Promoting Digital Inclusion for Older Adults in Santa Clara County

A REPORT BY THE SANTA CLARA COUNTY DIGITAL INCLUSION WORKGROUP

AGE FRIENDLY
SANTA CLARA COUNTY

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June 16, 2021

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Table of Contents

Preface 1

Executive Summary 2

1. Introduction 3
    a. Digital Inclusion 3
    b. Digital Literacy 4

2. Demographics of Older Adults in Santa Clara County 5

3. Older Adults and Technology 8
    a. Ownership and Use of Digital Technologies by Older Adults 8
    b. Older Adults' Use of Social Media and Other Communication Applications 11
    c. Older Adults' Access to Broadband at Home: National Data 13
    d. Broadband Access for Older Adults in California and Santa Clara County 14

4. Effects of Limited Access to Technology 16
    a. Loneliness and Social Isolation 17
    b. Limited Access to Essential Services 17

5. Barriers to Technology Adoption 18
    a. Why Do I Need It? 18
    b. Lack of Confidence 19
    c. Privacy/Security Concerns 20
    d. Product Design 21
    e. Limited Access to Affordable Broadband Service 21

6. Promoting Digital Inclusion: Inexpensive Internet Access Alternatives 22
    a. Discount Internet Access Plans 22
    b. Personal Mobile Hotspots 23
    c. Public Wi-Fi 23

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7. Local Digital Inclusion Projects: Santa Clara County and Bay Area 24
   a. Santa Clara County 24
   b. San José 26
   c. Sunnyvale 27
   d. Milpitas 27
   e. San Francisco County 27
   f. San Mateo County 28
   g. Solano County 28

8. Statewide Digital Inclusion Initiatives 28

9. National Digital Inclusion Initiatives 29

10. Other Pilot Programs Around the County 30

11. Conclusion and Recommendations 31

PREFACE

Santa Clara County is the heart of Silicon Valley, known around the world for its technological leadership and innovation. But even here, one group – our older adult population – lacks the ability to access and use technologies that many of us take for granted. This has been exacerbated by the COVID-19 pandemic and the resulting shift to life online. It is time to address that digital divide.

The disparity in technology access and use between older and younger people is not new nor unique to our county. But the coronavirus pandemic has turned a serious problem into an urgent one, as thousands of older adults faced more than a year of enforced isolation without internet access and/or the digital training necessary to effectively move their lives to online platforms. This lack of access has resulted in increased social separation during these difficult times and a potentially life-threatening inability to obtain necessary services, such as telehealth, financial support, and grocery delivery. Even as the pandemic loosens its grip, many service providers will continue to offer the majority of their services online, deepening the need for meaningful connectivity for older people.

In 2017 Santa Clara County became the first in the United States to have all of its cities as well as the county itself receive the Age-Friendly Community designation by the AARP and the World Health Organization's Global Network of Age-Friendly Cities. Digital inclusion for older adults is a critical part of the Age-Friendly movement. The County's Age-Friendly Three Year Action Plan calls for ensuring that "older adults are incorporated into county digital inclusion policies." This goal aligns directly with key initiatives in the recently adopted California Master Plan on Aging to provide older adults with broadband, devices and digital literacy support.

Last year the Board of Supervisors approved a referral to the Department of Aging and Adults Services (DAAS) to research and make recommendations regarding digital inclusion for older adults. Under DAAS, a Digital Inclusion Workgroup was formed and has prepared the following report, *Promoting Digital Inclusion for Older Adults in Santa Clara County*. The report provides a detailed rationale for more robust digital inclusion efforts and outlines the barriers to access and adoption. The report also describes laudable efforts designed to foster inclusion and create more opportunities. Santa Clara County is in position to once again lead the nation in addressing the unique challenges faced by an aging population; the following report represents a strong commitment to that end.

Please join us in working to connect this vital population to the many benefits and essential services of online access.

Tylor Taylor
Chair, Santa Clara County Senior Care Commission

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Promoting Digital Inclusion for Older Adults in Santa Clara County

Executive Summary

Older adults have long lagged behind younger people in adopting and using digital technologies such as computers, smartphones and the internet. This "digital divide" has raised the prospect of older adults being left out of the digital revolution. The seriousness of this problem has been amplified by the impact of the COVID-19 pandemic that has kept seniors isolated at the same time that vital services such as telemedicine and e-commerce are increasingly moving online. A diverse group of service providers in Santa Clara County has come together to promote digital inclusion to insure that the county's seniors have full access to and are able to use digital technologies to stay connected and access key services.

Demographics

Approximately 14% of the county's 1.9 million people, or about 268,000 people, are age 65 and older. This population is quite ethnically diverse: 47% are Caucasian, 35% are Asian, 14% are LatinX, and 2% are African American. Almost 39% live alone, and 38% have income below 200% of the federal poverty level.

Precisely how many seniors in Santa Clara County lack access to digital technology and the internet is not well established. But recent survey data shows that 36.4% of older Californians do not have access to broadband at home, which would translate to over 97,000 Santa Clara County residents. And a 2020 survey of participants in the County's Senior Nutrition Program found that two-thirds—some 10,000 seniors—in just this one program lacked internet access. Other surveys show less of a gap, but clearly the number of older county residents without internet access is substantial.

Barriers to Adoption

It is important to understand the reasons why so many older adults are not online. Among the reasons are unfamiliarity with the benefits of using the internet; a lack of confidence in their ability to learn and use technology; concerns about privacy and security; the lack of products designed to appeal to older adults; and limited access to affordable broadband services.

Efforts to Promote Digital Inclusion

A number of efforts have been launched locally, regionally and nationally to help older adults adopt tools and get online. Many of the county's public libraries and senior centers have provided classes and the opportunity to use public access terminals, but this access has been much reduced by COVID-19 closures. Other organizations, such as Senior Planet @Avenidas, have been attempting to provide remote support for digital inclusion even during the pandemic. Sourcewise, the county's Area Agency on Aging, has funded several such projects and is distributing free access devices provided through the California Department of Aging to low-income seniors.

Promoting Digital Inclusion for Older Adults in Santa Clara County

1. INTRODUCTION

Santa Clara County has become famous around the world as the home of Silicon Valley. But it would be a mistake to assume that everyone in our community has benefitted from the concentration of high-tech companies responsible for this name.

The COVID-19 pandemic has shined a bright light on inequities and disparities in our county and throughout the U.S., including access to information and communication technologies (ICT). One of the most glaring inequalities is the fact that many older adults in our community are on the wrong side of the "digital divide" and lack access to the internet, which has increased their isolation and cut them off from access to vital services.

For older adults in our communities to be connected via ICT and achieve actual digital inclusion, much more is needed than just hardware, bandwidth, and communication technology infrastructure, although those are necessary to start.

This section introduces the concepts of digital inclusion and digital literacy and offers an overview of the older adult population in Santa Clara County.

a. Digital Inclusion

The National Digital Inclusion Alliance provides the following definition of digital inclusion:

> Digital Inclusion refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs).[2]

According to the NDIA, digital inclusion also "requires intentional strategies and investments to reduce and eliminate historical, institutional and structural barriers to access and use technology." These include:

1. Access to affordable, robust broadband internet service;
2. Access to internet-enabled devices that meet the needs of the user;
3. Digital literacy training;
4. Quality technical support; and
5. Applications and online content designed to enable and encourage self-sufficiency, participation and collaboration.[3]

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[2] National Digital Inclusion Alliance. *Definitions.* September 24, 2020. https://www.digitalinclusion.org/definitions/.
[3] National Digital Inclusion Alliance. *Definitions.* September 24, 2020. https://www.digitalinclusion.org/definitions/.

Or, as a recent study of digital inclusion in the Netherlands stated:

> For a long time, a common opinion among policy-makers was that the digital divide problem would be solved when a country's Internet connection rate reaches saturation. … [But] the digital divide remains a problem in one of the richest and most technologically advanced countries in the world. By extending basic physical access combined with material access, the study finds that a [disparity] in access to devices and peripherals, device-related opportunities [to update equipment], and the ongoing expenses required to maintain the hardware, software, and subscriptions affect existing inequalities related to Internet skills, uses, and outcomes.[4]

b. Digital Literacy

In addition to having the necessary technology to get online, people must also have the ability to use that technology. The American Library Association defines digital literacy as "the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills."[5]

Digital literacy includes answering the question "why should I bother to go online?" Multiple studies have found that older adults are more motivated to adopt new technologies if they can see underlying purposes that align with their goals and interests.[6] Answers to the question of "why" may be:

Social/Civic Activities:

- To stay connected to family, friends, and the community;
- To get support from or offer support to others;
- Citizenship and other forms of social service (to engage with local government, to find opportunities for volunteering, to amplify your/your community's voice through blogs or social media).

Activities of Daily Life:

- To pay bills, manage bank accounts, and conduct other financial tasks;
- To shop, obtain necessary goods and services (e-commerce);
- To communicate with local authorities;
- To communicate with health care providers, order medications, or consult with health care team (telemedicine);
- To work remotely, find employment, or run a business;
- For entertainment and intellectual stimulation, including participating in online learning programs;

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[4] van Deursen AJAM, van Dijk, JAGM. The first-level digital divide shifts from inequalities in physical access to inequalities in material access. *New Media & Society*, 2019; 21:354-375. doi/10.1177/1461444818797082.

[5] American Library Association. *Digital Literacy.* 2021. https://literacy.ala.org/digital-literacy/.

[6] Hage E, van Offenbeek M, Boonstra A. New Rules of Engagement: How Adaptation To Online Media Changes Older Adults' Social Connectedness. *Journal of Computer-Mediated Communication.* 2020; 25:182–197. https://doi.org/10.1093/jcmc/zmz028.

