36.3	63.7		33.0	42.1	3.3	21.6
Community, no limitations	62.6	37.4	41.2	58.8		37.6	33.7	3.7	25.0
Phone									
Residential care	82.3	17.7	76.8	23.2	**	73.0	13.9	3.8	9.3
Community, with limitations	85.6	14.4	83.3	16.7		79.7	10.8	3.6	5.9
Community, no limitations	90.9	9.1	88.4	11.6		85.5	6.2	2.9	5.4
Electronic									
Residential care	32.9	67.1	33.2	66.8	**	32.1	66.0	1.1	0.8
Community, with limitations	47.8	52.2	45.8	54.2		43.3	49.8	2.4	4.5
Community, no limitations	72.5	27.5	69.9	30.1		67.3	24.9	2.6	5.2
Video									
Residential care	20.2	79.8	18.1	81.9	*	12.7	74.5	5.4	7.5
Community, with limitations	21.7	78.3	23.1	76.9		17.3	72.6	5.7	4.4
Community, no limitations	21.5	78.5	27.6	72.4		18.5	69.5	9.0	3.0

Notes: COVID-19 = coronavirus disease 2019. N = 3,098; 2,083 in community with no limitations, 806 in community with limitations, and 209 in residential care. ++p < .01 for χ^2 test for difference from before; * p < .05 and **p < .01 for χ^2 test for difference across settings.

and in changes in contact frequency. We tested for differences across setting in covariates with *t*-tests and χ^2 tests (for continuous and categorical variables, respectively). Finally, we estimated a series of multinomial logit models for all settings combined (and by setting; see [Supplementary Appendix](#)) predicting change in contact by mode, with the omitted category maintaining weekly or more contact before and during the pandemic. We reported β coefficients and associated *p* values and in the text adjusted odds ratios (AOR = exp (β)) to facilitate interpretation.

All estimates used weights taking into account differential probabilities of selection and response to NHATS and the COVID-19 supplement. Standard errors were adjusted to reflect the complex design of NHATS.

Results

Among adults aged 70 and older, 60.5% had weekly or more in-person contact before the pandemic; this figure dropped to 39.0% during the pandemic (top panel, [Table 1](#)). Weekly or more contact was substantial and largely stable for telephone (89.2%–86.6%) and electronic methods (64.8%–62.5%), whereas weekly video communication increased (from 21.4% to 26.0%). Altogether, one in four (25.0%) older adults experienced changes to less than weekly in-person contact. Although changes in phone or electronic contact were relatively uncommon, 8.1% increased to weekly or more contact by video.

With respect to setting differences, four points are noteworthy (bottom panel, [Table 1](#)). First, community residents with no limitations were most likely to have weekly or more in-person, phone, and electronic contact before the pandemic. Second, for those in residential care settings,

weekly or more in-person contact declined substantially (55.8%–21.7%) and more than for those in the community. That is, nearly four in 10 in residential care transitioned to less than weekly in-person contact, resulting in a doubling to eight out of 10. Third, phone contact also declined in residential care more than in community settings (82.3% before; 76.8% during), but the declines were not as steep as for in-person visits. Fourth, 9% of those in the community without limitations changed to weekly or more video communication (vs. 5%–6% for other groups).

Compared to community residents (with or without limitations), those in residential care were older on average, more likely to be female and living alone, and had smaller nonresident networks than other groups ([Table 2](#)). They were more likely to be college-educated but less likely to have a history of regularly using email, texting, or social network sites. Those living in the community with limitations were more racially and ethnically diverse than the other groups.

In models, setting was significantly associated with change to less than weekly in-person and video contact ([Table 3](#)). Compared to community residents with no limitations, those in assisted living or nursing home settings had more than 5 times the odds of changing to less than weekly in-person contact versus maintaining weekly or more contact ($\beta = 1.94, p < .01$; AOR = 5.3). Those in independent living settings had higher odds of changing to less than weekly in-person ($\beta = 0.97, p < .01$; AOR = 2.6) and video ($\beta = 1.25, p < .05$; AOR = 3.4) contact.

