



COMMUNITY NEEDS ASSESSMENT

Digital Equity: Access, Barriers and Usage Patterns Among Food Insecure Hartford Residents

Prepared by Urban Alliance

URBANALLIANCE

About Urban Alliance
Urban Alliance (UA) is a collective impact organization located in East Hartford, Connecticut. Our mission is to create opportunities for people to achieve lasting change in their lives through the collaborative work of churches and organizations in our local community. Learn more at www.urbanalliance.com.

The *Community Needs Assessment: Digital Equity: Access, Barriers and Usage Patterns Among Food Insecure Hartford Residents* is the final report derived from data collected from residents at food distribution sites in Hartford, CT.

Prepared by:
Urban Alliance, Inc.
62 Village Street
East Hartford, CT 06108
www.urbanalliance.com

Principal Investigators:

Jessica Sanderson, Ph.D., LMFT
Associate Executive Director
Urban Alliance

Jeanna McCann
Principal and Founder
Impact Analytics
www.impactanalyticsconsulting.com

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Direct questions about this report to jessica.sanderson@urbanalliance.com

Digital Equity: Access, Barriers and Usage Patterns Among Food Insecure Hartford Residents

Abstract

Digital equity refers to the state where every person and community has the necessary information, technology, and resources to participate in society, democracy, and the economy fully. Research has documented digital disparities among lower income households, households of color, seniors and individuals with disabilities. This needs assessment explores digital usage patterns, barriers, and needs among households receiving charitable food in the Hartford community.

Digital Equity

Digital equity is the idea that everyone should have the same access to digital technologies and resources, regardless of their background. The Digital Equity Act outlines conditions needed for digital equity including:[1]

- **Device Access:** Having access to an affordable, functioning device and relevant software (i.e. laptop, smartphone, tablet).
- **Internet Access**: Having access to high speed Internet. This involves having it available in the region and affordable to residents, which is essential to realizing the true value of a computer or other smart device.
- **Digital Literacy:** Having the skills and support needed to live, learn, and work in a society where communication and access to information is increasingly through digital technologies like Internet platforms, social media, and mobile devices.

In an increasingly digital world, access to the Internet and digital resources is crucial to accessing information, essential services, and opportunities for growth and stability. Digital equity is important because it allows people to participate in the economy and society, and to access income-generating opportunities.

Digital Divide

The digital divide is the gap between people who have access to digital technology and those who do not. It refers to a lack of access to stable, high-speed Internet and reliable technological devices as well as a lack of access to important information, resources, and services.[2] This divide also involves digital skills, literacy and agency in the digital world and therefore some people are unable to participate in or benefit from interactions with technology. The main reason some families do not have home computers or subscribe to the Internet is that they cannot afford it.[3] In general, those differences reinforce social inequalities and cause a persisting information or knowledge gap for those people with access to and using the new media ("haves"), and those people without ("have-nots").

Those with access to broadband Internet and computers have advantages over those who lack adequate Internet connectivity, which can lead to far-reaching negative consequences. In CT, the digital divide is most likely to affect lower-income households, households of color (African American and Latino), veterans, residents with a language barrier, seniors, incarcerated individuals, rural communities, and disabled individuals.[4]

The digital divide can affect people in many ways, including[5]:

- Education: Students without access to digital technology may have lower performance in school, and may have a harder time completing schoolwork and participating in remote learning. Further, as more postsecondary education moves online, people without access to technology may face educational barriers.
- Job opportunities: People without access to the Internet may have a harder time finding jobs, as many job listings are now online.
- Healthcare: Patients without access to digital technology may have poorer health outcomes, as they may have less access to health information and online patient portals.
- Social isolation: People without access to the Internet may experience social isolation, especially in rural areas. This can affect their mental health.
- Economic inequality: People without access to the Internet may have lower earning power, and may be more likely to rely on manual labor or jobs that pay lower wages.
- Misinformation: The digital divide can contribute to misinformation and deeper inequality.
- Technological discrimination: Some people may have less independence in performing certain tasks, which can make them more vulnerable to digital crime.

Digital Benchmarks for Connecticut

In 2022, Governor Ned Lamont called on the CT Commission for Educational Technology to lead the state's plan to improve digital equity, "Connecticut: Everyone Connected". As part of this effort, research was conducted to understand the gaps to achieving digital equity in the state. The state defined digital benchmarks for Connecticut and assessed covered populations. They defined digital benchmarks in the following ways:

1. Digital Connection Benchmark: residents have a computer, smartphone, and Internet
2. Digital Literacy Benchmark: residents can complete 5 of 6 digital tasks without help
3. Digital Security Benchmark: Residents are very or fairly familiar with all key security concepts