- For physical activity or fitness; and
- To participate more fully in a world that uses an online interface as the entrée to so many events and activities.

Information access:
- To learn about events in the community;
- To keep up with the news;
- To investigate rumors and fact-check news;
- To avoid scams and frauds; and
- To find health information.

Or, in the words of the definition of digital literacy, to engage with "applications and online content designed to enable and encourage self-sufficiency, participation and collaboration." These skills are not innate or "intuitive," meaning that digital literacy components must be built into training for older adults.

2. DEMOGRAPHICS OF OLDER ADULTS IN SANTA CLARA COUNTY

The County of Santa Clara is home to almost 2,000,000 residents, making it the most populous county in the San Francisco Bay Area and Northern California, and the sixth largest in the State of California.

According to the Census Bureau's American Community Survey, adults aged 55 years and older comprise more than 25% of the total county population[7], and 13.9% of that population is over the age of 65 (267,948 people). Approximately 55.4% are female.[8]

The county's 65+ population is 2.1% African American, 13.8% LatinX, 35.1% Asian, and 47.4% White alone (not Hispanic or Latino).[9] Approximately, 38% of adults ages 65 and older live below 200% of the federal poverty level.[10]

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[7] U.S. Census Bureau. ACS 1-Year Estimates Subject Tables. *Age and Sex (Santa Clara County).* 2019. https://data.census.gov/cedsci/table?q=Santa%20Clara%20County,%20California%20Populations%20and%20People&tid=ACSST1Y2019.S0101&hidePreview=false.

[8] U.S. Census Bureau. ACS 1-Year Estimates Subject Tables. *Population 65 Years and Over in the United States (Santa Clara County)*, 2019. https://data.census.gov/cedsci/table?q=santa%20clara%20county&tid=ACSST1Y2019.S0103&hidePreview=false.

[9] U.S. Census Bureau. ACS 1-Year Estimates Subject Tables. *Population 65 Years and Over in the United States (Santa Clara County)*, 2019. https://data.census.gov/cedsci/table?q=santa%20clara%20county&tid=ACSST1Y2019.S0103&hidePreview=false.

[10] California Department on Aging. Santa Clara County Demographic Profile*. California Health Interview Survey.* 2018 (updated 4/9/2020) https://aging.ca.gov/download.ashx?lE0rcNUV0zZet47c6UNoUA==.

Table 2.1
Santa Clara County Population by Age

Population by age range (Table B01001) View table

Column	Santa Clara County			
0-9	11.4%	±0.2%	219,094	±4,007.9
10-19	12.6%	±0.2%	241,852	±4,133.3
20-29	14.2%	±0.3%	274,315	±4,734.1
30-39	15.7%	±0.2%	303,021	±4,255.5
40-49	13.8%	±0.2%	266,101	±4,313
50-59	12.8%	±0.2%	247,072	±4,109.9
60-69	10%	±0.3%	193,059	±5,997.7
70-79	5.9%	±0.2%	113,551	±3,737.6
80+	3.6%	±0.2%	69,787	±3,562.6

https://censusreporter.org/profiles/05000US06085-santa-clara-county-ca/

The county's older adult population is growing rapidly and its composition is changing. It is projected that by 2050, about *one in four residents of Santa Clara County will be over the age of 65*. In addition, the racial and ethnic demographic distribution of the older adult population is anticipated to shift to increasingly Asian and Pacific Islander and LatinX, while the African American population will remain relatively the same.[11]

The 2018 California Health Interview Survey highlighted some of the health indicators and social economic conditions of older adults in the county. According to the survey, the percentages of those 65+ living alone (28.5%), who do not speak English at home (35.3%), or who live below 200% of the Federal Poverty Level (38.2%) are higher in Santa Clara County compared to the statewide numbers of 21.0%, 21.0%, and 33.6% respectively. On the other hand, the numbers of older county residents who reported their health as either "fair" or "poor" and experienced food insecurity in the past year are similar to the statewide percentages (Table 2.2).[12]

[11] California Department of Finance. *Population Projections.* 2019. https://www.dof.ca.gov/Forecasting/Demographics/Projections/.

[12] California Department on Aging. Santa Clara County Demographic Profile*. California Health Interview Survey.* 2018 (updated 4/9/2020) https://aging.ca.gov/download.ashx?lE0rcNUV0zZet47c6UNoUA==. The numbers in Table 2.2 are based on a 65+ population of 249,000 in 2018. As noted elsewhere in this Report, that number has since increased to 268,000.

Table 2.2

Health Indicators and Social Economic Status of Adults 65 Years and Older In Santa Clara County

Population	**Santa Clara County**	**California**
TOTAL POPULATION	1,923,000	38,885,000
Population 65+ [as of 2018]	249,000	5,707,000
% Population 65+	12.9%	14.7%
Adults 65+		
LIVE ALONE	**Santa Clara County**	**California**
Number	71,000	1,197,000
Percentage	28.5%	21.0%
IN FAIR/POOR HEALTH		
Number	72,000	1,656,000
Percentage	28.9%	29.0%
DO NOT SPEAK ENGLISH AT HOME		
Number	88,000	1,201,000
Percentage	35.3.%	21.0%
INCOME BELOW 200% OF FEDERAL POVERTY LEVEL		
Number	95,000	1,917,000
Percentage	38.2%	33.6%
FOOD INSECURE*		
Number	22,000	535,000
Percentage	8.8%	9.4%

*Income below 200% FPL and not able to afford enough food

3. OLDER ADULTS AND TECHNOLOGY

In this section, we review the current state of knowledge about the adoption and use of digital technologies by older adults. Most of the available data on this topic is national, but we include specific data about Santa Clara County where available.

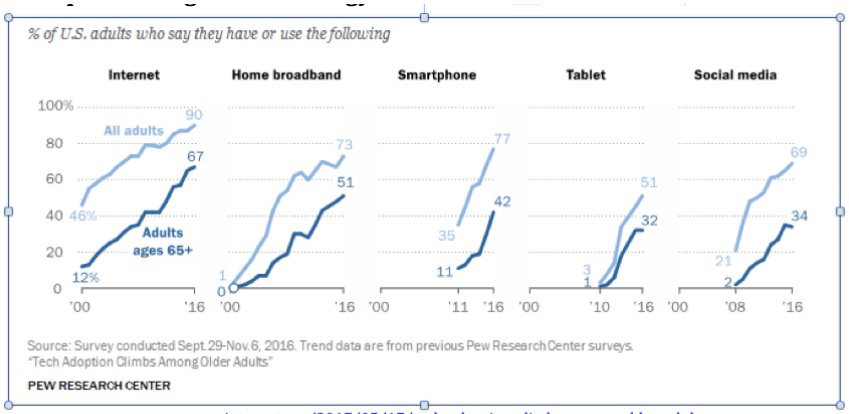
a. Ownership and Use of Digital Technologies by Older Adults

In the past, older adults were largely seen as non-users of digital technology and were often considered to be "technophobic." This has changed over time, as the older population has adopted new technologies such as PCs, tablets and cellphones. However, the rates of adoption and use of technology by older adults have generally lagged behind those of younger people, resulting in a persistent "digital divide" based on age.

Most data on technology ownership and use is national. Perhaps the best source of this data is the Internet & Society project at the Pew Research Center, which conducts research on a variety of topics related to how Americans use technology. Many of their surveys provide data on adoption and use by age. For example, a Pew study published in 2017[13] showed that while usage has increased steadily for a variety of digital technologies – including the internet, home broadband, smartphones, tablets and social media – use of all of these technologies by adults ages 65 and over has consistently trailed behind usage of all adults (see Figure 3.1).

Figure 3.1

Adoption of Digital Technology—All Adults vs Older Adults, 2000-2016



www.pewinternet.org/2017/05/17/tech-adoption-climbs-among-older-adults

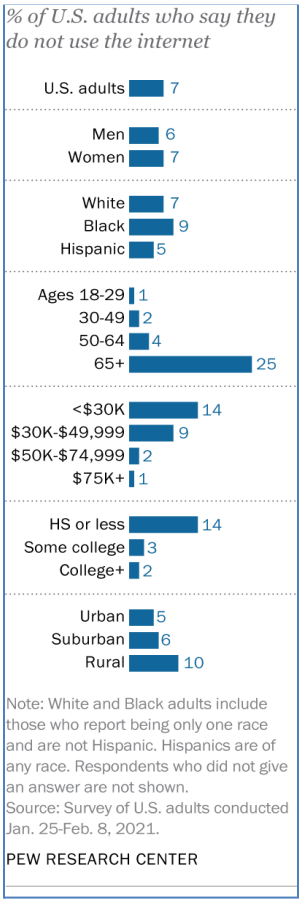
More recent data from Pew shows that this overall trend has continued.[14] In terms of internet use by age, the gap between younger and older Americans has narrowed somewhat but continues to be significant (see Figure 3.2). The percentage of

[13] Anderson M, Perrin A. Tech Adoption Climbs Among Older Adults. Pew Research Center. 2017. www.pewresearch.org/internet/2017/05/17/tech-adoption-climbs-among-older-adults.

[14] Pew Research Center: Internet and Technology. *Internet/Broadband Fact Sheet.* 2019. www.pewresearch.org/internet/fact-sheet/internet-broadband.

Americans ages 18-49 who use the internet is now nearly 100%, and 96% for adults ages 50-64. But of those 65 and over, 25% report not using the internet at all.[15]

Figure 3.2
Who's Not Online?