Several additional points about covariates ([Table 3](#) and [Supplementary Appendix Tables A2 and A3](#)) are noteworthy. First, prepandemic family and social network measures were associated with lower odds of changing to

Table 2. Characteristics of Adults Aged 70 and Older by Residential Setting, Prior to COVID-19 Pandemic

	All	Residential care	Community, with limitations	Community, no limitations	<i>p</i>
	100%	5.7%	22.0%	72.3%	
Independent living	9.4	53.5	—	—	—
Assisted living or nursing home	8.2	46.5	—	—	—
Age, <i>M</i> (<i>SD</i>)	78.3 (6.5)	85.4 (8.4)	80.2 (8.1)	77.2 (5.2)	**
Female	55.7	68.9	63.0	52.4	**
White, non-Hispanic	78.5	82.7	69.2	81.0	**
Lived alone	31.1	81.0	25.6	28.8	**
Had at least one nonresident daughter	70.5	71.1	69.8	70.7	
Had at least one nonresident social network member	77.7	73.3	75.4	78.7	
Nonresident network size, <i>M</i> (<i>SD</i>)	5.5 (2.9)	4.3 (2.6)	5.3 (2.9)	5.6 (2.8)	**
Had at least a college education	32.4	35.2	24.0	28.8	**
Used email or texting most days or some days or went on social networking sites	64.0	27.7	45.9	72.4	**
<i>N</i>	3,098	209	806	2,067	

Notes: COVID-19 = coronavirus disease 2019.

p* < .05 and *p* < .01 for difference across settings.

Table 3. Multinomial Logit Model Coefficients Predicting Contact in a Typical Week by Mode Before and During COVID-19 Pandemic: Change to Weekly or More, Stayed Less Than Weekly, or Changed to Less Than Weekly (vs. stayed weekly or more), Adults Aged 70 and Older

Setting	In-person			Phone			Electronic			Video		
	Changed to weekly or more	Stayed less than weekly	Changed to less than weekly	Changed to weekly or more	Stayed less than weekly	Changed to less than weekly	Changed to weekly or more	Stayed less than weekly	Changed to less than weekly	Changed to weekly or more	Stayed less than weekly	Changed to less than weekly
Community, no limitations	(omitted)			(omitted)			(omitted)			(omitted)		
Community with limitations	-0.03	0.36**	0.12	0.32	0.54**	0.15	0.27	0.84**	0.09	-0.30	-0.16	0.22
Residential care: independent living	-0.35	1.69**	0.97**	0.06	-0.25	0.44	-0.91	0.24	-1.27	0.20	0.14	1.25*
Residential care: assisted living or nursing home	0.44	0.82	1.94**	0.92	1.48**	0.85	0.57	1.98**	-0.92	0.03	-0.77	0.48
Age	0.02	-0.02	-0.02	-0.01	-0.01	-0.02	0.03	0.09**	0.04*	-0.01	0.01	0.01
Female	-0.20	0.08	0.31*	-0.57	-0.24	-0.37	-0.52*	-0.41**	-0.17	0.32	-0.13	0.37
White, non-Hispanic	-0.24	-0.70**	-0.13	-0.44	0.30	0.54	-0.97**	-0.97**	-1.01**	0.30	0.59**	-0.09
Lived alone	-0.18	-0.44**	-0.45**	0.20	-0.27	0.09	0.02	0.33**	-0.35	-0.39	0.20	-0.08
Had at least one nonresident daughter	-0.40	-0.12	-0.02	-0.55	-0.56**	-0.57**	-0.06	-0.02	-0.03	-0.37	-0.29	-0.05
Had at least one nonresident social network member	-0.42	-0.56**	-0.22	-0.55	-1.04**	-0.58*	0.45	-0.41**	-0.07	0.21	0.07	0.48
Nonresident network size	-0.02	-0.02	-0.00	0.07	-0.03	-0.05	0.16	-0.47**	-0.80*	0.00	-0.07*	0.01
Had at least a college education	0.01	0.25	0.41*	-0.28	-0.09	-0.70**	-0.32	-0.98**	-0.50	1.04**	-0.50**	0.39
Used email or texting most days or some days or went on social networking sites	0.20	0.11	0.42**	-0.12	-0.47*	-0.33	—	—	—	-0.10	-1.11**	-0.90**
Constant	-2.97	2.64*	0.60	-1.31	-0.03	0.29	-4.55*	-6.05**	-4.02*	-0.40	1.63	-2.82