Their research showed that the following groups were lower in all three areas for each of the three benchmarks: African American residents, Latino residents, individuals with disabilities, households at or below 150% of the poverty level, and residents with a language barrier. "Connecticut: Everyone Connected" also established the State's five-year Digital Equity Plan which includes goals that leverage and expand existing efforts and directly address the needs that residents face.[4]

These goals include:

1. Promote Development of Digital Skills and Technical Support Programs
2. Increase Public Awareness of Digital Equity Resources
3. Ensure Residents Have Affordable Options for Getting Online that Meet Their Needs
4. Support Development of Accessible and Inclusive Digital Government at the State and Local Levels
5. Support High-Speed Broadband Infrastructure Buildout
6. Foster Ongoing Learning About Digital Equity Best Practices

This plan will increase the number of residents that meet the digital benchmarks and promote digital equity for Connecticut's most vulnerable residents.

Methods

This study explored digital usage patterns, needs and barriers as well as food insecurity and anxiety in a sample of residents at food distributions. While much data has been collected to understand the digital divide, little has targeted our most vulnerable residents in urban communities. This study collected data onsite at charitable food distributions in Hartford, CT. Hartford is an urban community where 34% of residents are African American and 46% are Latino. Census data shows that 28% of households live below the poverty level and 20% are food insecure. This study is unique in that it explores the digital usage, access, and barriers of a food insecure sample in an urban community. This study will help us to better understand ways the digital divide impacts these populations and ways supportive programing can bridge the gap. A total of 364 residents completed a paper and pencil survey at community food distributions. Each survey contained questions related to demographics, digital usage, barriers and needs, food security, anxiety, and faith.

Demographic Data

Demographic data including gender, age, ethnicity, household composition, and zip code were collected.

Digital Usage, Needs and Barriers

Digital Usage, Barriers and Needs: A series of questions were asked to understand residents Internet usage habits and experiences, digital barriers and needs related to devices and, Internet access, and digital knowledge.

Anxiety

Generalized Anxiety Disorder Scale (The GAD-2): This 2-item measure assesses anxiety symptoms associated with generalized anxiety disorder. Items are scored using a zero to three scale indicating the frequency of each of the symptoms. Scale scores range from 0 to 6 and place residents in two categories (at-risk and not at risk).[7]

Food Security

USDA U.S. Household Food Security Survey Module (2-Item Short Form): The 2-item short form of the survey module was developed by researchers at the National Center for Health Statistics. It has been shown to identify food-insecure households and households with very low food security with reasonably high specificity and sensitivity and minimal bias compared with the original 18-item measure. The tool has a sensitivity of 97% and a specificity of 83% when compared to the USDA's Household Food Security Scale. Residents were given a score ranging from 0-6, which corresponds to at-risk and not at risk for food insecurity.[8]

Results

Demographic Data

Three hundred and sixty-four (n=364) residents completed the questionnaire.

The majority of residents were females (*n*=213, 61.2%). Most described themselves as Black (*n*=154, 43.5%) or Latino/a (*n*=146, 41.2%) totaling 84.7% of residents. Residents skewed toward older adults, with half falling into the most senior category of 55+ (*n*=174, 49.0%). The majority of residents reported that they were practicing a religion (*n*=315, 90.0%), most reported they were Christian (*n*=69, 76.9%). Average household size for residents was higher than the national average (3.9 persons vs. 2.5 nationally). Resident households were also more likely to have children and have a greater number of children compared to national averages (47.8% have children vs. 40.3% nationally and households with children <18 have 2.4 children vs. 1.9 nationally). Additionally, the majority come from food insecure households (*n*=276, 76.0%) and one quarter were at-risk for an anxiety disorder (*n*=91, 24.9%). See Table 1.

Table 1. Demographic Information (*n*=364)

Gender
Male: 38.8%
Female: 61.2%

Ethnicity
Black/African American: 43.5%
Latino: 41.2%
White: 5.9%

Age
18-25 years: 11.3%
26-40 years: 17.2%
41-54 years: 22.5%
55 years and over: 49.0%

Household Composition
Average Adults in Household: 2.4
Average # Children Under 18 Years: 2.4
Average Total in Household: 3.9
% of households with children: 47.8%

Faith
Christian: 76.9%
Jewish: 2.6%
Other 10.6%
Not Practicing: 10.0%

Faith as a Protective Factors (Percent Agree)
My faith gives me strength to keep going: 81.7%
My faith gives me hope: 79.8%

Anxiety
At-risk for an anxiety disorder: 24.9%

Food Security
Food insecure households: 76.0%

Internet Access and Usage

Residents were asked questions about Internet access in their homes and ways they use the Internet. The Internet access of our sample was compared to a National Internet and Computer Use survey fielded in 2021 through the US Census Bureau.[6] Our sample of residents (n=291) reported that 68.0% of households have Internet in their homes. This is lower than national Internet access in homes even when considering household income. This sample evidenced a gap of -7.2pts compared to national households with <$25K income, -19.0pts compared to national households with $25-$49K income and -22.3pts compared to all national households.