The disparity in usage is particularly clear when users are asked about their frequency of internet use. While 44% of people under 50, in another just-released Pew study, said that they go online "almost constantly," only 8% of those 65 and over report such frequent usage, a figure that has remained unchanged since Pew started asking this question in 2015.[16]

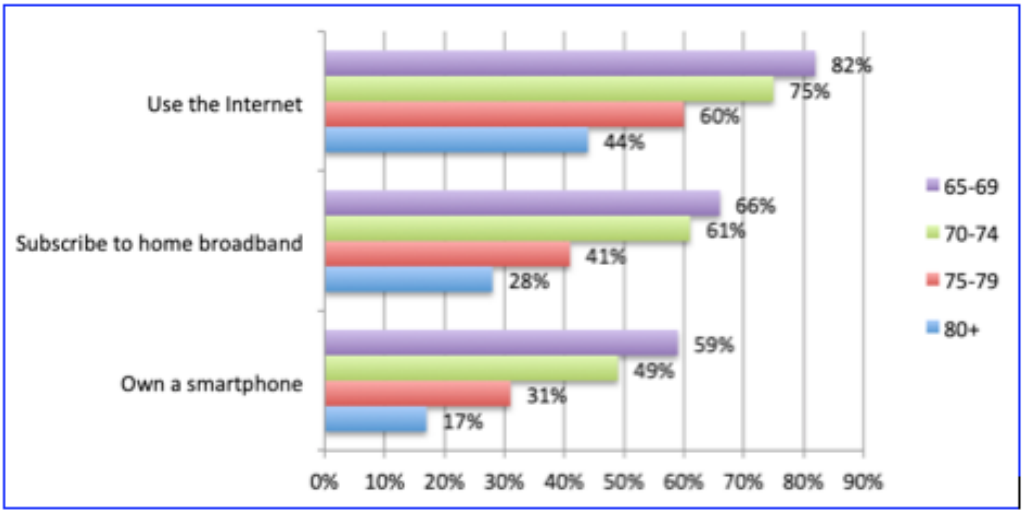
Although most survey research lumps all adults age 65 and older into a single category, a few studies break out this age group into several cohorts and show that

[15] Perrin A, Atske S. 7% of Americans don't use the internet. Who are they? *FactTank*. Pew Research Center. 2021. https://www.pewresearch.org/fact-tank/2021/04/02/7-of-americans-dont-use-the-internet-who-are-they/.

[16] Perrin A, Atske S. About Three-in-Ten Adults Say They Are "Almost Constantly" Online. *FactTank*, Pew Research Center. 2021. https://www.pewresearch.org/fact-tank/2021/03/26/about-three-in-ten-u-s-adults-say-they-are-almost-constantly-online/.

the age gap also exists *within* the older adult population. For example, Pew's 2017 report on tech adoption by older adults (see Figure 3.3) showed that usage of the internet is almost twice as great among those ages 65-69 (82%) as among those 80 and older (44%). The gap is similar for broadband access (66% for 65 to 69-year-olds vs. 28% for those 80+) and is even greater for ownership of a smartphone (59% for 65 to 69-year-olds vs. 17% among those 80+).

Figure 3.3
Use of technologies among older adults

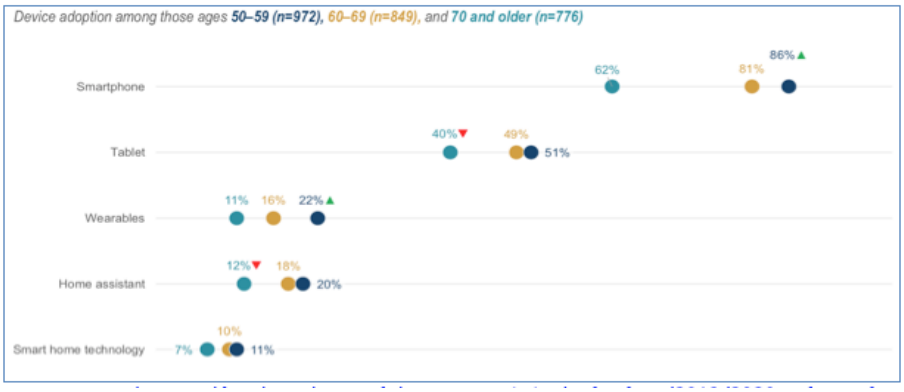


www.pewinternet.org/2017/05/17/tech-adoption-climbs-among-older-adults

A recent survey by AARP[17] regarding tech ownership by device showed a similar pattern of decreased use by age, with adults ages 70 and older lagging behind those in the 50-69 age groups in the adoption of smartphones, tablets and smart watches (see Figure 3.4).

[17] American Association of Retired People (AARP). *2020 Tech and the 50 Plus Survey.* 2019. www.aarp.org/content/dam/aarp/research/surveys_statistics/technology/2019/2020-tech-trends-survey.doi.10.26419-2Fres.00329.001.pdf.

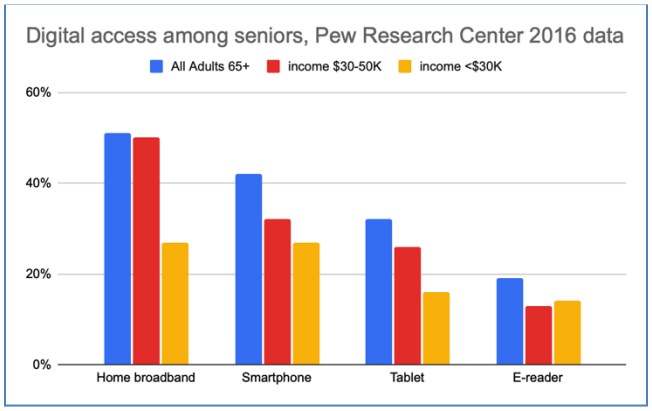
Figure 3.4
Device Ownership among Older Adults



www.aarp.org/content/dam/aarp/research/surveys_statistics/technology/2019/2020-tech-trends-survey.doi.10.26419-2Fres.00329.001.pdf

Usage of digital technology is also strongly correlated with income. A 2017 survey by Pew showed that adults with incomes of $30,000 to $50,000 per year are nearly twice as likely to have home broadband as those with annual incomes under $30,000 (see Figure 3.5).

Figure 3.5
Digital Access Among Seniors by Income

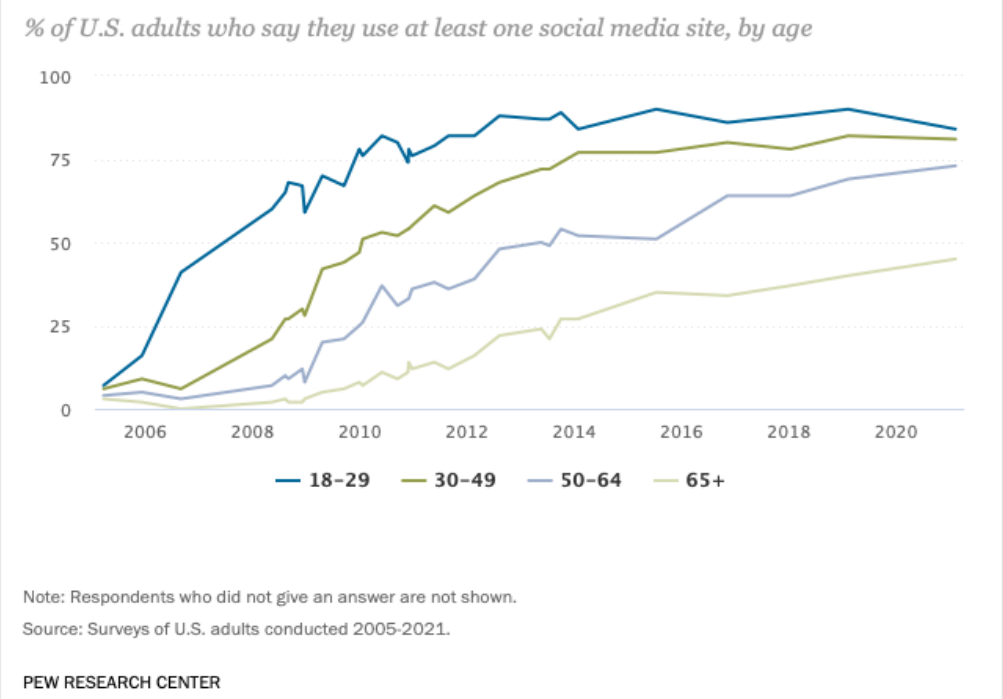


Source: Pew Research Center. *Tech Adoption Climbs Among Older Adults* (2017)
https://www.pewresearch.org/internet/2017/05/17/technology-use-among-seniors/

b. Older Adults' Use of Social Media and Other Communication Applications
Use of internet applications to communicate with friends and family, for banking, shopping, entertainment, telemedicine, and information gathering soared worldwide in 2020. Communicating online with others became a high priority for many in the wake of the pandemic.

But again, the same pattern of differences in adoption by age can be seen in data on the use of social media.[18] As of April 2021, a Pew study found that some 84% of young people 18 to 29 used at least one social media site, compared to 81% of those 30 to 49, 73% of those 50 to 64, and just 45% of those 65 and older.

