

# Making Progress on Digital Equity

*An update on bridging the  
digital divide in Essex County*



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THE CENTER FOR  
STATE POLICY  
ANALYSIS

# Introduction

Digital tools and skills are vital for navigating our increasingly online world, whether you're connecting with friends, seeking a new career, or getting medical care. We at the Essex County Community Foundation are working to ensure that all residents of our county can share in these opportunities.

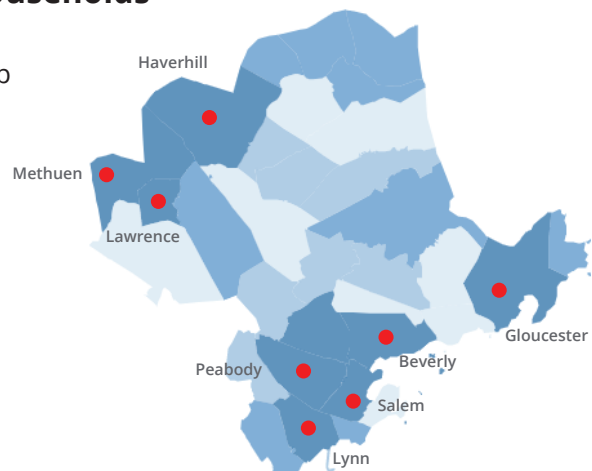
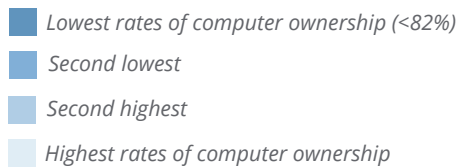
Roughly one of every five households in Essex County makes do without a home computer or reliable broadband. But the good news is that those numbers are shrinking, thanks to state, federal, and local resources that are helping to subsidize internet accounts, expand Wi-Fi networks, support computer recycling, and generally clear obstacles to online life.

To maximize the impact of such interventions — and identify fruitful new possibilities — we are taking a deeper look at the dynamics shaping digital equity in Essex County, with particular attention to race and ethnicity in our increasingly diverse home. Combining the latest census data with other high-quality sources we find that:

- Non-white households would benefit most from efforts to enhance digital equity, as Black and Hispanic residents have more limited access to digital resources, even after adjusting for differences in income and education. On average, non-white families earning \$100,000 have lower access to broadband than white families earning just \$50,000.
- Diversity has increased all across Essex County, with some of the most vivid changes happening in suburban locales outside of the major cities. Effective strategies to expand digital equity will need to attend to this changing demographic reality.
- Cell phones remain the only source of consistent internet access for many, including a large number of middle-class non-white families. Outreach efforts and online resources need to reflect the experience of these cell phone users.
- Early data suggest that Covid-era interventions are reaching communities with the highest need. And by identifying best practices across cities and towns, we could amplify the impact of federal efforts like the subsidies available via the Affordable Connectivity Program (ACP).

## One of every five Essex County households lacks a basic computer

Share of households with a desktop or laptop



SOURCE: Census Bureau, American Community Survey

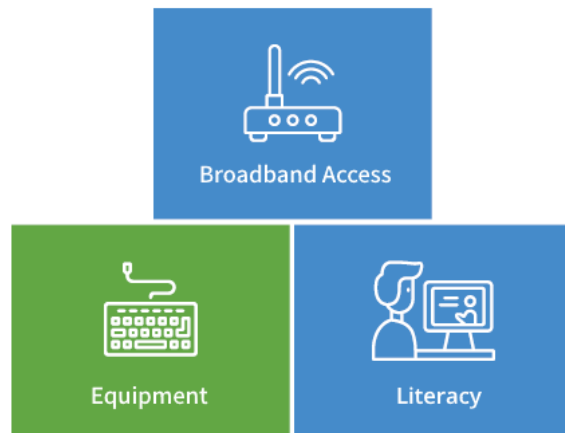
# 1 Background: ECCF's ongoing efforts around digital equity

In 2021, we released an inaugural report titled “Striving for Digital Equity: A report on the challenges and opportunities the Digital Divide presents to Essex County communities.”