The majority of residents are confident in their ability to use the Internet [(strongly agree (*n*=112, 43.1%), agree (*n*=81, 31.2%)] and report using Internet daily (*n*=186, 68.4%). The highest percentage of residents reported using Internet for entertainment (*n*=146, 54.5%). Around a third of residents reported using Internet for work (*n*=93, 35.0%), communication (*n*=92, 34.8%), school or learning (*n*=89, 33.7%) and household (*n*=85, 32.2%). The lowest usage reported was for healthcare (*n*=69, 26.1%) and religious services (*n*=54, 20.5%).

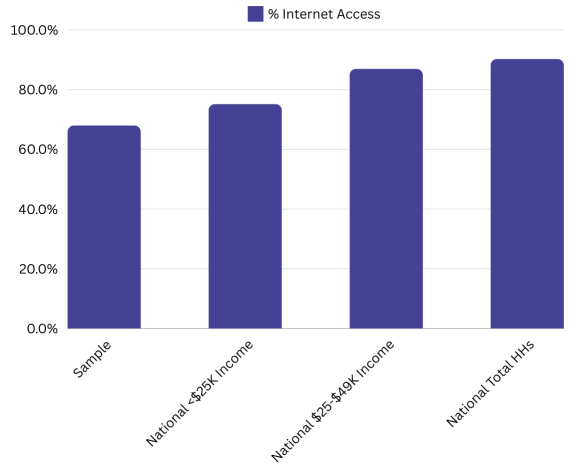
See Tables 2, 3, 4 and 5.

Internet Access

Table 2. Study Sample compared to a National Sample

Internet Available in household	*n*	% Yes
Study Sample	291	68.0%
National <$25K Income	22,810	75.2%
National $25-$49K Income	24,800	87.0%
National Total households	127,545	90.3%

Figure 2. Study Sample compared to a National Sample

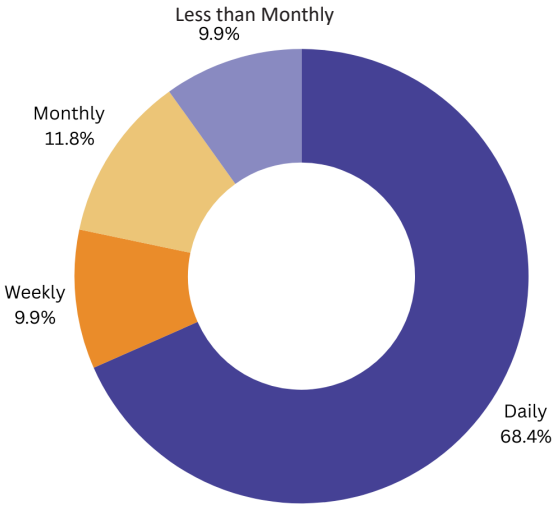


Frequency of Internet Usage

Table 4. Internet Usage Frequency (*n*=260)

Response	*n*	%
Daily	186	68.4%
Weekly	27	9.9%
Monthly	32	11.8%
Less than Monthly	27	9.9%

Figure 4. Internet Usage Frequency (n=260)

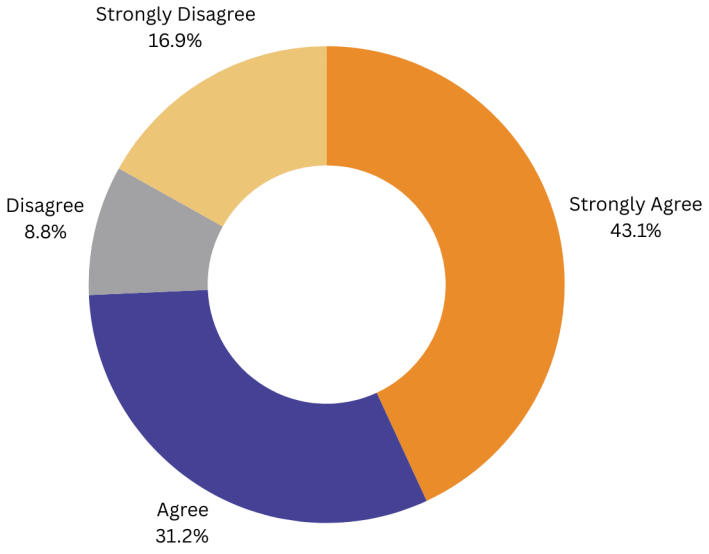


Internet Confidence

Table 3. Responses to "I am confident in my ability to use the Internet" (*n*=260)

Response	*n*	%
Strongly Agree	112	43.1%
Agree	81	31.2%
Disagree	23	8.8%
Strongly Disagree	44	16.9%