Figure 3.6
Social Media Use by Age

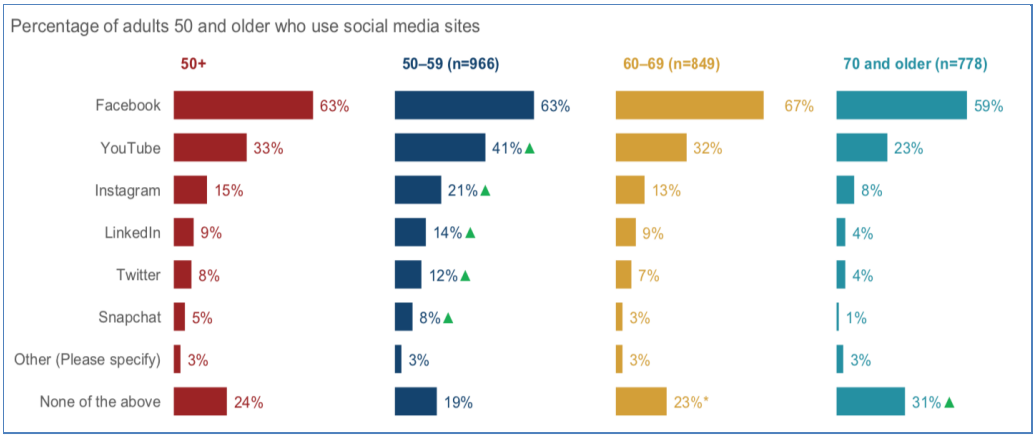


www.pewresearch.org/internet/fact-sheet/social-media

AARP's *Tech and the 50+* report, published in December 2019 before the arrival of the pandemic, found a higher use of social media, or at least Facebook, by older adults. According to this data, Facebook was being used by nearly two-thirds of those in their fifties and sixties, and almost 60% of those ages 70 and above (Figure 3.7).

[18] Pew Research Center: Internet and Technology. *Social Media Fact Sheet*. 2021. www.pewresearch.org/internet/fact-sheet/social-media.

Figure 3.7
Use of Social Media by Older Adults

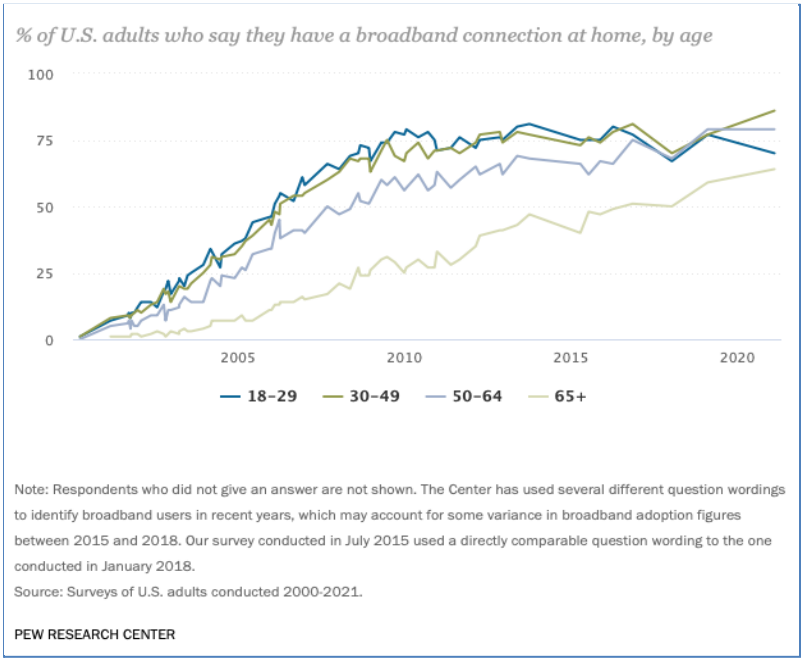


www.aarp.org/content/dam/aarp/research/surveys_statistics/technology/2019/2020-tech-trends-survey.doi.10.26419-2Fres.00329.001.pdf

c. Older Adults' Access to Broadband at Home: National Data

In terms of access to broadband at home, the gap between younger and older Americans has narrowed but still remains. As of 2020, 86% of Americans between 30 and 49 and 79% of those ages 50-64 had access to home broadband, but just 64% of those 65 and over had home broadband (see Figure 3.8).[19]

Figure 3.8
Home Broadband Use by Age

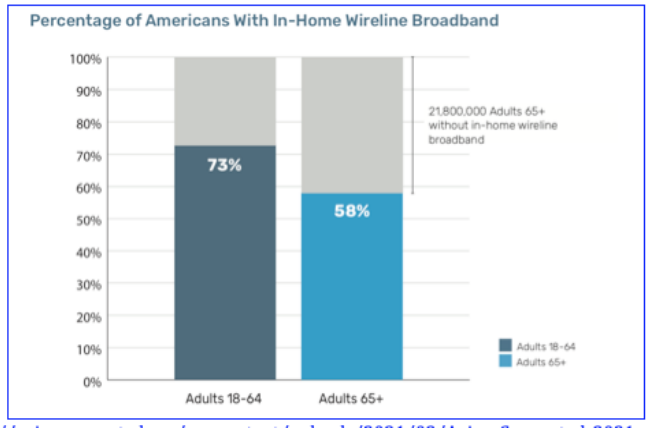


https://www.pewresearch.org/internet/fact-sheet/internet-broadband/

[19] Pew Research Center: Internet and Technology. *Broadband Fact Sheet*. 2021. www.pewresearch.org/internet/fact-sheet/internet-broadband.

A report done for the Aging Connected project[20] also documents the size of the gap in terms of home broadband access (see Figure 3.9). According to this report, 42% of American adults ages 65 and older – a total of 21.8 million people – lack broadband access at home.

Figure 3.9
Percentage of Americans with In-Home Wireline Broadband



https://agingconnected.org/wp-content/uploads/2021/02/Aging-Connected_2021_v5.pdf

d. Broadband Access for Older Adults in California and Santa Clara County
Finally, what do we know about the state of the digital divide in our state and our county?

Data from the 2021 Aging Connected report indicates that 63.6% of Californian's ages 65 and older have access to home broadband, slightly higher than the national figure of 58.1% (Figure 3.10). Also, the gap in broadband access between those under 65 and those over ages 65+ is slightly smaller in California than in the country as a whole (14.8% vs. 15.7%). Still, more than one third of older Californians – 36.4%, or approximately 2.13 million people – currently lack broadband access.

Figure 3.10
Access to Broadband at Home by Age, U.S. and Selected States

	Ages 18-64	**Ages 65+**	**Gap**
United States	73.8%	58.1%	15.7%
California	**78.4%**	**63.6%**	**14.8**
Alaska (smallest gap)	69.4%	63.7%	5.7%
DC (largest gap)	81.0%	56.8%	24.1%

Source: Aging Connected, OATS (Tom Kamber)

[20] Humana Foundation and Older Adults Technology Services (OATS). *Closing the Connectivity Gap for Older Americans.* 2021. https://agingconnected.org/wp-content/uploads/2021/01/Aging-Connected_2021.pdf.

In Santa Clara County, with a total 65+ population of 268,000, assuming that the percentage of older adults in the county who lack home broadband access is the same as in the state, there would be 97,552 older adults in the county without broadband access at home.

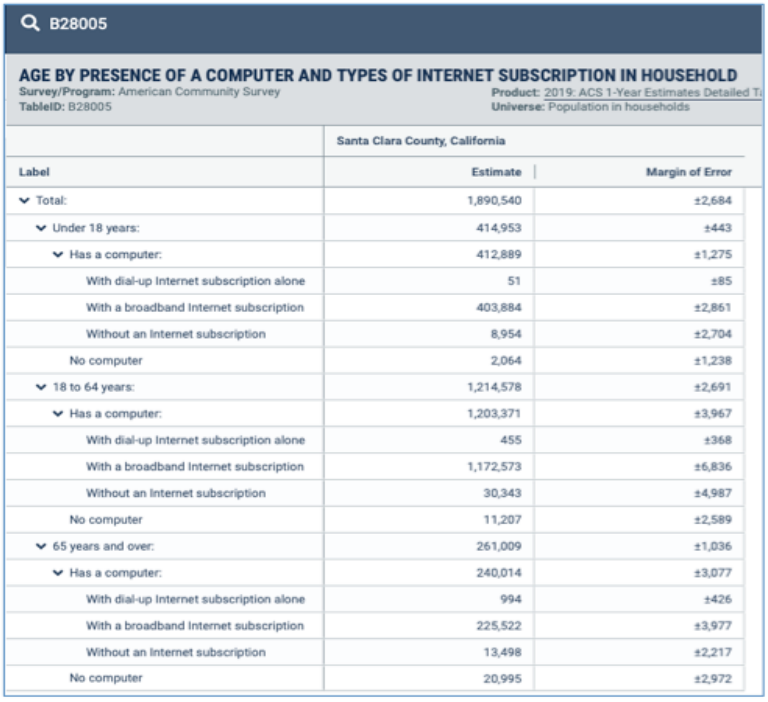
A report just released by the California Emerging Technology Fund found that home broadband adoption is increasing but that more than a quarter of adults 65 and over were unconnected or connected only by a smartphone.[21]

A very different picture of the digital connectivity of seniors in the county comes from data provided by the U.S. Census Bureau's American Community Survey (see Figure 3.11). According to this data, of the county's 261,009 older residents at the time of the survey, 240,014 (92%) reported that they "have a computer," and 225,522 seniors (86.5%) responded that they have a computer "with a broadband internet subscription."[22] These relatively high numbers mean that there would be just 34,493 older residents of the county who do not have internet access at home (i.e., they either have a computer with no broadband subscription or do not have a computer). The fact that these data show that 92% of older adults in Santa Clara County "have a computer" seems somewhat questionable and casts doubt on the accuracy of these figures.

[21] Galperin H. *Statewide Survey on Broadband Adoption 2021: Internet Adoption and the "Digital Divide" in California.* California Emerging Technologies Fund. 2021:7. https://www.cetfund.org/wp-content/uploads/2021/03/Annual_Survey_2021_CETF_USC_Final_Summary_Report_CETF_A.pdf.