In that paper, we found that roughly 160,000 people in Essex County struggle to secure a basic home computer and fixed broadband. And while the need is certainly greater in some areas, we also identified opportunities for improvement in every town and city.

Building on this analysis — and a series of follow-up discussions with local experts and thought-leaders — we identified three main points of focus:

- 1) **Access**, including secure, affordable broadband.
- 2) **Equipment**, chiefly a modern desktop or laptop with a camera for video.
- 3) **Literacy**, to build skills and comfort with computers.



Guided by that initial report, we have assembled a countywide digital equity coalition to push for systemwide change and also invested in a range of high-impact, community-led interventions. These include support for a regional digital literacy program, innovative efforts for e-recycling, and two communitywide free Wi-Fi programs.

In the next few years, this coalition-powered approach aims to bring free broadband to tens of thousands of households and businesses, while also providing 5,000 devices and offering digital literacy training to 1,000 residents.

To ready ourselves for this next phase of work, we have pursued this follow-up analysis using the latest Census data to understand how best to enhance digital equity in our increasingly diverse county.

# 2

## Digital equity across race and ethnicity

When it comes to differences in computer ownership and broadband access, race plays a vitally important role.

Compare, for instance, white and non-white families earning around \$50,000 per year in Essex County. Despite earning the same income, the white families are far more likely to have high-speed broadband at home.

Indeed, white families earning \$50,000 are more likely to have broadband than non-white families that earn \$100,000 — suggesting that even when we account for differences in income, non-white families still face significant, additional barriers to digital equity.

Other approaches tell the same story of barriers impacting people of color.

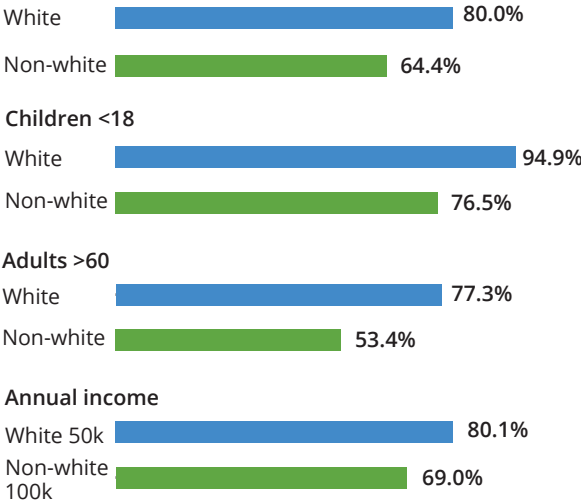
White residents without a college degree are more likely to own computers than their non-white peers (67% to 49%).

In addition, non-white folks over 60 years old are much less likely to have secure broadband (53% have fixed broadband compared to 77% of whites over 60).

In all these cases, non-white families that reach the same life-milestones — in terms of earnings, education, or age — confront unique hurdles to digital equity. It follows that effective interventions may have to focus directly on race-based opportunities in addition to income and other measures.

### New supports could be especially valuable for non-white families

Share of households with high-speed broadband access in Essex County



SOURCE: cSPA tabulation of data from IPUMS USA, University of Minnesota

# 3

## The expanding diversity of Essex County

Over the past decade, the share of non-white residents in Essex County has grown from 24 percent to 34 percent. And this expanding diversity is reshaping our suburbs as much as our core cities — or even more so.





The census tracts with the largest increases in non-white residents are mostly outside the urban cores, including neighborhoods of Haverhill, Beverly, Boxford, Saugus, Peabody, and Gloucester.

A full county map shows the evolving picture, with the dark blue areas of change sprinkled throughout the center of the county, rather than concentrated in a few areas.

Combine the colors of this map with our other key finding — about how race and ethnicity is a vital predictor of digital equity — and you can see that the landscape of effective intervention may also be changing.