Figure 3. Responses to "I am confident in my ability to use the Internet" (*n*=260)

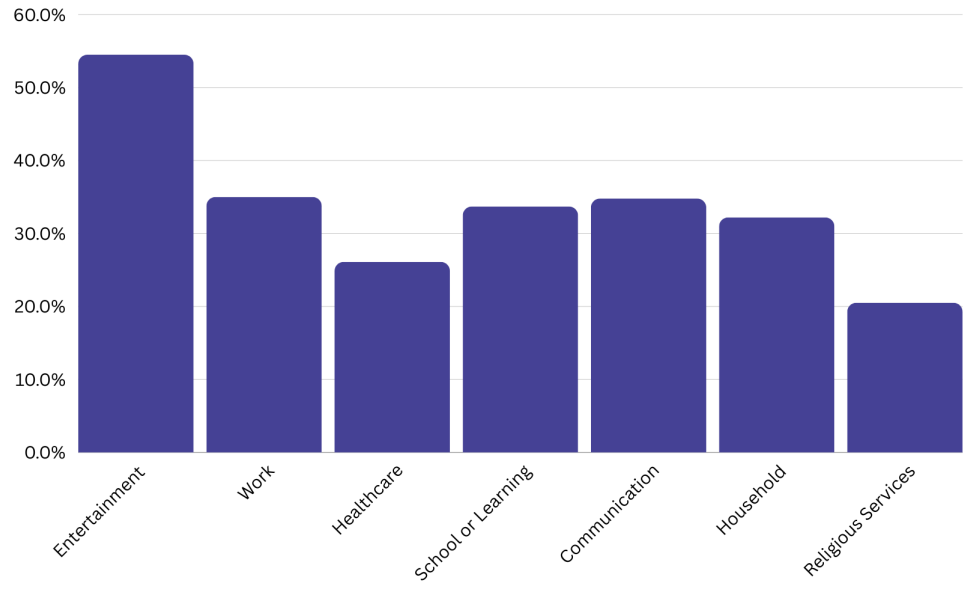


Types of Internet Usage

Table 5. Ways Residents Use the Internet (*n*=268)

	n	% Yes
Entertainment (e.g. movies, social media)	146	54.5%
Work (e.g. email, remote work)	93	35.0%
Healthcare (e.g. doctor's appointments)	69	26.1%
School or Learning (e.g. classes)	89	33.7%
Communication (e.g. staying in touch)	92	34.8%
Household (e.g. bills, shopping, banking)	85	32.2%
Religious Services (e.g. streaming services)	54	20.5%

Figure 5. Ways Residents Use the Internet (*n*=268)



Types of Devices

Residents were asked questions about the types of devices they had in their homes. The majority of residents reported that they had at least one digital device at home (*n*=294, 85.2%). This includes computers, smartphones or tablets. Most residents reported having a smartphone (*n*=223, 64.8%). Few residents reported having a laptop or desktop computer (*n*=77, 22.3%), or a tablet (*n*=69, 20.1%).

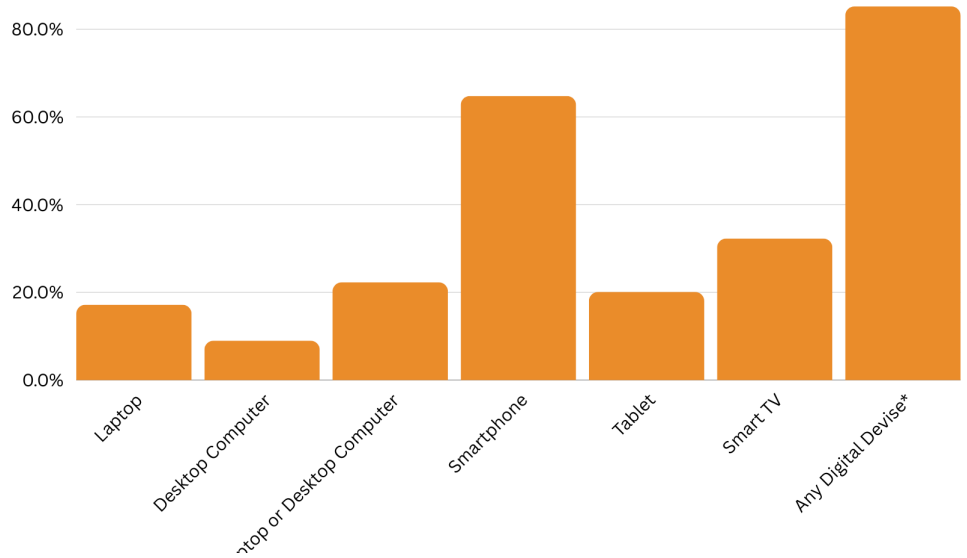
Responses from this sample were compared to a National Internet and Computer Use survey fielded in 2021 through the US Census Bureau. While resident households had a gap compared to total national households for owning any digital device, ownership was similar when considering income (no difference compared to national households with <$25K income). However, our sample evidenced a disparity in ownership of computers (-34.0pts) and tablets (-20.5pts) compared to national households with <$25K income. The majority of residents in this study owned only one type of device (*n*=238, 69.0%). This sample had a very high occurrence of smartphone only households (*n*=174, 50.4%) compared to only 16% of national households with <$25K income.