[22] U.S. Census Bureau. Table B28005: Age by Presence of a Computer and Types of Internet Subscription in Household. *American Community Survey*. 2019. https://data.census.gov/cedsci/table?q=B28005&g=0500000US06085&tid=ACSDT1Y2019.B28005&hidePreview=false.

Figure 3.11



B28005

AGE BY PRESENCE OF A COMPUTER AND TYPES OF INTERNET SUBSCRIPTION IN HOUSEHOLD

Survey/Program: American Community Survey
TableID: B28005
Product: 2019: ACS 1-Year Estimates Detailed T
Universe: Population in households

	Santa Clara County, California	
Label	**Estimate**	**Margin of Error**
Total:	1,890,540	±2,684
Under 18 years:	414,953	±443
Has a computer:	412,889	±1,275
With dial-up Internet subscription alone	51	±85
With a broadband Internet subscription	403,884	±2,861
Without an Internet subscription	8,954	±2,704
No computer	2,064	±1,238
18 to 64 years:	1,214,578	±2,691
Has a computer:	1,203,371	±3,967
With dial-up Internet subscription alone	455	±368
With a broadband Internet subscription	1,172,573	±6,836
Without an Internet subscription	30,343	±4,987
No computer	11,207	±2,589
65 years and over:	261,009	±1,036
Has a computer:	240,014	±3,077
With dial-up Internet subscription alone	994	±426
With a broadband Internet subscription	225,522	±3,977
Without an Internet subscription	13,498	±2,217
No computer	20,995	±2,972

https://data.census.gov/cedsci/table?q=B28005&g=0500000US06085&tid=ACSDT1Y2019.B28005&hidePreview=false

The large discrepancy between these data sources is an indicator of the lack of good primary research on the state of digital inclusion among Santa Clara County's older residents.

A post-COVID survey was done in 2020 with participants in the county's senior nutrition program (SNP), which is designed to meet the nutritional needs of the county's low-income seniors.[23] Last year, the SNP served 1.4 million meals to 15,384 participants at 37 sites around the county, and, after the beginning of the COVID pandemic, delivered more than 638,000 meals to participants' homes. The survey, which was distributed to SNP participants in early spring 2020, and generated 2,973 responses, found that just one-third of respondents had internet access, while two-thirds did not. If this result can be projected to the entire SNP participant population, it would mean that there are approximately 10,000 seniors – just in this one program – who lack internet access at home.

4. EFFECTS OF LIMITED ACCESS TO TECHNOLOGY

The effects of older adults' limited access to technology are real and growing. Lack of digital access contributes to the social isolation of older people, long a topic of concern, and makes it difficult if not impossible to obtain essential services that are ever more frequently being delivered through digital platforms.

[23] Santa Clara County Social Services Agency. *Senior Nutrition Program Annual Report, 2019-2020.* https://www.sccgov.org/sites/ssa/food-assistance/Documents/SNP_Annual%20Report.pdf.

These issues have become front and center during the COVID-19 pandemic. The difficulties faced by older adults attempting to navigate resources, and by health and service organizations trying to reach them, have made clear that digital access is a necessity and should be prioritized.

a. Loneliness and Social Isolation

A significant health concern for those without technology is increasing loneliness, due to social isolation. Many studies show that the lack of social connection or social disengagement can affect both mental and physical health.

Social isolation increases the likelihood of depression, anxiety, reduced cognition, dementia, heart disease, stroke and premature death.[24] Pre-pandemic, nearly one-fourth of older adults ages 65 and older were considered to be socially isolated.[25] Now, according to a recent study in the *Journal of Applied Gerontology*, social distancing during the pandemic has increased the risk of social isolation and loneliness, with their accompanying negative effects.[26]

Older adults who are tech-savvy and connected, like their younger counterparts, can combat the effects of social isolation by using applications such as FaceTime, Skype or Zoom. But such connections are not available for those without internet access. This lack of connection, especially for those who live alone, can also mean that signs of declining health or cognition that could be seen on a routine video call will go unnoticed.

b. Limited Ability to Access Essential Services

Technology is a lifeline in other ways as well, as seen recently in the use of online media to disseminate important news during the widespread fire evacuations in California and throughout the pandemic. The county's emergency systems rely heavily on technology-based information distribution.

An example of the problem is the difficulty that many older adults have experienced in scheduling COVID vaccines.[27] With most major health systems using patient portals for scheduling vaccinations, some older adults may not have even known when they became eligible. According to the National Poll on Healthy Aging at the

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[24] Center for Disease Control and Prevention. *Loneliness and Social Isolation Linked to Serious Health Conditions.* 2020. https://www.cdc.gov/aging/publications/features/lonely-older-adults.html.
[25] National Academies of Sciences, Engineering, and Medicine, *Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System*. The National Academies Press, 2020. https://doi.org/10.17226/25663.
[26] Gorenko JA, Moran C, Flynn M, Dobson K, Connert C. Social Isolation and Psychological Distress Among Older Adults Related to COVID-19: A Narrative Review of Remotely Delivered Interventions and Recommendations *Journal of Applied Gerontology.* 2021; 40:3-13. https://journals.sagepub.com/doi/full/10.1177/0733464820958550.
[27] Browning K. Seniors Seeking Vaccines Have A Problem: They Can't Use The Internet. *New York Times.* February 28, 2021. www.nytimes.com/2021/02/28/technology/seniors-vaccines-technology.html.

University of Michigan Institute for Healthcare Policy and Innovation, 45% of adults ages 65 to 80, and 42% of all adults ages 50 to 80, said they had not set up an account with their health provider's portal system.[28]

For non-connected older adults, obtaining emergency essentials such as food, medications and doctor's appointments can also be an ongoing challenge, especially for those who have hearing or vision loss, cognitive decline, limited mobility, or a language barrier. As healthcare delivery systems rely more on digital health care and telehealth, continued limitations and obstacles surrounding the lack of digital access are being reported.[29]

Lack of digital access can also hamstring older adults who need or want to continue working. During the pandemic, older adults were the least likely of any age group to have jobs that could be done remotely.[30] Post-pandemic, telework is predicted to continue[31], but those who lack digital access or literacy do not have this option. Even when it is safe for older workers to seek jobs that do not involve remote work, digital access is increasingly necessary just to fill out a job application. Digital exclusion is one more barrier for older adults, who already face ageism in employment, and may force them into the ranks of the long-term unemployed.[32]

5. BARRIERS TO TECHNOLOGY ADOPTION

For all the benefits that technology can provide, addressing the digital divide between younger and older people still requires an understanding of whether older people in fact want the problem addressed, or even consider it a "problem" in the first place. Although many older people are eager to learn new technologies and tools, researchers and practitioners both report resistance by some members of this population. What are those barriers, and can they be overcome?

a. Why Do I Need It?

Perhaps the most fundamental issue that new technology raises for older adults is whether and how the newest gadget, or even now-standard tools like email, will improve their lives. On that question older people are more likely to make what

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[28] Seegert L. Lack of online medical accounts for seniors could affect COVID vaccination scheduling. Association of Health Care Journalists. 2021. https://healthjournalism.org/blog/2021/02/poll-lack-of-online-medical-accounts-for-seniors-could-affect-COVID-vaccination-scheduling.

[29] Du Sault L. Coronavirus: The Bay Area seniors who are left behind by a telehealth tech divide. *San Jose Mercury News.* July 20, 2020. https://www.mercurynews.com/2020/07/20/coronavirus-the-seniors-who-are-left-behind-by-a-telehealth-tech-divide/.

[30] Gould E. Older workers can't work from home and are at a higher risk for COVID-19. Economic Policy Institute. 2020. https://www.epi.org/blog/older-workers-cant-work-from-home-and-at-high-risk-for-COVID-19/.

[31] McKinsey Global Institute. *The Future of Work After COVID-19.* 2021. https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-after-COVID-19.

[32] Farrell C. How the Coronavirus Punishes Many Older Workers. *Next Avenue*. 2020. https://www.nextavenue.org/coronavirus-punishes-older-workers/

researchers call a value-based choice: "Older adults make deliberate decisions to not use technologies when they perceive the technology as replacing or eroding something of value to them."[33]

Many older adults still view some tasks as better done offline. For example, some prefer to do their shopping or banking offline for social reasons, as well as to support local business.

That said, older adults will learn a new tech skill when they see a reason for it—a use that has personal relevance.[34] Tech tutors in the field report successes in responding to a user's specific requests, such as a woman who wanted to learn how to sell her knitting on Etsy, and a traveler asking how to post photos while abroad.[35]

Laura Carstensen, Professor of Psychology and Founding Director of the Stanford Center on Longevity, suggests introducing older people to specific uses of technology that they may not be aware of, e.g., explaining Zoom as a way to have a "window" into the life of a grandchild or introducing an app as a way to get the latest news on crises like the pandemic. Such approaches could be particularly valuable if combined with a social setting, e.g., introducing tablets to a retirement community where residents can help each other to learn in a social environment.

b. Lack of Confidence

One distinctive challenge that older adults face is their own lack of confidence in their ability to learn about and properly use technology. A 2017 Pew Research Center survey found that only 26% of internet users ages 65 and up said they felt "very confident" when using computers, smartphones or other electronics to do the things they need to do online. A significant number described themselves as "only a little" (23%) or "not at all" (11%) confident in their abilities to use electronic devices as needed.[36]

The lack of confidence is exacerbated by stereotypes about older people and technology. This element of today's ageism has the same negative effect as other "isms" and can itself undermine older adults' confidence. "[T]he media rhetoric surrounding older adults and technology affects how older adults perceive their own digital literacy and may itself be a barrier to digital technology use by lowering their confidence and depleting their willingness to further develop their digital skills."[37]

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[33] Knowles B, Hansen V L. The Wisdom of Older Technology (Non)Users. *Communications of the ACM.* 2018*;* 61:76. https://dl.acm.org/doi/10.1145/3179995.