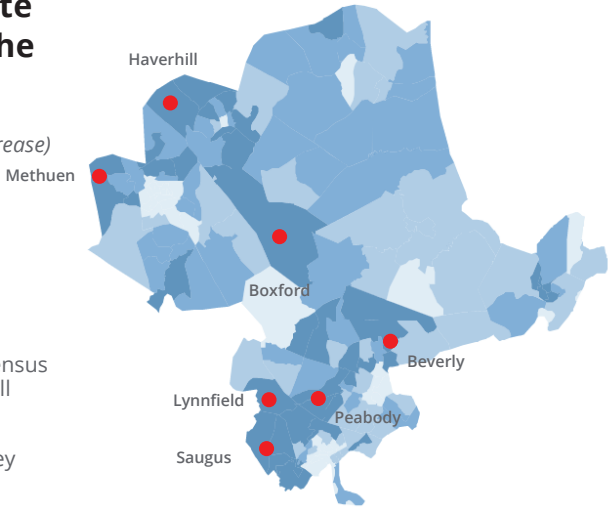
In particular, race-conscious interventions may be newly vital in an expanding number of towns if we hope to effectively address digital equity.

### The largest increases in non-white populations happened outside the main cities

-  Largest increase in non-white population (>79% increase)
-  Second largest
-  Second smallest
-  Smallest increase in non-white population

**NOTE:** Percent change in non-white population by Census tracts, adjusted to account for outliers with very small initial populations

**SOURCE:** Census Bureau, American Community Survey



## 4 Reliance on cell phones

For many residents of Essex County, cell phones remain a vital link to the digital world — with some 8 percent of households reporting that cell service is their only form of internet access.

This dependence on cell phones is especially pronounced for lower-income families and middle-class non-white households. Roughly 14 percent of these middle-income, non-white families with earnings between \$50,000 and \$100,000 per year are reliant on cell service.

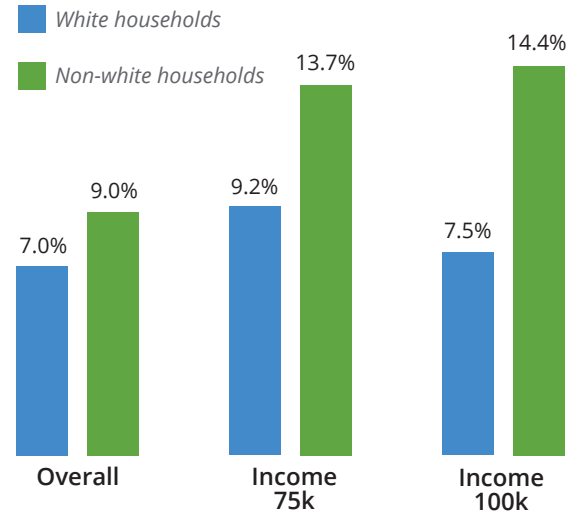
And while cell phones have some obvious advantages when it comes to portability and the ability to access online resources from anywhere, they also come with real constraints. Small screen sizes, slower processors, and the high cost of data make it challenging to access some parts of the digital world.

When thinking about potential supports or investments, this continuing reliance on cell phones points in two directions:

- 1) It suggests that more could be done to ensure equal access to equipment and fixed-line broadband, whether through computer recycling programs, public Wi-Fi, or broadband subsidies.
- 2) It means online resources need to be phone-friendly if we hope to reach all residents; this includes sign-ups for valuable programs, outreach to share community information, and beyond.

### Cell phones remain the only source of internet access for some groups

Share of households relying exclusively on cellular broadband in Essex County



SOURCE: cSPA tabulation of data from IPUMS USA, University of Minnesota

# 5

## Interventions are already working

Working in parallel, the public, private, and philanthropic sectors are already lifting up families and communities by providing much-needed resources and supporting new online skills.

As part of a community-led, coalition-powered, multiyear effort to advance digital equity, we at Essex County Community Foundation are pursuing a range of interventions and investments.

Our countywide coalition of 150+ individuals and organizations is a powerful regional community of practice, learning together to promote and implement digital equity.