Types of Device

Table 6. Devices at Home (*n*=344)

	n	% Yes
Laptop	59	17.2%
Desktop Computer	31	9.0%
Laptop or Desktop Computer	77	22.3%
Smartphone	223	64.8%
Tablet	69	20.1%
Any Digital Device*	294	85.2%
Smart TV	111	32.3%

Figure 6. Devices at Home (*n*=344)



Device at Home: Study Sample Compared to National Sample

Table 7. Devices at Home Sample compared to 2021 National Computer and Internet Use in the US Census Survey

	Sample	Nat <$25K	Nat $25K-$49K	Nat Total households
Laptop or Desktop Computer	22.3%	56.3%	71.9%	80.5%
Smartphone	64.8%	76.7%	85.9%	90.0%
Tablet	20.1%	40.6%	52.0%	63.8%
Any Digital Device *	85.2%	85.1%	93.4%	95.0%

*Any Digital Device includes laptop computers, desktop computers, smartphones and tablets

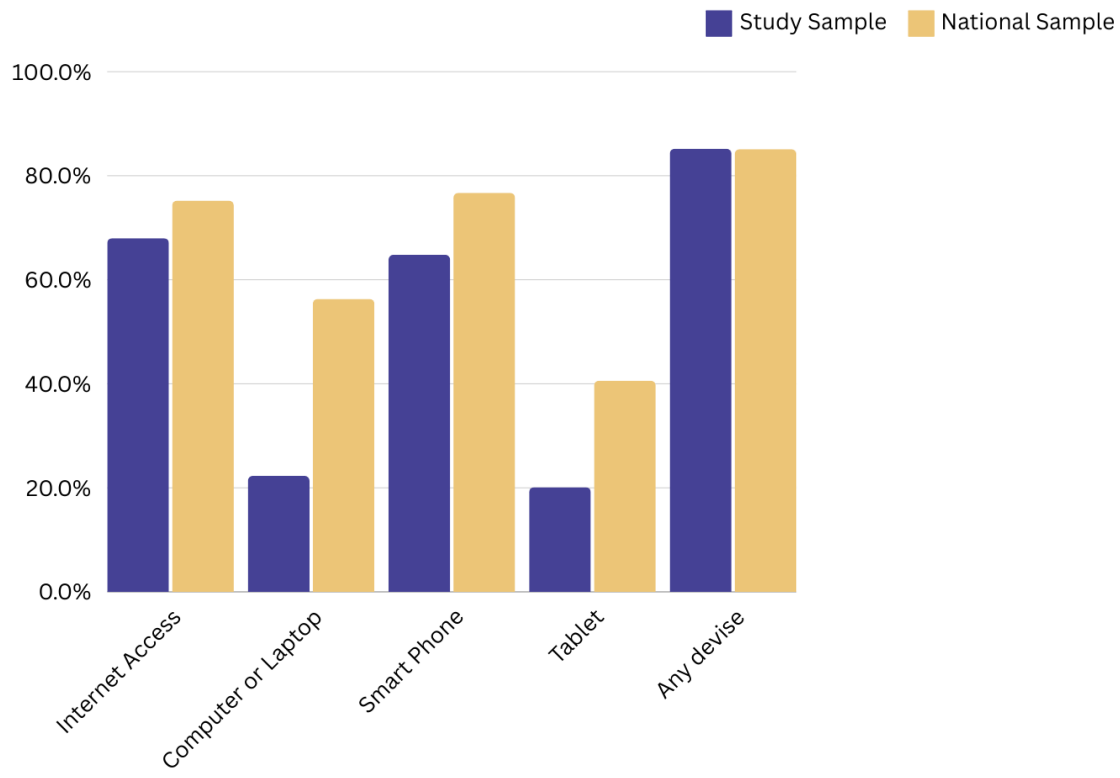


Table 8. Number of Digital Devices in Household by Type

Number of Digital Types in Household	*n*	%
0 Digital Devices	51	14.8%
1 Digital Devices	238	69.0%
2 Digital Devices	31	9.0%
3 Digital Devices	18	5.2%
4 Digital Devices	7	2.0%

Table 9. Single Digital Device by Type

Type of Single Device	*n*	%
Smartphone Only	174	50.4%
Laptop Computer Only	21	6.1%
Desktop Computer Only	13	3.8%
Tablet Only	30	8.7%
4 Digital Devices	7	2.0%

CT Digital Connection Benchmark

The state of Connecticut has defined the Digital Connection Benchmark as residents having a computer, smartphone, and Internet in their home. Residents that meet all three criteria meet the digital connection benchmark. Data from this study is examined using these criteria and compared to data from a recent statewide needs assessment.