[34] Vroman KG, Arthanat S, Lysack C. Who over 65 is online? Older adults' dispositions toward information communication technology. *Computers in Human Behavior.* 2015; 43:156-166. https://www.sciencedirect.com/science/article/abs/pii/S074756321400541X.

[35] Nash S. Older Adults and Technology: Moving Beyond the Stereotypes. Stanford Center on Longevity. 2019. https://longevity.stanford.edu/older-adults-and-technology-moving-beyond-the-stereotypes/.

[36] Anderson M, Perrin A. Tech adoption climbs among older adults. Pew Research Center. 2017. https://www.pewresearch.org/internet/2017/05/17/tech-adoption-climbs-among-older-adults/

[37] Schreuers, K, Quan-Haase A, Martin K. Problematizing the digital literacy paradox in the context of older adults' ICT use: Aging, media discourse, and self-determination. *Canadian Journal of*

Overcoming these barriers requires patience and practice. Whether someone is just learning how to enter a user name and password to get online or is a more sophisticated user, "a well-written set of steps are crucial" to remind older people how to use a new skill online.[38]

The ability to learn and practice new skills is also key; ideally, older adults would attend a weekly class and then have their own tablet or laptop to practice on during the week. When older adults can review what was done in class and practice with multimedia materials – a "blended workshop" approach – they do better at retaining the new skill.[39]

Research and experience have shown that older adults may learn technology best from their peers, who are better able to appreciate the challenges of learning a new skill.[40] The many intergenerational tech tutoring efforts aimed at helping older adults are often successful as well, as seen in the documentary *Cyberseniors*[41] and similar community service projects. Fortunately, several projects are underway to provide this kind of support to older adults in Santa Clara County (see Section 7), although their reach is currently limited.

c. Privacy/Security Concerns

Another factor related to older adults' lack of confidence is a worry about privacy and security when using digital tools. These concerns may cause "a hesitancy in adopting a technology or submitting personal data to a digital platform."[42] Such hesitancy can be disabling when, for example, some personal data must be entered online in order to make a vaccine appointment or to order groceries.

The answer to these concerns, again, is digital literacy education and practice, to increase the feeling of control and lessen anxiety about digital tools. User "safety nets" can be strengthened, particularly with respect to financial transactions, so that older adults in particular do not have to fear losing their life's savings. The more

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Communication. 2017; 42: np. https://ir.lib.uwo.ca/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1141&context=fimspub.

[38] Zajicek M. Web 2.0: Hype or happiness?, *Proceedings of the 2007 International Cross-Disciplinary Conference on Web Accessibility.* ACM Press. 2007; 35-39. https://dl.acm.org/doi/10.1145/1243441.1243453.

[39] Martínez-Alcalá C, Rosales-Lagard A, Alonso-Lavernia M, et al. Digital Inclusion in Older Adults: A Comparison Between Face-to-Face and Blended Digital Literacy Workshops. *Frontiers in ICT.* 2018*;* 5:np. www.frontiersin.org/articles/10.3389/fict.2018.00021/full

[40] Adler R. Closing the Digital Divide. *CSA Journal.* (Society of Certified Senior Advisors)*.* 2017.

[41] Cassaday M. *Cyberseniors* [documentary]. 2014. https://pluto.tv/on-demand/movies/cyber-seniors-2014-1-1?utm_medium=textsearch&utm_source=google.

[42] Wang S, Bolling K, Mao W, et al., Technology to Support Aging in Place: Older Adults' Perspectives. *Healthcare.* 2019; 7:60. https://doi.org/10.3390/healthcare7020060.

older people understand how a particular tool works, the more comfortable they will be using it.[43]

d. Product Design

Digital tools must be appropriately designed to meet the needs of older adults. Fine-motor disabilities or other mobility issues, low vision, hearing loss, or cognitive issues can make them extremely difficult to use. Cost can also be an issue.

Tablets may be simpler for older adults to use than computers, provided that sufficient instructions are given.[44] As discussed below, many programs directed at crossing the digital divide for older adults are employing tablets, some of them modified especially for this population.

One option that has gained currency in some older adult communities is the use of voice-activated personal assistants, *e.g*., Amazon's Alexa. These devices are particularly useful for those with visual impairments.[45] Google has recently provided over 1300 of its "Google Assistant" devices to older adults in Santa Clara County, to be distributed by Sourcewise, the county's Area Agency on Aging.

e. Limited Access to Affordable Broadband Service

A final barrier to adoption is the cost of broadband internet services in Santa Clara County.[46]

Of course, broadband internet services are generally available; as of this writing, internet service providers (ISPs) claim 95% or greater availability in the county, including even in the most rural areas.[47] Smartphones have also played an important role in providing access to the internet. A Pew Internet & Technology study found that in the U.S. overall in 2016, 51% of people 65+ had home broadband, and another 16% had internet access (presumably through a smartphone).[48] Older adults, too, use smartphones to connect: a similar study done three years later showed 12% of adults 65+ who used the internet in the U.S. relied on their smartphones exclusively

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[43] Knowles B, Hansen V L. The Wisdom of Older Technology (Non)Users. *Communications of the ACM.* 2018; 61:76. https://dl.acm.org/doi/10.1145/3179995.

[44] Vaportzis E, Clausen M G, Gow A J. Older Adults Perceptions of Technology and Barriers to Interacting with Tablet Computers: A Focus Group Study. *Frontiers in Psychology.* 2017; 8:1687. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5649151/.

[45] Adler R. A New Kind of Companion. *CSA Journal* 2020; 78:10-14. https://cdn.ymaws.com/www.csa.us/resource/resmgr/docs/journals/journal_78/Adler.pdf.

[46] The Federal Communications Commission (FCC) currently defines broadband access as a download speed of 25 megabits per second (Mbps) and an upload speed of 3 Mbps. Broadband includes several high-speed transmission technologies, such as fiber optics, cable, wireless, DSL and satellite. Federal Communications Commission, *Types of Broadband Connection*. 2014. https://www.fcc.gov/general/types-broadband-connections.

[47] https://www.highspeedinternet.com (data searched March 1, 2021).

[48] Anderson M, Perrin A. Tech Adoption Climbs Among Older Adults. Pew Research Center. 2017. https://www.pewresearch.org/internet/2017/05/17/tech-adoption-climbs-among-older-adults/

for access.[49] It is reasonable to assume that access to the internet, either by home broadband service or via a cellular phone network, would be at least as available in Silicon Valley.

But *affordable access* is another matter entirely. For older adults, income level is a major determining factor in their internet access. That same study of 2016 data showed that just 27% of low-income seniors in the U.S. overall had either home broadband or a smartphone.[50]

To bring this issue closer to home, an estimated 8% of adults 65 and older in Santa Clara County have incomes below the federal poverty line.[51] Using the more realistic California Elder Economic Security Standard, the estimates are that as many as 48% do not have income to meet basic needs.[52] Income disparities in Santa Clara County are steep, especially for older adults. As a result, despite the seeming abundance of technology, a great many older adults still cannot afford to be connected. In a 2020 survey of participants in the Senior Nutrition Program that serves low-income older adults in the county, only one out of three said that they had internet access, meaning that fully two out of three respondents lacked the ability to go online.[53]

As discussed below, some ISPs have discount plans to make access somewhat more affordable, and various initiatives are in place to give low-income older people access to smartphones. However, there is need, and room, for more initiatives in these areas.

6. PROMOTING DIGITAL INCLUSION: INEXPENSIVE INTERNET ACCESS ALTERNATIVES

Home broadband via a wired connection is usually the easiest way to access the internet but it is not the only option. In this section we discuss multiple options for providing inexpensive broadband access.

a. Discount Internet Access Plans

Some Internet Service Providers (ISPs) in Santa Clara County offer discounted broadband access plans for eligible households. These include *Comcast Internet Essentials*, which offers internet service with no contract for eligible households for $9.95 per month, along with an option to purchase a low-cost computer[54]; *AT&T -*

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[49] Pew Research Center: Internet and Technology. *Broadband Fact Sheet*. 2021. www.pewresearch.org/internet/fact-sheet/internet-broadband

[50] Anderson M, Perrin A. Tech Adoption Climbs Among Older Adults. Pew Research Center. 2017. https://www.pewresearch.org/internet/2017/05/17/tech-adoption-climbs-among-older-adults/

[51] U.S. Census Bureau. *American Community Survey 1-year estimates [Santa Clara County, CA].* 2019. http://censusreporter.org/profiles/05000US06085-santa-clara-county-ca/.

[52] Insight Center for Community Economic Development. *Elders Who Can't Make Ends Meet in Santa Clara County.* 2011. https://insightcced.org/old-site/uploads/eesi/2011_county_pages/Santa%20Clara/santa_clara_es.pdf.

[53] Santa Clara County Social Services Agency. *Senior Nutrition Program Annual Report, 2019-2020.* https://www.sccgov.org/sites/ssa/food-assistance/Documents/SNP_Annual%20Report.pdf

[54] Comcast. *Affordable Internet at Home for Eligible Households.* 2021. https://www.internetessentials.com.

