

Statewide Survey on Broadband Adoption 2023

Internet Adoption and the “Digital Divide” in California

*Results from a Survey Conducted for the California Department of
Technology (CDT) and the California Emerging Technology Fund (CETF)*

Principal Investigators:

Dr. Hernan Galperin, Dr. François Bar & Dr. Thai V. Le

University of Southern California

January 2024

About the Statewide Survey on Adoption

- **Population:** California Adults (Age 18 and Older)
- **Method of Collection:** Multimodal (RDD + Text-to-Web)
- **Languages:** English, Spanish, Mandarin, Vietnamese
- **Margin of Error:** <3% for 95% Confidence Level
- **Fieldwork Dates:** February – June 2023
- **Sampling:** Main Sample + 3 Oversamples

Sampling Strategy and Sample Size

Sample Type	Description	Amount	Total
Main Sample	Telephone Surveys Complete	1,000	1,899
	Telephone Surveys Basic	249	
	Online Text-to-Web	650	
Oversample	Rural County Regions	1,059	1,661
	Low-Income HHs (Pre-Paid)	283	
	Department of Rehabilitation	319	
TOTAL			3,560

Main Topics

1. Adoption Across Covered Populations and Regions
2. Broadband Costs
3. Reasons for Non-Adoption
4. ACP Awareness and Participation
5. Telehealth
6. Access and Devices Among K-12 Households
7. Digital Skills

Key Concept Definitions

Connectivity

- Self-reported
- Residential connectivity (“at home”)
- Any technology, either fixed or mobile
 - Connected vs. unconnected: based on residential access
 - “Underconnected”: has mobile access only

Key Concept Definitions

Covered populations (as defined by Infrastructure Act):

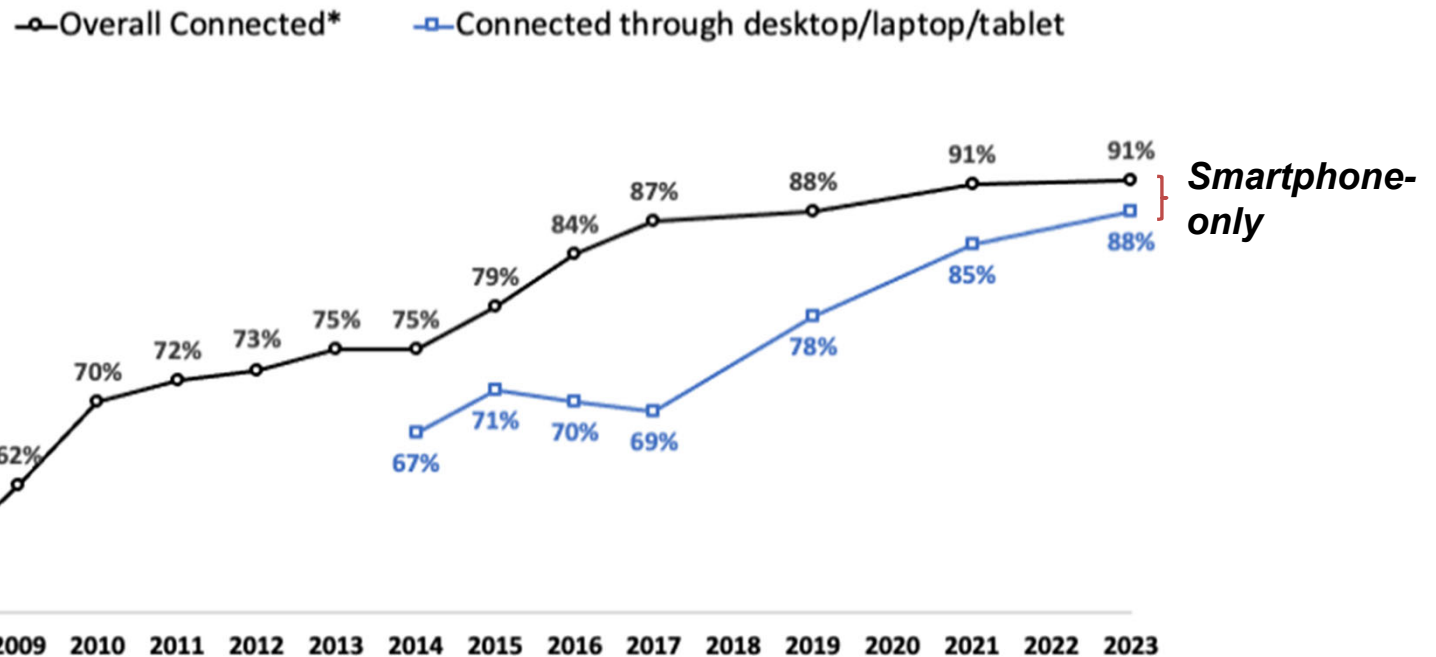
- Low-income HHs (below at or below 150% of FPL)
- Aging individuals (60+ years)
- Veterans
- Individuals with disabilities
- Individuals with a language barrier
- Members of a racial or ethnic minority group
- Individuals who primarily reside in a rural area
- Women
- LGBTQIA+
- **Incarcerated individuals**

Main Topics

- 1. Adoption Across Covered Populations and Regions**
2. Broadband Costs
3. Reasons for Non-Adoption
4. ACP Awareness and Participation
5. Telehealth
6. Access and Devices Among K-12 Households
7. Digital Skills

Broadband Adoption Remains High While Share of Underconnected (Smartphone-Only) Continues to Drop

Broadband Adoption in California (2008-2023)

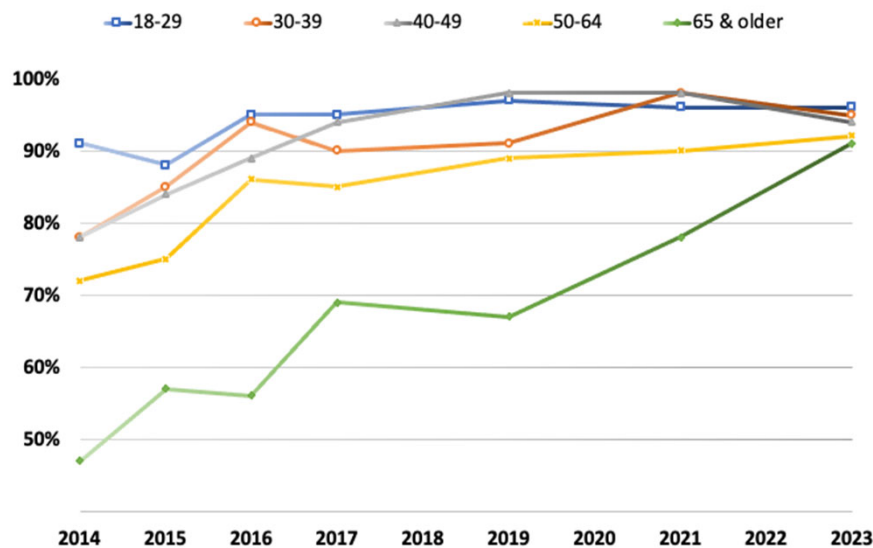


Source: 2021/23 from USC; 2017/2019 from Berkeley IGS Poll; 2014 to 2016 from The Field Poll; 2008 to 2013 from PPIC.

*Includes those who can connect to the Internet either through a desktop, laptop, tablet computer, or smartphone.