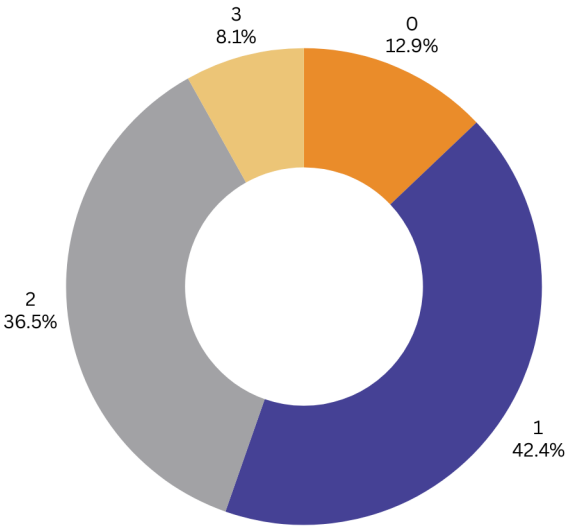
Table 10 shows the number of residents that met zero, one, two or three of the connection benchmark criteria. The majority reported 1 (*n*=151, 42.4%) or 2 (*n*=130, 36.5%) benchmarks met. Table 11 shows the percent of residents that met each of the three criteria. Most reported having a smartphone (*n*=223, 64.8%) and Internet (*n*=198, 68.0%); however, only a small percent owned a computer or laptop (*n*=77, 22.3%). Table 12 compares benchmark data for this sample, the state, and various covered groups within the state. Only 8.1% of residents come from a household that meets the digital benchmark, compared with 73% of households statewide.

Number of Connection Benchmarks

Table 10. Number of Digital Connection Benchmarks

Number of Benchmarks Met	*n*	%
0	46	12.9%
1	151	42.4%
2	130	36.5%
3	29	8.1%

Firgure 10. Number of Digital Connection Benchmarks

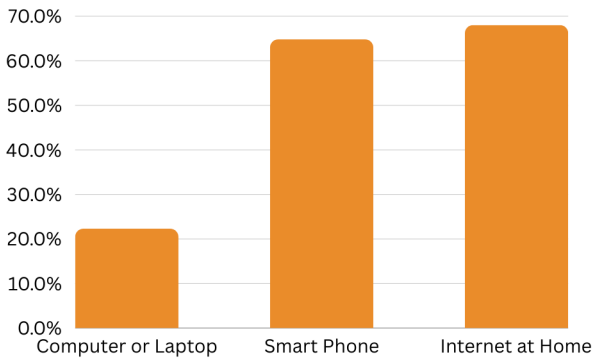


Connection Benchmarks Met

Table 11. Connecticut Digital Benchmark Criteria Met

Criteria	*n*	Yes
Computer or Laptop	345	22.3%
Smartphone	345	64.8%
Internet at Home	291	68.0%

Figure 11. Connecticut Digital Connection Benchmark Criteria Met

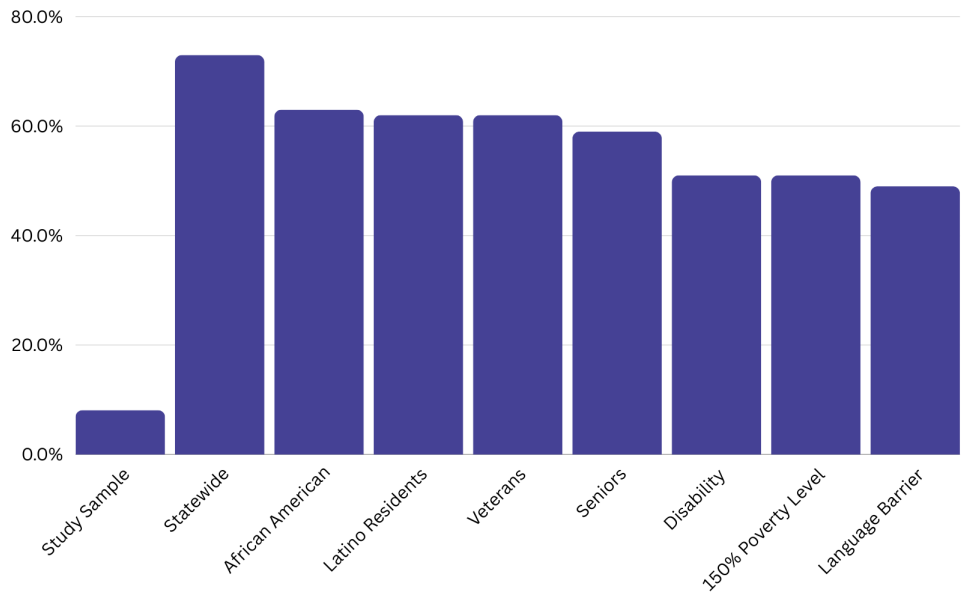


Percent Meeting Benchmarks

Table 12. Percent Meeting Connecticut Digital Benchmark for Various Groups within the State