Notes: COVID-19 = coronavirus disease 2019. N = 3,098. *p < .05, **p < .01.

less than weekly phone contact, particularly for those with limitations. Second, the chances of changing to less than weekly contact were higher for in-person and lower for video contact when the older adult had a history of email, texting, or social networking, but this finding was limited to those without limitations. Finally, those who lived alone had lower odds of changing to less than weekly in-person contact across all settings.

Discussion

We found that during the COVID-19 pandemic, across all settings, one in four older adults experienced a change to less than weekly in-person visits with nonresident family and friends. Video contact increased marginally, and phone and electronic contact remained substantial and largely stable. Our findings align with one other national study examining COVID-related changes in contact, which found a significant increase in mean physical isolation scores, but no difference in digital isolation for those aged 50 and older in 2020 compared to 2016 (Peng & Roth, 2021).

We also add to the literature by identifying differences across settings. During the pandemic, weekly in-person contact fell most for those in residential care so that eight out of 10 older adults in these settings—double the prepandemic level—had less than weekly in-person contact with nonresident family or friends. In adjusted models, the chances of changing to less than weekly contact were highest for those in assisted living and nursing home settings, followed by independent living settings. These findings highlight the challenges posed by the pandemic to settings that have been characterized as centered on providing opportunities for social engagement (Zimmerman et al., 2020).

Video contact increased marginally during the pandemic mainly among those without limitations in the community. Elevated chances of changing to less than weekly video contact were observed in independent living settings, although the reasons for this pattern are not clear. It may be that access to shared technology or designated staff to assist with technology may have been limited during the pandemic (Zimmerman et al., 2020).

This analysis has limitations. Prepandemic measures of contact were collected retrospectively. Although the average recall period was only 4–5 months (to before March 2020), reports of prepandemic behaviors may have been inaccurate for some participants. Seasonal influences on contact, particularly for face-to-face visits, also cannot be ruled out. In addition, because of limited sample sizes, in stratified (supplemental) models, we combined those living in residential care and in the community with limitations. We were therefore unable to explore whether family/network and technology use had different effects in these settings. Moreover, this analysis focused on the frequency of social contacts and did not address the quality of interactions or extent of emotional support related to such contacts, nor did it explore other kinds of

social participation that may have taken place during the pandemic.

Despite these limitations, this study is the first to document the extraordinary declines during the COVID-19 pandemic in face-to-face visits across residential settings for a national sample of older adults. Particularly striking are the substantial declines for in-person visits and low levels of regular video use with family and friends, especially in residential care settings. In response to the pandemic, some have suggested that clinicians should monitor not only loneliness and perceptions of social isolation among patients, but also access to phone and video communication technologies (Cudjoe & Katwal, 2020). Our findings underscore the importance of this recommendation and the need for residential care facilities to monitor these outcomes for residents as well. Finally, although additional studies are needed to evaluate the potential of video and other technologies to mitigate loneliness and social isolation (Hajek & König, 2021), the pandemic has made clear the need to invest in technological and personnel infrastructure—particularly in residential care settings—not only for “telemedicine” purposes but for “televisits” with family and friends as a means of maintaining social ties when in-person contact is not possible.

Supplementary Material

Supplementary data are available at *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* online.

Funding

This research was supported by the National Institute on Aging of the National Institutes of Health (U01AG032947). The views expressed are those of the authors and not those of their employers or the funding agency.

Conflict of Interest

None declared.

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