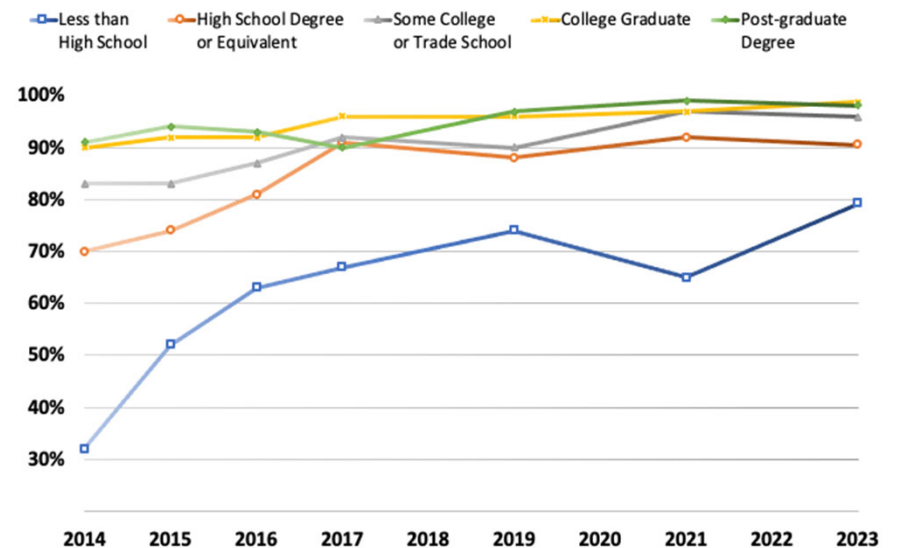
Adoption Gaps for Several Covered Populations and Disadvantaged Groups Are Closing

Broadband Adoption by Age Group (2014 - 2023)



Source: 2021/23 from USC; 2017-2019 from Berkeley IGS Poll; 2014 to 2016 from The Field Poll.

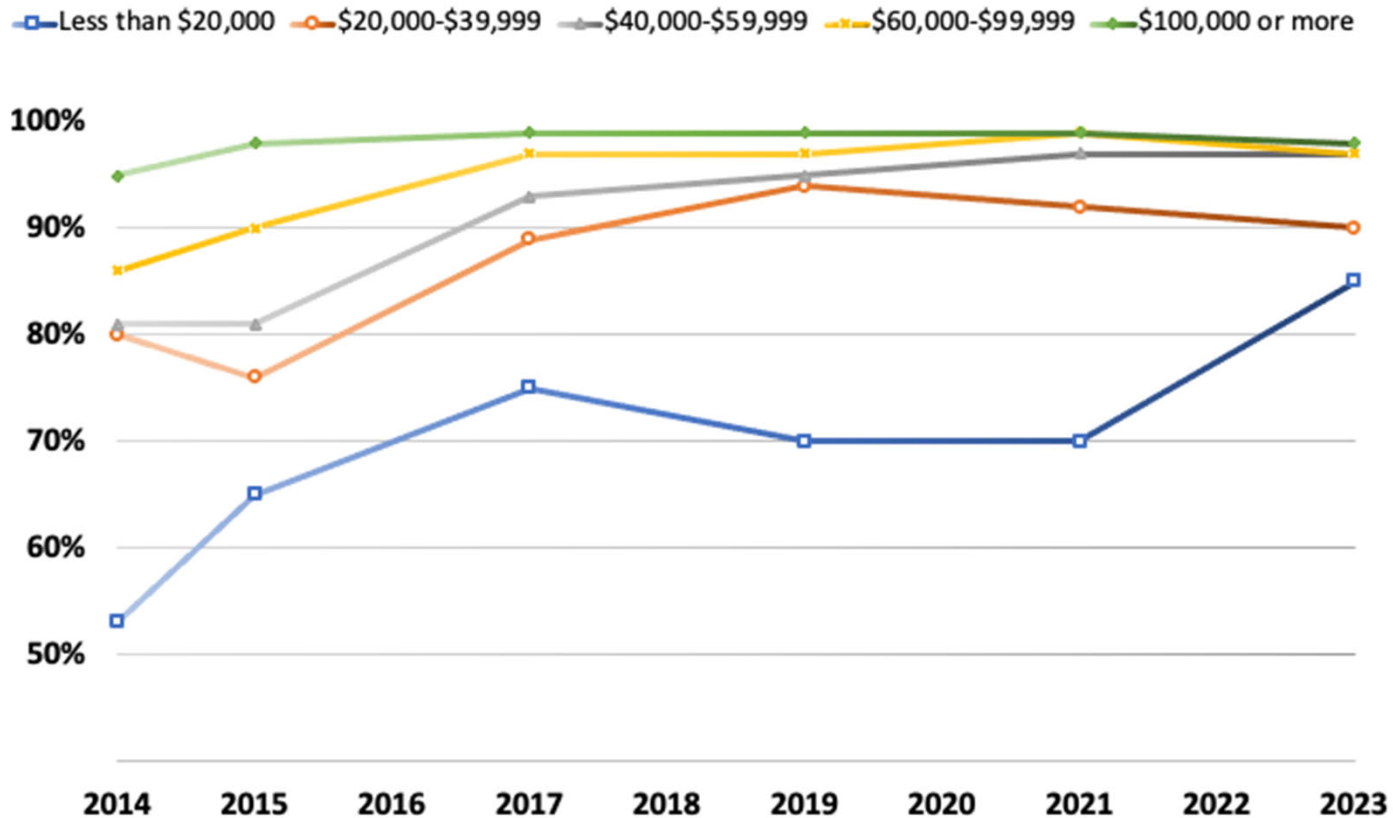
Broadband Adoption by Educational Attainment (2014 - 2023)



Source: 2021/23 from USC; 2017-2019 from Berkeley IGS Poll; 2014 to 2016 from The Field Poll.

Income Gap in Broadband Adoption Has Decreased Thanks to Jump in Adoption Among the Poorest Households (<20K)

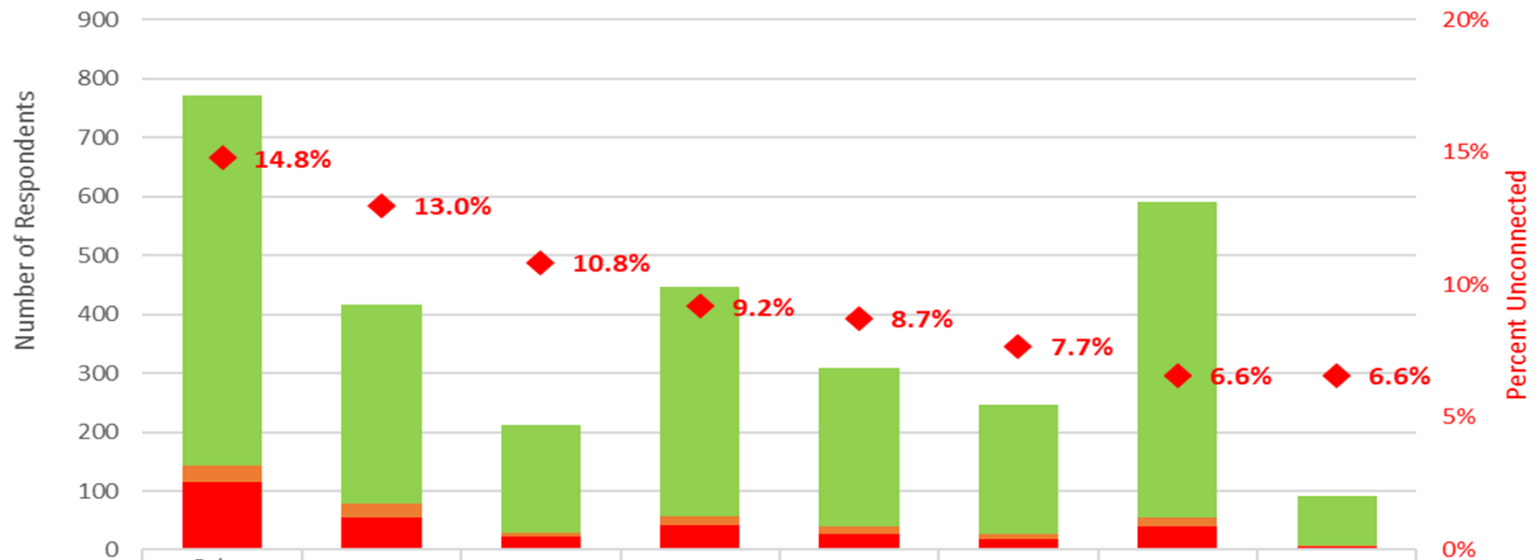
Broadband Adoption by Household Income (2014 - 2023)



Source: 2021/23 from USC; 2017-2019 from Berkeley IGS Poll; 2014 to 2016 from The Field Poll.