In the first 12 months, we are expanding broadband access with free Wi-Fi in community-based centers, including YMCAs, Boys and Girls clubs, homeless shelters, and food pantries.

In addition, we are investing in neighborhood Wi-Fi, building networks in the Point Neighborhood in Salem (partnered with North Shore CDC) and in Lawrence (partnered with Lawrence Community Works.)

We launched the first countywide digital literacy program with our partners at Tech Goes Home, with five sites across the county.

For devices, we are piloting an e-recycler program with our partners at TEK Collaborative and have made Chromebooks, desktops, and laptops available to 2,000 families, individuals, and small businesses.

We continue to invest in and pilot larger initiatives that address all areas of digital equity, such as an ambassador program for the Affordable Connectivity Program that connects individuals with federal resources, as well as a telehealth navigator program to address digital equity and health with our Community Health Centers.

We invest in solutions by the community, from the community, and for the community, and this model was showcased when we inspired entrepreneurs and students to submit innovative solutions at our first annual digital equity competition in partnership with UMass Lowell iHub Haverhill and E for All.

## 6 Focus: The Impact of the Affordable Connectivity Program

We have also seen the effect that a well-organized national effort can make, when it comes to digital equity.

Witness the impact of the federal government’s Affordable Connectivity Program (ACP), which offers discounted prices to low-income families seeking internet service as well as assistance with the purchase of home computers.

Thousands of Essex County families are now enjoying the benefits of these programs, and there’s a strong connection between need and participation; neighborhoods where families have struggled with broadband access are largely the ones with the highest rates of ACP participation.

Still, some cities and towns seems to be reaching more folks than others, and there’s a lot we could learn from studying the success stories.

Town	Share of households lacking broadband (2016-2020)	Share in ACP Broadband Subsidy Program (June 2022)
<b>COMMUNITIES REACHING LARGE NUMBERS OF FAMILIES</b>		
Lawrence	35%	25%
Lynn	27%	12%
Haverhill	21%	10%
<b>COMMUNITIES STRUGGLING TO REACH FAMILIES</b>		
Peabody	22%	5%
Beverly	19%	5%
Gloucester	20%	6%
Amesbury	16%	5%



# 7

## We can keep doing better

Wonderful as it is to see the improvements for our residents and neighbors on the ground, we know there's more we can do to boost digital equity in Essex County. Among other things, we can:

- Redouble efforts to close racial disparities through investments and grant designs attuned to the unique opportunities and aspirations of different racial and ethnic groups.
- Listen to and partner with local organizations connected to the communities experiencing the least access to digital resources.
- Re-envision our mental map of where need meets opportunity, working outside of cities and crossing municipal boundaries to invest in marginalized neighborhoods hungry for better access to digital life.
- Spread effective ideas across the county, including initiatives like the ACP Ambassador program in Haverhill, which informs and trains community residents.
- Reconsider the role of cell phones, ensuring our efforts to provide equipment look beyond personal computer use and remain open to devices that meet individuals, families and small businesses across Essex County where they are.
- Use digital equity challenges to promote grass roots innovation, collaboration, and systems thinking on the model of the iHub digital equity challenge.
- Focus on areas where philanthropy can complement other sources of funding, including from the state and federal government.
- Continue to emphasize collaboration, relationship-building, and the power of a thriving and communicative coalition to ensure long-term impact.

## 8 Conclusion

Our future success as a community — and the success of our residents — depends on our ability to adapt to the shifting economic and social landscape, which increasingly values digital expertise for jobs and civic engagement.

Just as important, we need to recognize how racial and ethnic diversity is enriching our communities and presenting a mix of new civic and social opportunities. Right now, non-white families are having a uniquely difficult time accessing digital resources, and fixing that will require focused effort across virtually every town and city.

Digital equity is not just possible for Essex County: It's within reach if we build on early successes, commit the necessary resources, and continue to learn from one another.

### Methodological Notes

Our analysis integrates a number of different data sources.