Access from AT&T, priced at $10 per month for eligible households[55]; and *Human I-T*, a non-profit organization that offers low-cost internet to qualified applicants.[56]

In May 2021, a new $3.2 billion federal initiative, the Emergency Broadband Benefit (EFF) program, was launched to help low-income Americans get access to high-speed broadband. The program offers a discount of up to $50 per month for broadband service and a one-time discount of up to $100 for a laptop or desktop computer or a tablet "purchased through a participating provider." The benefit is available to Americans whose income is below 135% of the federal poverty level, who qualify for the Lifeline program, or who participate in federal programs such as Medicaid, SNAP and SSI benefits. The EBB is a limited-time program that will end once the funds have been exhausted. More information about the program is available at www.aarp.org/EBB or at 1-800-891-7425.

b. Personal Mobile Hotspots

Another way to get online is through a mobile hotspot. A mobile hotspot is an ad hoc wireless access point that is created by a dedicated hardware device or a smartphone with a feature that shares the phone's cellular data to enable other nearby devices (such as a computer or a tablet) to connect to the internet.[57]

Hotspots are supported by major carriers like AT&T, Verizon, T-Mobile/Sprint, Google Fi and others. Consumers with unlimited data plans can use their smartphones to allow other devices to connect to the internet. It is also possible to purchase a separate hotspot device and sign up for a data plan with an ISP, although these plans are priced according to the amount of data used.[58]

c. Public Wi-Fi

Free Wi-Fi is available at many restaurants and coffee shops (including Starbucks and Peet's) and at other public locations. Almost all U.S. airports have free Wi-Fi hotspots. Some communities have developed government-sponsored programs to offer free Wi-Fi in parks and other locations. The City of San Jose has a program to offer "wickedly fast Wi-Fi" in the downtown core, at the Convention Center and at the San Jose Airport.[59] Mobile apps are available to help users find hotspots near their location.

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[55] AT&T. *Stay Connected with Affordable Internet.* 2021, www.att.com/internet/access/.
[56] Human I-T. *Request Low-Cost Internet.* 2021. www.human-i-t.org/request-internet.
[57] TechTarget. *Wireless Access Point Definition.* 2021. https://searchmobilecomputing.techtarget.com/definition/access-point.
[58] For more information on using mobile hotspots, visit How to use a smartphone as a mobile hotspot and Mobile hotspot FAQs. T-Mobile offers a discounted unlimited data plan for people ages 55 and up. Other plans and devices are available from AT&T, Xfinity and Verizon.
[59] Wickedly Fast Wi-Fi Network, City of San Jose, www.sanjoseca.gov/your-government/departments/information-technology/wickedly-fast-wi-fi.

As discussed in the next section, many local libraries have expanded their public Wi-Fi areas and are also lending out mobile hotspots in order to promote digital inclusion.

7. LOCAL DIGITAL INCLUSION PROJECTS: SANTA CLARA COUNTY AND BAY AREA

Some pilot programs to increase digital inclusion for older adults are already underway in Santa Clara County and the larger Bay Area. In this section we summarize those county and city projects and initiatives.

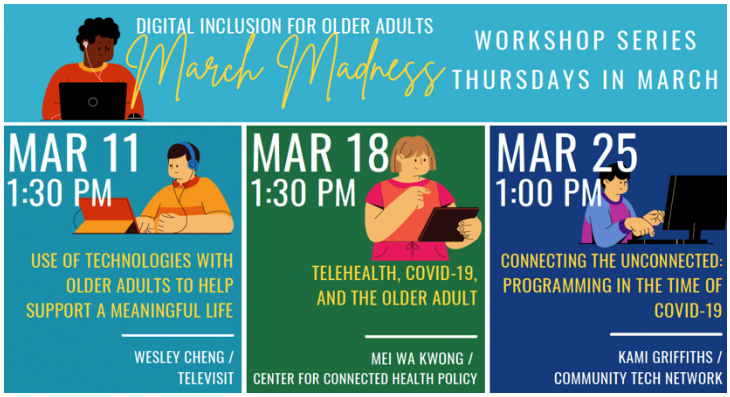
a. Santa Clara County

i. Age-Friendly Commitment to Digital Inclusion

In 2017, Santa Clara County became the first county in the United States to have all of its cities and the county join the World Health Organization's Global Network of Age-Friendly Cities. A community's Age-Friendly commitment is measured in part through progress made towards Social Inclusion and Communication/Information access for all ages. Collectively, the county's 15 cities have formed Age-Friendly Silicon Valley, with support from the County Department of Aging and Adult Services' Seniors Agenda. A key goal of the county's current Age-Friendly Three Year Action Plan is to "ensure that older adults are incorporated into county digital inclusion policies."

ii. Santa Clara County Digital Inclusion Workgroup

The Digital Inclusion Workgroup was created in response to the referral by the Board of Supervisors on June 23, 2020. This group, which includes diverse representatives from government agencies, senior centers, libraries, social service providers and academia, has been meeting regularly under the auspices of the County Department of Aging and Adult Services to research and make recommendations regarding digital inclusion for older adults. This Report is one result of those efforts. Another result is a series of free community webinars offered by DAAS in March and April 2021 on various aspects of digital inclusion.



iii. Santa Clara County Library District

Santa Clara Public Libraries are providing free Wi-Fi in the parking lots of the Campbell, Cupertino, Gilroy, Los Altos, Milpitas, Morgan Hill and Saratoga Libraries. The Wi-Fi is available 24/7 for patrons to access from their cars and/or outdoors where they are able to social distance. In addition, the Libraries have installed Wi-Fi on both Bookmobiles to provide Wi-Fi access to patrons when the Bookmobile is out in the community.

iv. Sourcewise (www.mysourcewise.com)

Sourcewise, the Area Agency on Aging for Santa Clara County, has made multiple grants to promote digital inclusion for older adults. In early 2021, with funding from the CARES Act, Sourcewise announced three grants to local agencies under the title of *COVID-19 Older Adult Recreation & Connectivity Projects*:

- ***Avenidas*** is providing technology training through Senior Planet @Avenidas for adults 60+ who are members of the Chinese and Vietnamese communities throughout Santa Clara County, in partnership with Asian American for Community Involvement (AACI). Avenidas identified the target population as disproportionately impacted by COVID-19 and lacking the resources to effectively learn and navigate technology during the pandemic.

- ***Catholic Charities:*** is providing virtual and in-person training to eastside San Jose adult residents 60 years and older in the geographic region surrounding Eastside Neighborhood Center (ENC), including zip codes 95116, 95111, 95122, and 95113. These areas are historically identified as having the greatest social and economic need as outlined by the Older Americans Act. Many residents of the geographic region surrounding ENC have been disproportionately impacted by COVID-19 and lack the skills to navigate or utilize technological devices or obtain access to services.

- ***City of San Jose, Parks, Recreation and Neighborhood Services (PRNS):*** PRNS will offer its program to all senior/community centers in San José but will target adults 60+ located in ZIP codes 95116, 95122, 95111, 95112 who have been disproportionately impacted by COVID-19 and known to experience cultural, social, and geographic isolation. PRNS will provide two remote programming options including: (1) Digital Literacy and Skill-building Classes, (2) Virtual Health and Wellness Classes. There will also be scheduled monthly health and wellness meetings with program participants to measure individual needs and access. Participants will be provided with laptops to access the program through a check-in/out process.

In February 2021, Sourcewise received an allocation of Google Home Smart Speakers from the California Department of Aging (CDA) to be distributed to eligible older adults, caregivers and adults with disabilities participating in Sourcewise-funded programs. In partnership with Sourcewise, these devices are being distributed by local community-based organizations including Asian Americans for Community Involvement (AACI), African American Community Services Agency, Catholic Charities, the City of San Jose, Community Services Agency of Mountain View and Los Altos, Latinas Contra Cancer, and Live Oak Adult Day Services.

Sourcewise is also expecting to receive from CDA an allocation of computer tablets bundled with internet access which will also be distributed to older adults within the county.

v. Televisit (www.televisit.org)

Televisit is a Palo Alto-based not-for-profit organization that connects older adults to each other through virtual interactive group activities and educational and entertainment programs. The Televisit model relies on an internet-connected, simplified tablet that requires only a minimal amount of training to use successfully.

b. San José

i. San José Digital Inclusion Partnership (www.sjdigitalinclusion.org)

San José's Digital Inclusion Partnership aims to provide 50,000 San José households with universal device access, connectivity, and appropriate digital skills proficiency over the next 10 years. The Fund made its first round of grants in 2019, disbursing $1,000,000 to San José organizations working to close the digital divide.

ii. San José Public Library (www.sjpl.org/hotspot)

Under SJ Access, the San Jose Public Library's (SJPL) hotspots initiative, SJPL has lent out over 800 mobile hotspots. SJPL estimates that 18% of the hotspots have been borrowed by residents aged 65+.

iii. San José Department of Parks, Recreation and Neighborhood Services (PRNS)

PRNS, through its Older Adults Digital Engagement Project, is preparing to distribute up to 100 laptops or tablets to community centers in high-need areas to be loaned out to older adults and youth. A 5-6 week program in digital literacy and skill building is a part of this effort.