Covered Populations: Low-Income and Households with Language Barriers Still Lag Behind in Broadband Adoption

Connectivity by Covered Populations
Ordered by Decreasing Percent of Unconnected Respondents

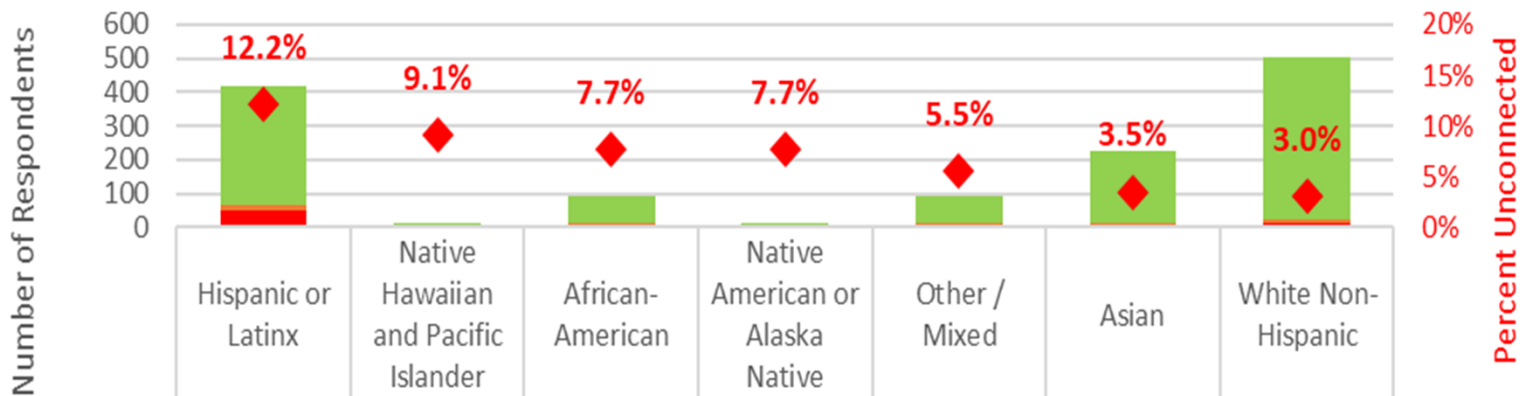


	Other Language at Home	Low-Income	Rural	60 or Older	Reported Disability	Veteran	Woman	Identifies as LGBTQIA+
Connected	628	338	183	389	270	220	536	83
Underconnected	29	24	6	16	12	8	16	2
Unconnected	114	54	23	41	27	19	39	6
Percent Unconnected	14.8%	13.0%	10.8%	9.2%	8.7%	7.7%	6.6%	6.6%
Percent Underconnected	3.8%	5.8%	2.8%	3.6%	3.9%	3.2%	2.7%	2.2%
Percent Connected	81%	81%	86%	87%	87%	89%	91%	91%

Main Sample; All Respondents

Hispanic/Latinx Residents More Likely to be Unconnected Than Other Racial/Ethnic Groups

Connectivity by Race and Ethnicity
Ordered by Decreasing Percent of Unconnected Respondents

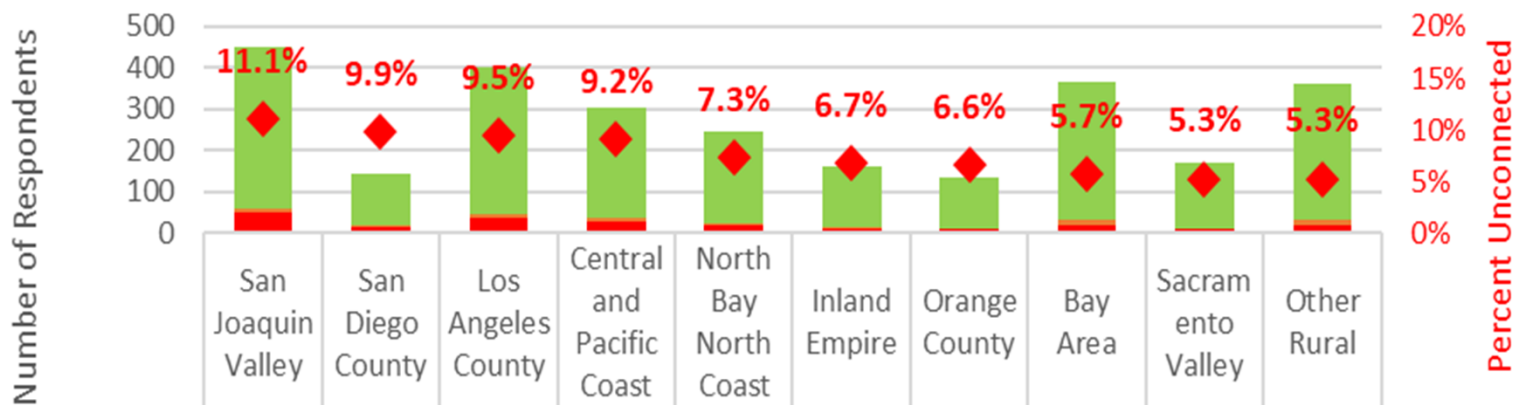


■ Connected	353	10	80	9	80	214	476
■ Underconnected	14	0	4	3	6	5	10
■ Unconnected	51	1	7	1	5	8	15
◆ Percent Unconnected	12.2%	9.1%	7.7%	7.7%	5.5%	3.5%	3.0%
Percent Underconnected	3.3%	0.0%	4.4%	23.1%	6.6%	2.2%	2.0%
Percent Connected	84%	91%	88%	69%	88%	94%	95%

Main Sample; All Respondents; Valid Responses n = 1352

Main + Rural Oversample: Broadband Adoption Varies Across the State, San Joaquin Valley Lags Behind Other Regions