% Meeting Digital Connection Benchmark	%
Study Sample	8.1%
Statewide	73%
African American Residents	63%
Latino Residents	62%
Veterans	62%
Seniors	59%
Individuals with a Disability	51%
150% Poverty Level	51%
Language Barrier	49%

Figure12. Percent Meeting Connecticut Digital Benchmark for Various Groups within the State



Digital Barriers and Needs

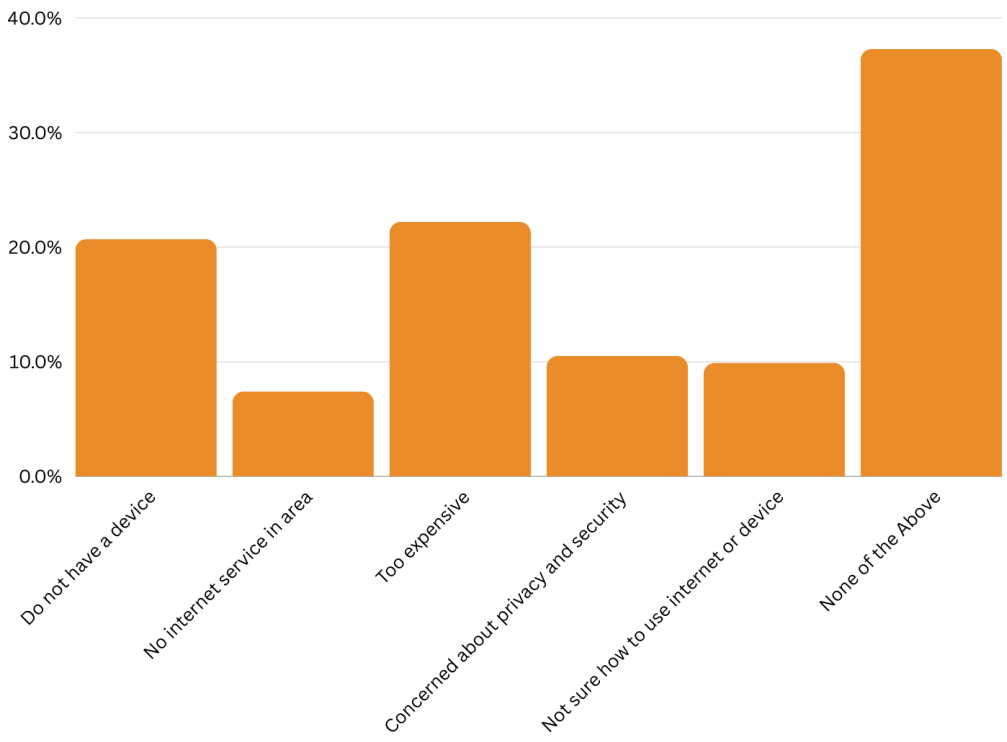
Residents were asked questions about barriers to Internet access and supports that would be helpful related to digital access. Table 13 shows challenges to accessing the Internet. A sizable group did not report any perceived challenges to Internet access (*n*=122, 37.3%) and just over 20% reported not having a device and expense as barriers. Additionally residents were asked, "Do you know where to get help for your device/Internet?" and "Have you or someone you know been a victim of an online scam?" Just over half (*n*=144, 53.5%) reported knowing where to get help and about one third (*n*=84, 32.1%) reported being a victim of a scam or knowing someone who has. Finally, residents were asked about supports that would be helpful. Most reported needing less expensive Internet service (*n*=154, 57.9%) and many reported more community locations with free Internet (*n*=63, 23.8%).