The PRNS Digital Inclusion Team also has an ongoing program to help low-income families enroll in affordable internet service.

c. Sunnyvale

i. Sunnyvale Public Library

The Sunnyvale Public Library offers an "Internet on the Go Mobile Hotspot Kit" that includes an Alcatel Linkzone Mobile Hotspot and accessories. The kit can be checked out for three weeks and renewed three times if there are no holds placed on the item.

ii. Sunnyvale Department of Library and Recreation Services (DLRS)

DLRS has distributed 20 tablets to older adults in Morgan Hill and Sunnyvale and has provided another 10 tablets for use by a community center in San Jose.

d. Milpitas

The Milpitas Senior Center is distributing 55 Chromebooks to lower-income older adults. Participants are given one-on-one in-person tutoring, followed by regular check-ins to provide additional help.

e. San Francisco County

i. #SF Wi-Fi

The City and County of San Francisco provide free Wi-Fi along Market Street and at 33 public parks and recreation centers throughout the city.

ii. SF Tech Council (www.sftechcouncil.org/about/)

The SF Tech Council brings together leaders from the technology and business communities, city agencies, community-based organizations, philanthropy, academia, and healthcare with the goal of improving digital access for older adults and people with disabilities.

iii. Community Tech Network

(www.communitytechnetwork.org/homeconnect/)

In response to the COVID-19 pandemic, Community Tech Network created its Home Connect Program to address the needs of isolated seniors sheltering in place. Through this program, CTN is providing devices, internet and virtual training to older adults in the San Francisco Bay Area and Austin, Texas.

iv. A New Vista Community Services (www.anewvistacs.org)

A New Vista is a nonprofit organization with the goal of improving social engagement for older adults. The organization offers free tech classes and virtual support.

v. Little Brothers (http://littlebrotherssf.org/tech-allies/)

Pre-pandemic, Little Brothers Friends of the Elderly (LBFE) program provided a free in-home 8-week tablet training to older adults. LBFE recently launched its Tech Allies 2.0 program to collect used tablets and distribute them to older

adults seeking to use telehealth services and connect socially through videoconferencing.

f. San Mateo County

As part of its Digital Inclusion Initiative, San Mateo County has expanded Wi-Fi connectivity to 13 new outdoor sites and the outdoor spaces around 12 county libraries. Although most of these sites are directed at providing connectivity for K-12 students, some community and senior centers now offer outdoor Wi-F hotspots.

g. Solano County

Choice in Aging (https://choiceinaging.org)

Choice in Aging, a community-based nonprofit, has piloted a program to purchase Android tablets, preload them with Zoom, and distribute them to isolated seniors in low-income housing complexes.

8. STATEWIDE DIGITAL INCLUSION INITIATIVES

In this section we describe various initiatives underway at the State level.

a. California Master Plan for Aging (https://mpa.aging.ca.gov)

The California Master Plan for Aging (MPA) includes three initiatives for 2021-22 to bridge the digital divide for older adults and meet one of the MPA's key goals of "*Inclusion and Equity, Not Isolation":*

81. *Execute the State Broadband Council's new Strategic Plan, including older adults.*
82. *Seek private donations and use existing funds to distribute personal technology devices to OAA program participants.*
83. *Develop plan to launch digital literacy support for older adults and for providers.*

b. California Department of Aging's Digital Divide Initiative
(www.aging.ca.gov/COVID19/Digital_Divide)

The California Department of Aging (CDA) is working with the state's Area Agencies on Aging, the California Department of Technology, and other stakeholders on strategies to bridge the digital divide and address social isolation for older Californians, people with disabilities, and caregivers. The CDA has also partnered with the University of Southern California's Graduate School of Gerontology to develop tools and evaluate the effectiveness of digital devices in reducing feelings of loneliness and isolation for device recipients.

The CDA has a project underway to use federal CARES Act funding to purchase and provide support for 4,000 tablets with data plans and dedicated technical assistance for low-income older adults who live alone. In addition, CDA's Google Home Smart Speaker Project will distribute 8500 Google devices to eligible people over 60 or with disabilities or their caregivers, using an equity lens to prioritize distribution. Local

coordination of these programs will be handled by the state's network of Area Agencies on Aging.

c. California Broadband Council (https://broadbandcouncil.ca.gov)
The California Broadband Council was established in 2010 to promote broadband deployment in unserved and underserved areas of the state. The 2020 Broadband Action Plan calls for an analysis of "*the needs of people 60 and older for access to affordable, reliable, high-speed broadband, and identify programmatic and partnership opportunities to meet these needs.*"

d. California Emerging Technology Fund (www.cetfund.org)
The California Emerging Technology Fund is a non-profit organization that provides statewide leadership to close the digital divide by accelerating the deployment and adoption of broadband to unserved and underserved communities and populations in California. The Fund was established in 2005 by the California Public Utilities Commission, which required AT&T and Verizon, as a condition of approving merger requests, to contribute a total of $60 million "for the purpose of achieving ubiquitous access to broadband and advanced services in California, particularly in underserved communities, through the use of emerging technologies."

9. NATIONWIDE DIGITAL INCLUSION INITIATIVES
Here we highlight a few of the multiple initiatives around the country.

a. Aging Connected - OATS and Humana (https://agingconnected.org)
As a result of the pandemic, Older Adults Technology Services (OATS) and the Humana Foundation are partnering to build Aging Connected, a national movement that brings together telecommunications companies, nonprofit service providers, and public sector agencies to get more seniors online and expand access to affordable broadband internet. By connecting with affordable, underutilized internet offerings in their area, older Americans will be able to better participate in basic life activities—from shopping and communicating with loved ones, to managing personal health and finances.

b. AARP, OATS and Senior Planet
Senior Planet is a nonprofit organization that specializes in teaching technology skills to older adults. Senior Planet and its parent organization, OATS have joined with AARP to offer free technology courses to even more older adults nationwide. OATS will continue to offer its programs independently. AARP will support OATS in expanding its offerings and making them known to a wider audience through AARP's new Virtual Community Center.

c. National Digital Inclusion Alliance (www.digitalinclusion.org)
NDIA is a unified voice for home and public broadband access, personal devices, and technology training and support. NDIA'S goal is to work collaboratively to craft, identify and disseminate financial and operational resources for digital inclusion programs while serving as a bridge to policymakers and the general public.

10. OTHER PILOT PROGRAMS AROUND THE COUNTRY

Other programs around the country also provide models for how to connect older people and help them learn digital tools. Some examples are described below.

a. Connected New York City Housing Authority

In 2020, the New York City's Mayor's Office and New York City Housing Authority (NYCHA) partnered with T-Mobile, LG Electronics USA, and OATS to provide 10,000 older residents of the city's public housing with tablets along with free internet connections and training. In partnership with the NYC Department for the Aging, Older Adult Technology Services (OATS) assisted tablet recipients to set up and learn how to use their devices to access free online resources and engage with friends and family. OATS is also offering ongoing free support through a multilingual hotline, training courses, and daily programs to help participating seniors make the most of their new devices.

b. Telehealth Access for Seniors - (www.telehealthforseniors.org)

In March 2020, a group of college and high school students formed Telehealth Access for Seniors, a nonprofit that has distributed several thousand repurposed devices through doctor's offices and clinics, including Veteran's Affairs hospitals, in 26 states. The devices come with instructions in five languages and free tech support from volunteers. The volunteers have also helped older adults expand their use of the devices to order groceries and use Zoom and FaceTime. Older adults needing online access are identified by their medical providers, overcoming the hurdle of how to find people who are not online.

c. Lighthouse for Older Adults

(https://citris-uc.org/research/project/lighthouse-for-older-adults/)
Lighthouse for Older Adults is a public-private partnership to support low-income older adults living in affordable housing communities by providing access to internet and telehealth services. Working with the Center for Information Technology Research in the Interest of Society and the Banatao Institute (CITRIS) and University of California researchers, Lighthouse will pilot programs introducing internet and telehealth technology and provide peer-led digital literacy trainings in two affordable housing communities in Northern and Southern California, with the goal of applying lessons learned and replicating the program statewide and nationally.

d. Cyber-Seniors (https://cyberseniors.org)

Cyber-Seniors' mission is to bridge the digital divide and connect generations through the development and dissemination of resources that enable community organizations to provide tech-training for older people, using an intergenerational, youth volunteer model. During the pandemic Cyber-Seniors has expanded its online offerings to include exercise and tech classes, webinars and other options.

e. Oasis (www.oasisnet.org)
Oasis is a non-profit educational organization that operates in over 250 communities, and pre-pandemic reached over 50,000 adults. Recently Oasis launched its Oasis Everywhere program, which offers free or reasonably priced classes on technology, history and other subjects to older adults around the county.

11. CONCLUSION AND RECOMMENDATIONS

Although digital inclusion for older adults is receiving increased attention both regionally and nationally, much remains to be done. Additional data on the extent of digital divide for older adults in the County and the geographic areas most in need of help is critical, as is the sharing of information and a coordinated effort to address the digital divide faced by older people. To that end, the Digital Inclusion Workgroup has set the following priorities for 2021-22:

- Support a pilot project, possibly with Senior Nutrition Program participants, to enable up to 2,000 older, low-income residents of SCC to get online;
- Organize a Digital Inclusion Summit meeting to highlight needs and existing responses;
- Offer additional webinars and/or in-person events to share best practices and success stories; and
- Continue to coordinate activities of multiple groups and agencies working to overcome the digital divide.

We hope that these efforts will lead to additional funding sources and public/private partnerships.

We also recommend that the County Board of Supervisors adopt the following set of specific proposals in order to move forward quickly:

- **Proposal 1: The County will provide up to $1.5 million in funding for a digital inclusion program serving at least 2,000 Santa Clara County older adults.**
- **Proposal 2: In all budget items or RFPs, the County will calculate the cost of any digital inclusion program for older adults at $750 per person, including device, broadband, literacy training, and tech support.**
- **Proposal 3: For any funded digital adoption program for older adults, the County will consider justice, equity, diversity, inclusion and language needs when expanding digital inclusion options.**
- **Proposal 4: The County will fund a second full-time employee for the Seniors' Agenda network to support the ongoing work of this working group.**