Connectivity by Region
 Ordered by Decreasing Percent of Unconnected Respondents



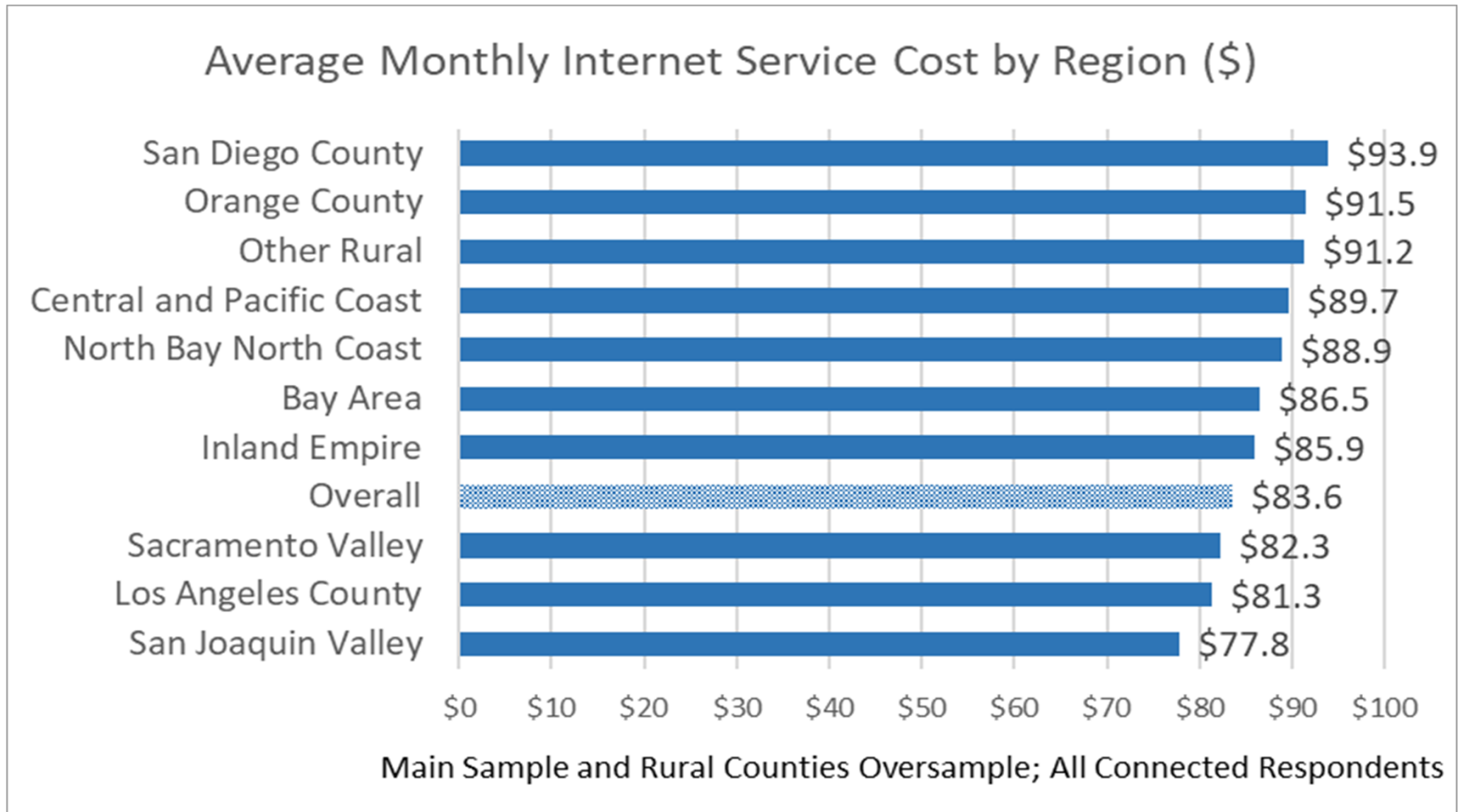
	San Joaquin Valley	San Diego County	Los Angeles County	Central and Pacific Coast	North Bay North Coast	Inland Empire	Orange County	Bay Area	Sacramento Valley	Other Rural
Connected	393	123	353	270	224	147	126	335	159	329
Underconnected	8	5	10	7	5	5	2	12	2	12
Unconnected	50	14	38	28	18	11	9	21	9	19
Percent Unconnected	11.1%	9.9%	9.5%	9.2%	7.3%	6.7%	6.6%	5.7%	5.3%	5.3%
Percent Underconnected	1.8%	3.5%	2.5%	2.3%	2.0%	3.1%	1.5%	3.3%	1.2%	3.3%
Percent Connected	87%	87%	88%	89%	91%	90%	92%	91%	94%	91%

Main Sample and Rural Counties Oversample; All Respondents; Valid Responses n = 2744

Main Topics

1. Adoption Across Covered Populations and Regions
- 2. Broadband Costs**
3. Reasons for Non-Adoption
4. ACP Awareness and Participation
5. Telehealth
6. Access and Devices Among K-12 Households
7. Digital Skills

Average Cost of Broadband in California is \$83.60/month, Generally Higher in Rural Areas



Main Topics

1. Adoption Across Covered Populations and Regions
2. Broadband Costs
- 3. Reasons for Non-Adoption**
4. ACP Awareness and Participation
5. Telehealth
6. Access and Devices Among K-12 Households
7. Digital Skills

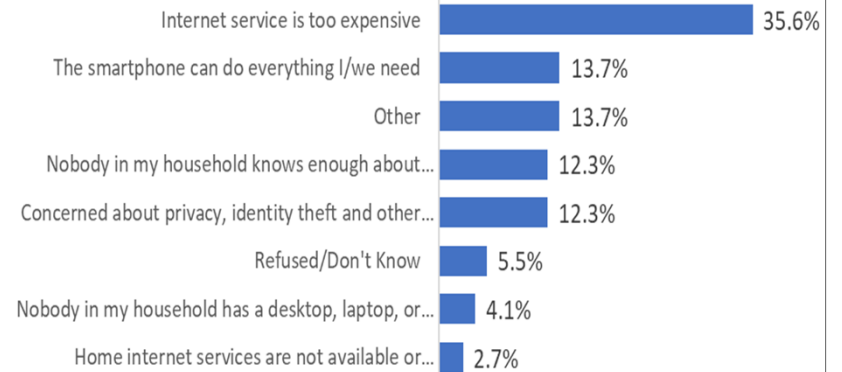
Cost Is the Main Barrier to Broadband Adoption, Followed by Concerns About Privacy

Reasons for Not Having Internet (Multiple Answers)



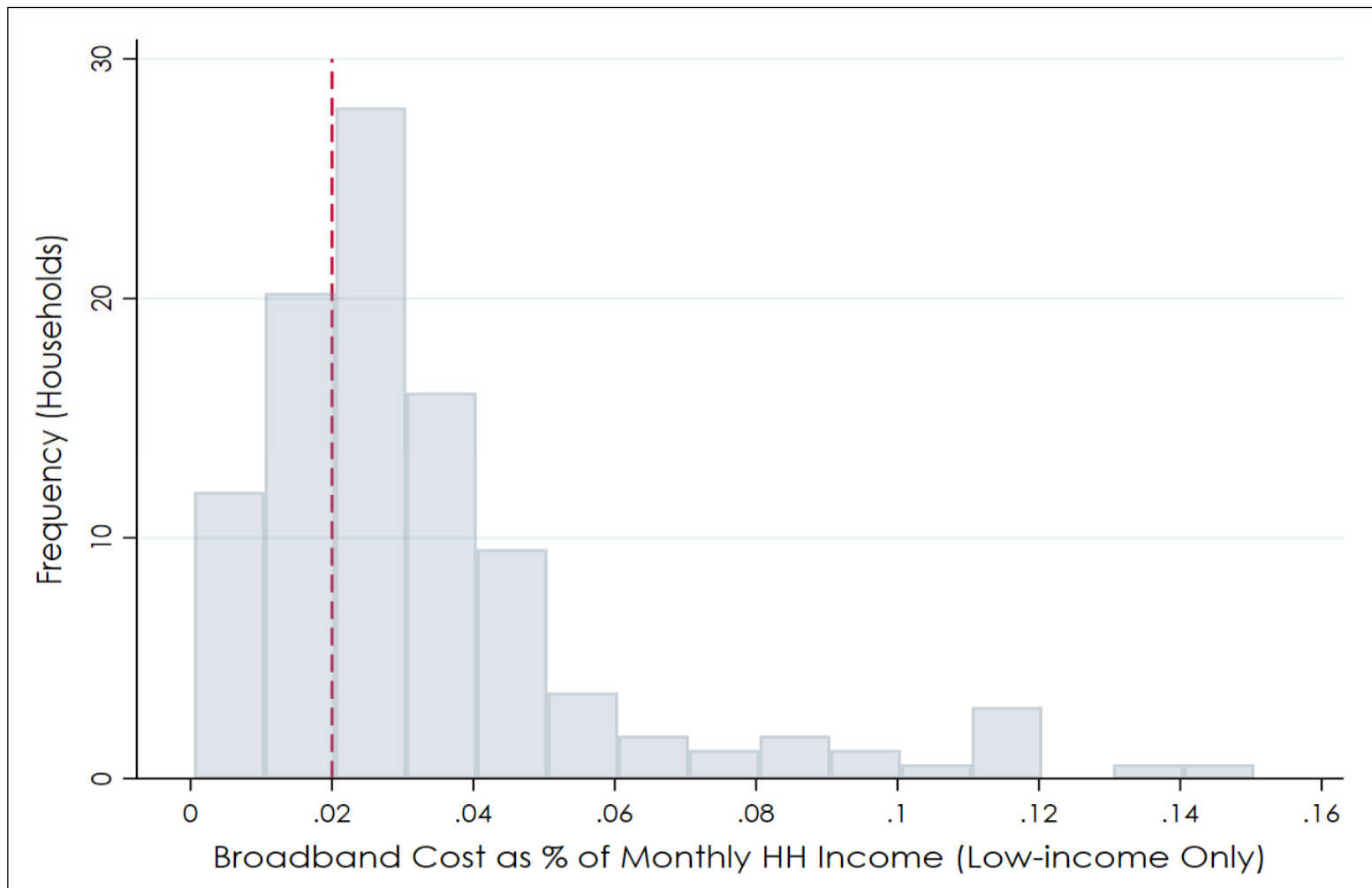
Main Sample; Unconnected and Underconnected Respondents ; Valid Responses n= 118