Barriers

Table 13. Barriers to Internet Access

	n	% Yes
Do not have a device	59	17.2%
No Internet service in area	31	9.0%
Too expensive	77	22.3%
Concerned about privacy and security	223	64.8%
Not sure how to use Internet or device	69	20.1%
None of the Above	294	85.2%

Figure 13. Barriers to Internet Access



Resident Needs

Table 15. Residents Needs Related to Digital Access (*n*=265)

	n	% Yes
Less expensive Internet	154	57.9%
Less expensive devices	45	17.0%
More community locations with free Internet and devices	63	23.8%
Help using Internet	34	12.8%
Help using devices	31	9.9%
None of the Above	294	85.2%

Figure15. Residents Needs Related to Digital Access (*n*=265)

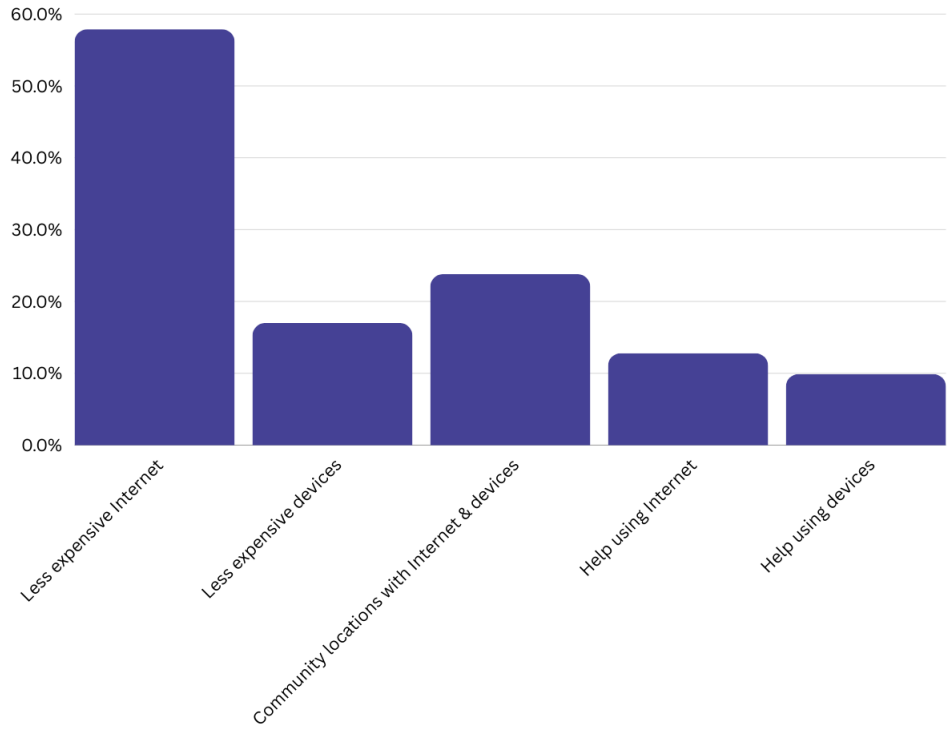


Table 16. Residents Needs Related to Digital Access (*n*=265)

Barrier Questions	*n*	Yes
Do you know where to get help for your device/Internet?	144	53.5%
Have you or someone you know been a victim of an online scam?	84	32.1%

Conclusions

This study explored residents digital usage patterns, needs and barriers in a sample of residents at community food distributions. Most residents in this sample were food insecure, and described themselves as either African American or Latino. In the city of Hartford 20% of residents are food insecure and in this sample 76% scored food insecure. Additionally, this sample evidenced a high prevalence of anxiety. Taken together, this study gives voice to the digital usage patterns, needs and barriers of a vulnerable sample in an urban community with a high prevalence of food insecurity.

Key Findings

Most had access to Internet. While most residents reported that they had access to the Internet, the percentage was less than other national samples when controlling for income (68% vs 75.2%). This sample felt relatively confident in their ability to use the Internet and the most common use was entertainment, followed by work, school and communications.

There was a high occurrence of Smartphone only households. Most residents reported that they had access to at least one digital device. The percent with access to one device was consistent with other national samples. However, there was a large disparity with computers or laptop ownership when compared with other samples. Half of residents are Smartphone only households compared to only 16% of national households with <$25K income.

Very few reached the CT Connection Benchmark compared with other groups. The state of Connecticut has defined the Digital Connection Benchmark as residents having a computer, smartphone, and Internet in their home. Residents that meet all three criteria meet the digital connection benchmark. Only 8.1% of residents in this sample met the connection benchmark. This number was very low when compared to the state average, which is 73%. A recent study showed that other covered groups (African Americans, Latinos, veterans, seniors, individuals with a disability, households 150% below the poverty level, residents with a language barrier) in CT ranged from 63%-49%. It seems this group is disproportionately impacted by the digital divide and is in great need of support in regards to both access and literacy. It speaks to the need to support CT's most vulnerable residents, particularly those who are food insecure and living in communities disproportionately impacted by poverty. This sample was recruited at community food distributions, and suggests that there are population subgroups with greater need than was captured in the state's needs assessment.

Access to computers or laptops, lower cost Internet, and opportunities to build digital skills would help bridge the digital divide. Residents reported increased access to devices and more affordable Internet as opportunities that would be beneficial. Further, half did not know where to go to get help with a device or the Internet. Therefore, programming offering technical support and digital literacy would benefit food insecure residents and help to bridge the digital divide.

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