Information about broadband access and computer ownership in the cities and towns of Essex County comes from the Census Bureau's American Community Survey, and specifically from the tables published at [data.census.gov](https://data.census.gov) covering the five-year period from 2016 to 2020.

Breakdowns of digital equity across racial, ethnic, and demographic groups also come from the 2016-2020 American Community Survey, but was gathered using microdata from the IPUMS USA project at the University of Minnesota.

Estimates of the change in non-white populations were based on a different Census survey, namely the decennial census.

Across surveys, our definition of "non-white" compassed all individuals who did not self-identify as "white, non-Hispanic," including Black, Hispanic, Asian, and multi-racial Americans, among others.

Participation rates for the Affordable Connectivity Program are provided by the federal government.

Each of these data sources covers slightly different timeframes and geographic areas; care was taken to ensure the best fit in each case.

## 9

## Digital Equity, Town by Town

This dashboard displays a number of key digital equity metrics for each city and town in Essex County, including: median household income, growth in the non-white population, the share of households lacking broadband, and ACP participation rates.

City/Town	Median Household Income	Non-white Households 2010 » 2020	Lacking Broadband (2020)	ACP Participation
Amesbury	\$81,027	4.9% » 10.3%	15.5%	4.5%
Andover	\$153,315	16.6% » 26.8%	4.5%	2.7%
Beverly	\$84,354	8.6% » 15.4%	18.8%	5.0%
Boxford	\$179,375	5.0% » 12.2%	4.6%	0.5%
Danvers	\$99,269	6.2% » 12.7%	14.7%	N/A
Essex	\$109,323	3.9% » 7.5%	16.0%	1.2%
Georgetown	\$122,600	4.3% » 8.5%	12.9%	2.0%
Gloucester	\$76,260	5.9% » 11.7%	20.2%	5.5%
Groveland	\$111,056	3.5% » 7.7%	16.8%	2.3%
Hamilton	\$115,203	8.7% » 11.1%	8.8%	1.7%
Haverhill	\$69,237	20.5% » 33.7%	20.6%	9.5%
Ipswich	\$103,941	5.3% » 9.0%	14.3%	2.4%
Lawrence	\$45,045	79.5% » 87.7%	34.8%	25.4%
Lynn	\$61,329	52.4% » 65.9%	27.3%	11.9%
Lynnfield	\$145,594	6.5% » 13.5%	9.1%	1.2%
Manchester-by-the-Sea	\$178,250	3.6% » 6.7%	16.3%	1.9%
Marblehead	\$131,293	5.0% » 9.2%	11.3%	1.9%
Merrimac	\$79,909	4.3% » 8.9%	19.3%	2.6%

City/Town	Median Household Income	Non-white Households 2010 » 2020	Lacking Broadband (2020)	ACP Participation
Methuen	\$83,527	25.1% » 40.7%	14.3%	8.1%
Middleton	\$145,525	12.7% » 15.7%	11.1%	1.1%
Nahant	\$94,243	4.5% » 9.0%	13.3%	2.0%
Newbury	\$121,286	3.0% » 7.3%	10.6%	1.5%
Newburyport	\$110,740	4.8% » 8.9%	10.3%	2.5%
North Andover	\$113,916	14.1% » 21.3%	8.3%	3.4%
Peabody	\$80,681	12.3% » 22.7%	21.6%	4.6%
Rockport	\$87,149	4.1% » 6.9%	20.7%	2.6%
Rowley	\$118,851	3.3% » 7.2%	15.2%	2.2%
Salem	\$66,428	24.1% » 31.5%	20.3%	6.7%
Salisbury	\$81,223	4.8% » 9.5%	19.5%	5.8%
Saugus	\$88,463	10.4% » 24.9%	14.4%	4.9%
Swampscott	\$102,898	7.0% » 14.2%	11.1%	2.3%
Topsfield	\$144,258	4.7% » 10.0%	14.6%	1.3%
Wenham	\$142,734	5.5% » 12.6%	11.0%	1.5%
West Newbury	\$151,500	3.7% » 8.8%	8.5%	1.3%