Top Reason Why not Connected (Single Response)



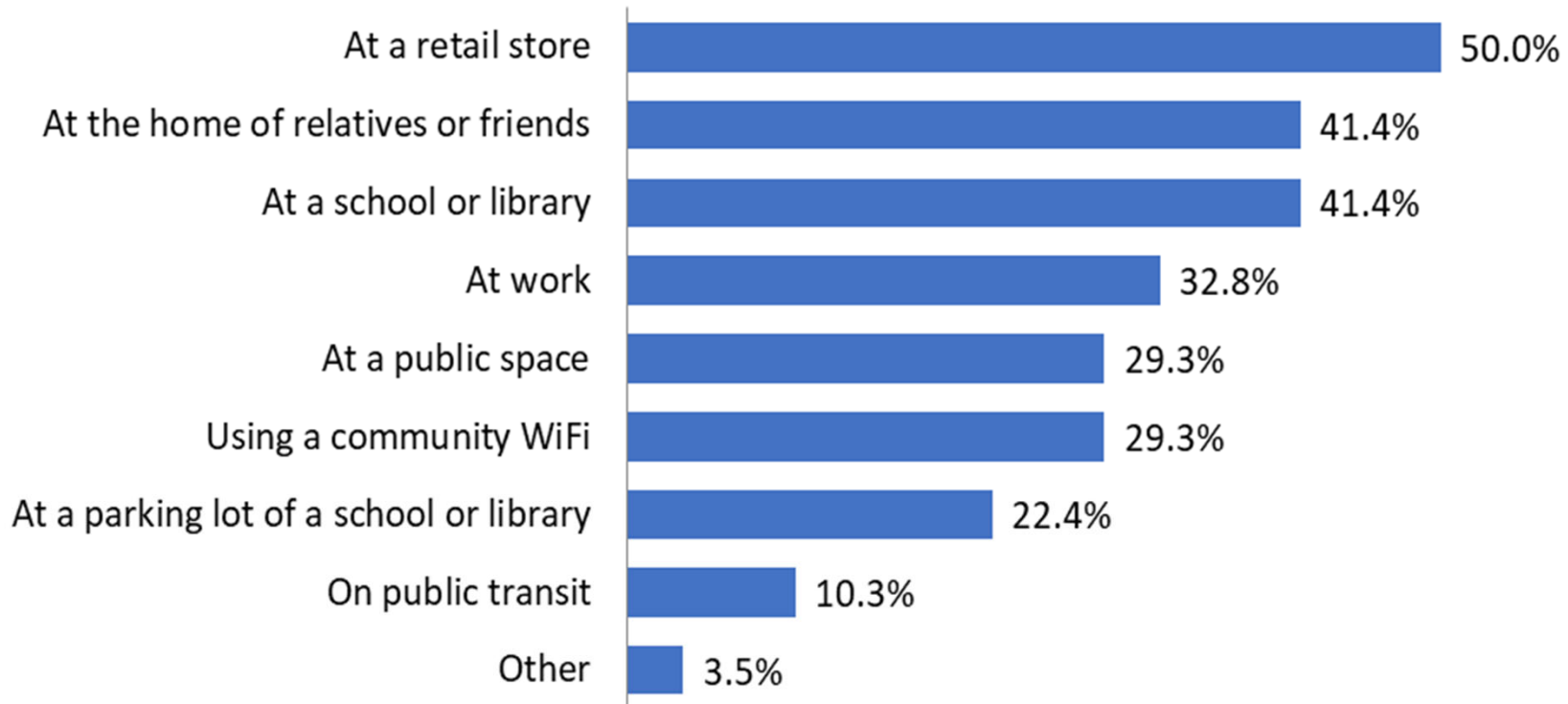
Main Sample; Underconnected and Unconnected Respondents; Valid Responses: n=73

For Most Low-income Households (~70%), Cost Exceeds FCC-Recommended Threshold (2% of Disposable Income)



Public/Community Broadband Remains a Key Access Alternative for Unconnected Households

Where Respondents Can Connect, Not Using Their Own Plan
(Multiple Responses)



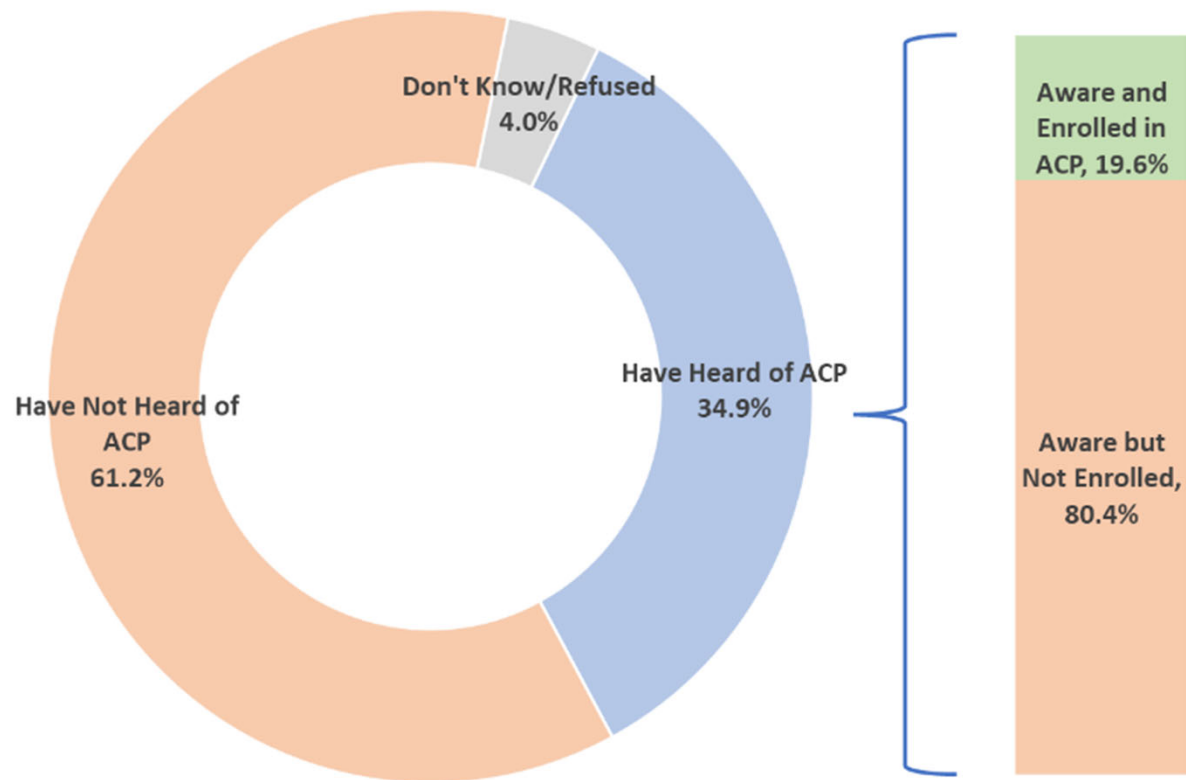
Main Sample; Unconnected and Underconnected Respondents ; Valid Responses n= 58

Main Topics

1. Adoption Across Covered Populations and Regions
2. Broadband Costs
3. Reasons for Non-Adoption
- 4. ACP Awareness and Participation**
5. Telehealth
6. Access and Devices Among K-12 Households
7. Digital Skills

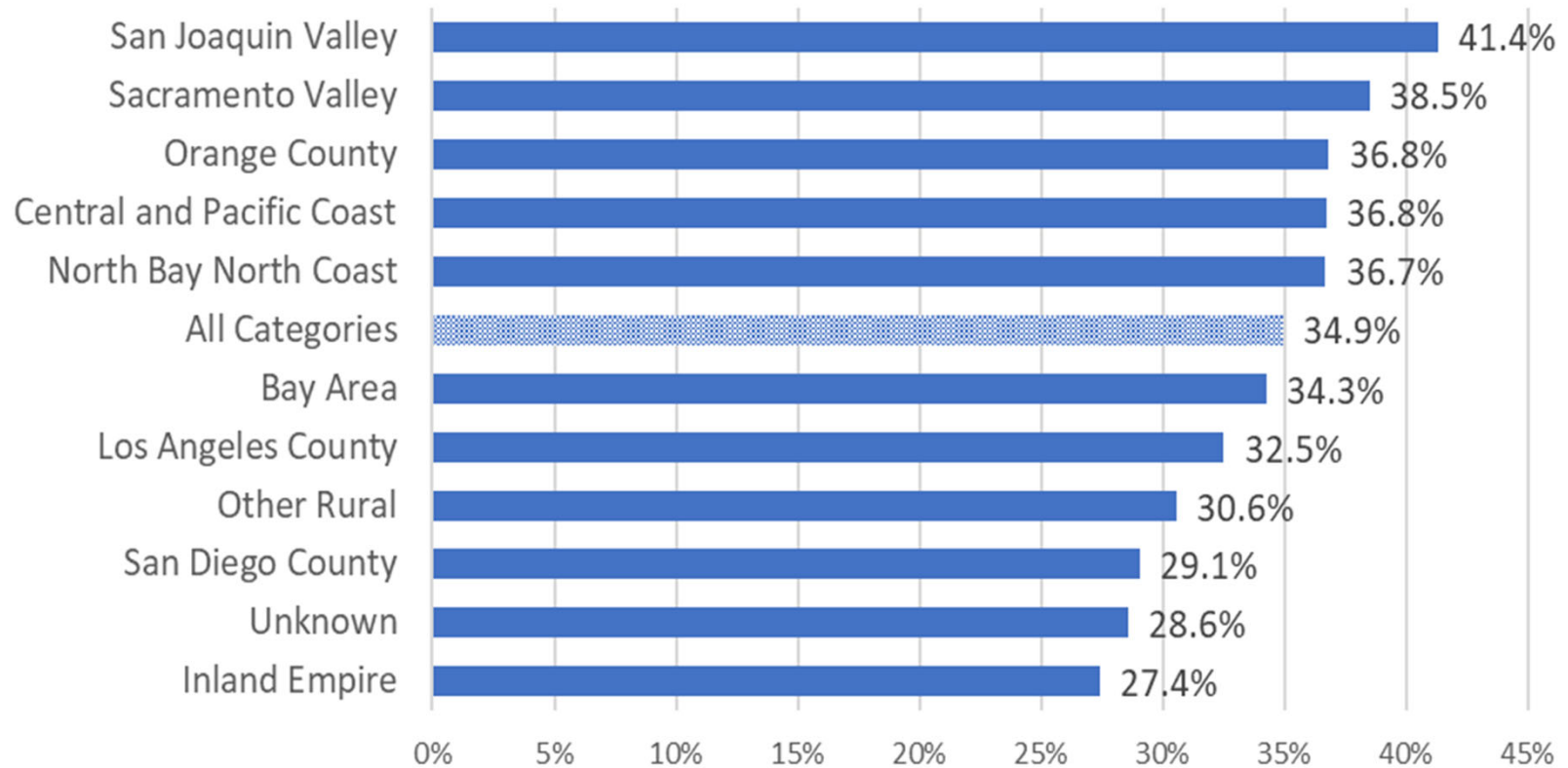
ACP Awareness and Participation Rates Remain Low Among Eligible Households

ACP Awareness and Enrollment Among ACP Eligible Respondents



ACP Awareness Varies Across the State, Higher in San Joaquin/Sacramento Valley, Lower in Inland Empire

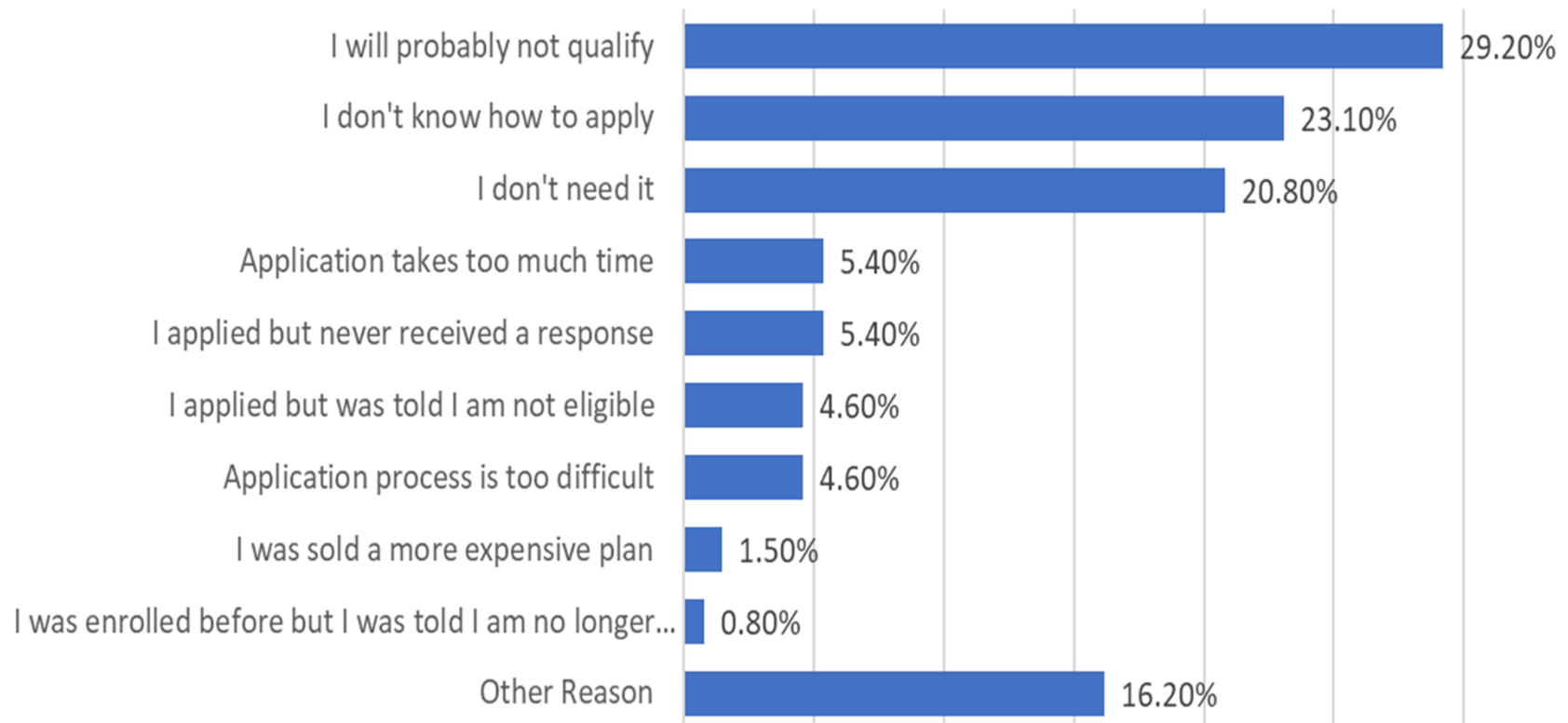
Percent Who Have Heard of ACP by Region



Main Sample and Rural Counties Oversample, All Respondents

Beyond Awareness, Lack of Information/Misinformation Also Reduce Participation in ACP and Similar Programs

Why are you not currently enrolled in ACP or Other Discount Programs?

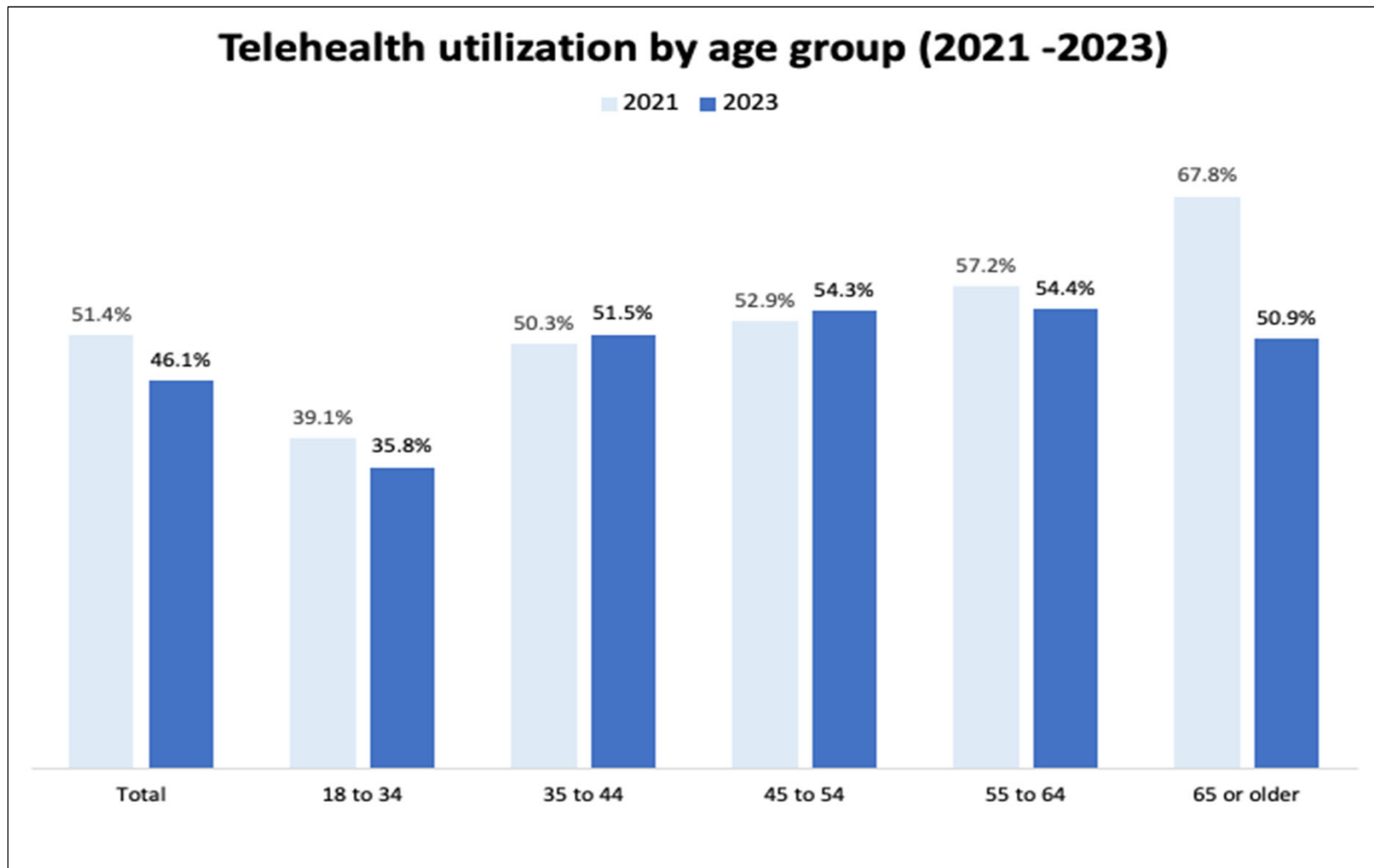


Main Sample; ACP Eligible and Not Enrolled

Main Topics

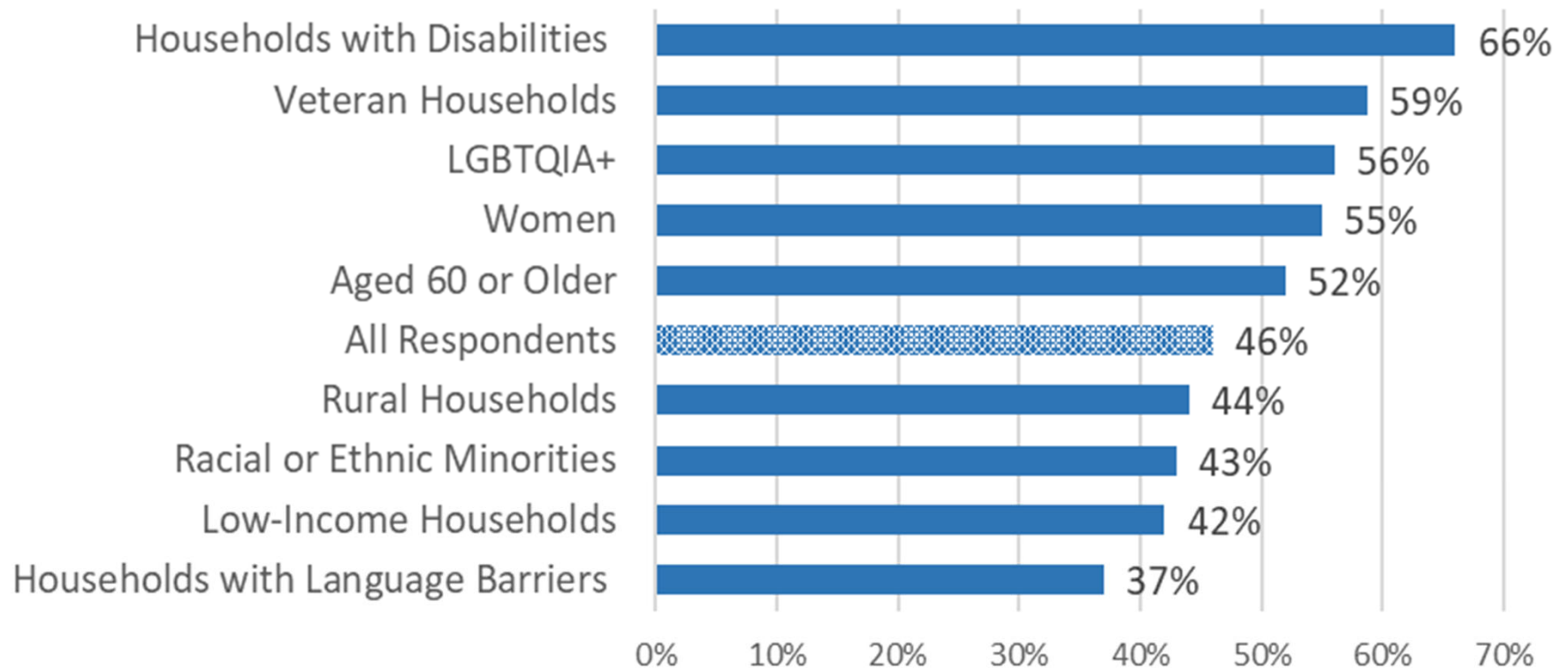
1. Adoption Across Covered Populations and Regions
2. Broadband Costs
3. Reasons for Non-Adoption
4. ACP Awareness and Participation
- 5. Telehealth**
6. Access and Devices Among K-12 Households
7. Digital Skills

Following Pandemic Surge, Telehealth Utilization Has Declined in Particular for Older Adults



Telehealth Utilization Lower for Those With Language Barriers and Low-Income Households

Percent of Covered Population Respondents Using Telehealth



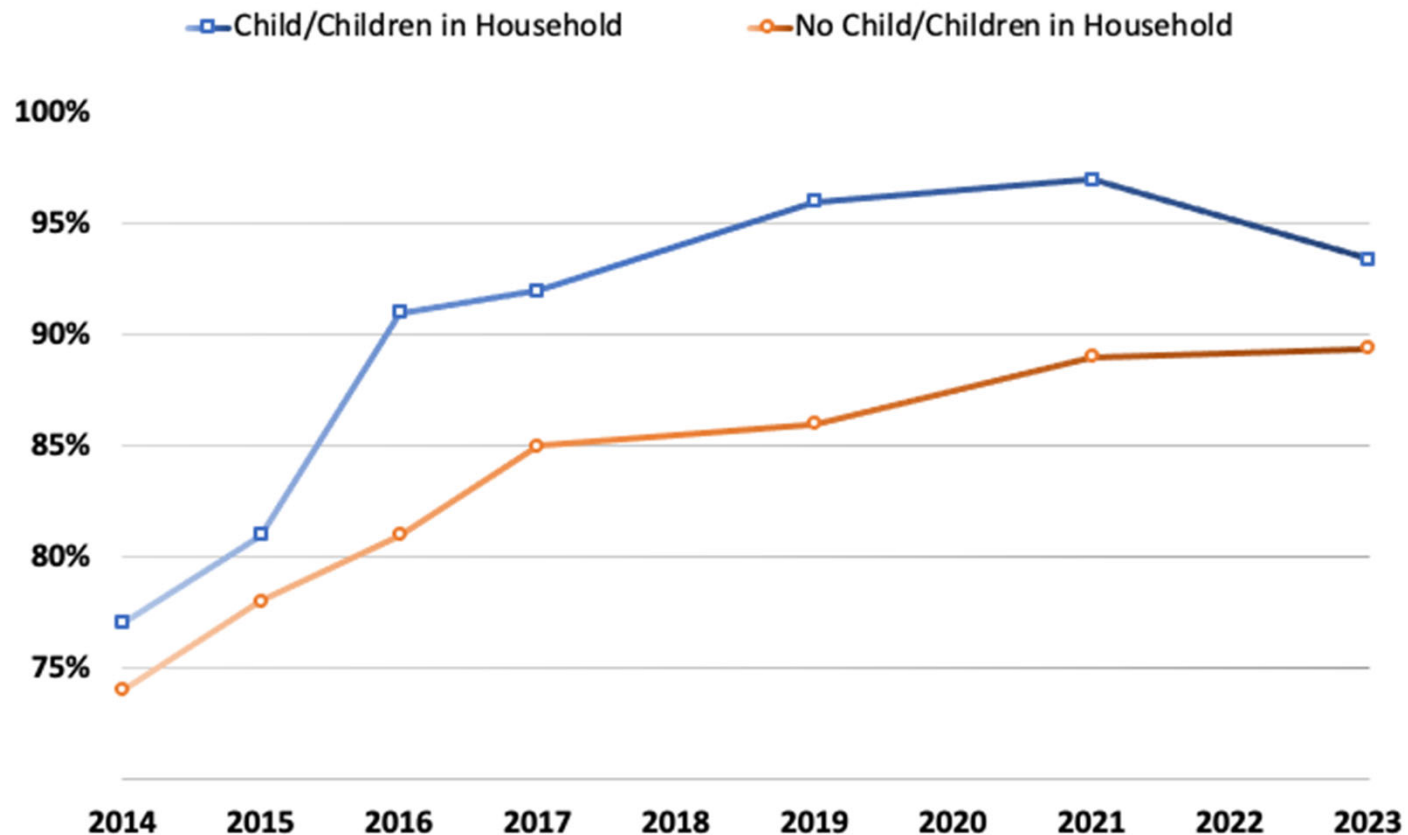
Main Sample; All Respondents

Main Topics

1. Adoption Across Covered Populations and Regions
2. Broadband Costs
3. Reasons for Non-Adoption
4. ACP Awareness and Participation
5. Telehealth
- 6. Access and Devices Among K-12 Households**
7. Digital Skills

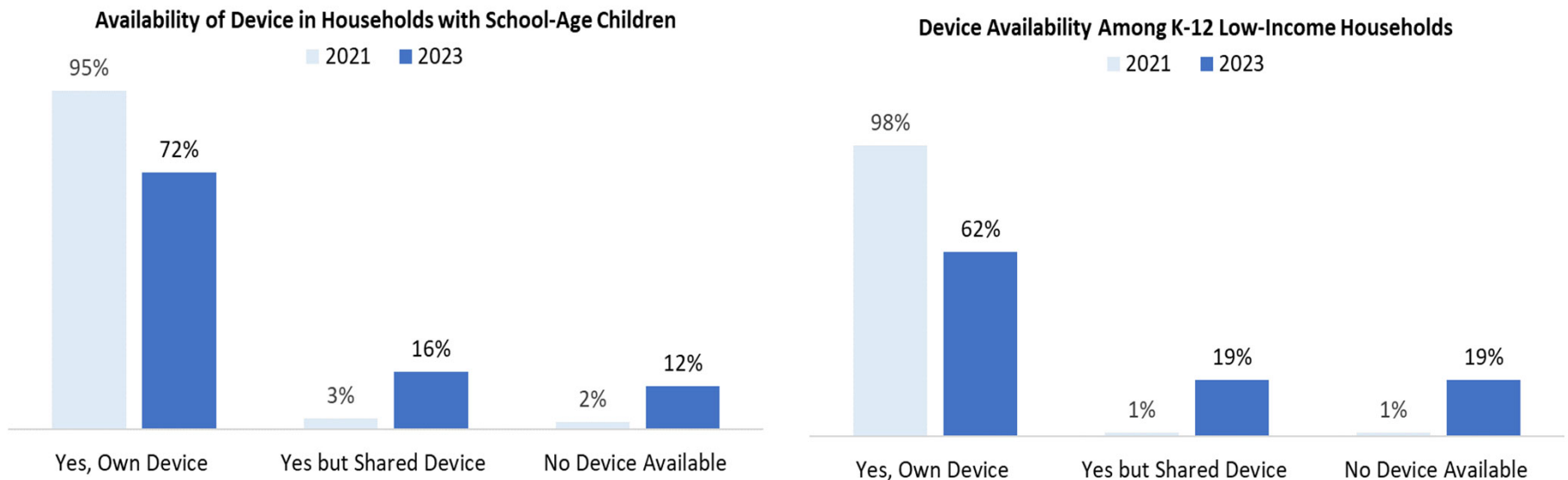
Broadband Adoption Among K-12 Households Has Decreased to Just Below Pre-Pandemic Levels

Broadband Adoption by Presence of School-Age Children (2014 - 2023)



Source: 2021/23 from USC; 2017-2019 from Berkeley IGS Poll; 2014 to 2016 from The Field Poll.

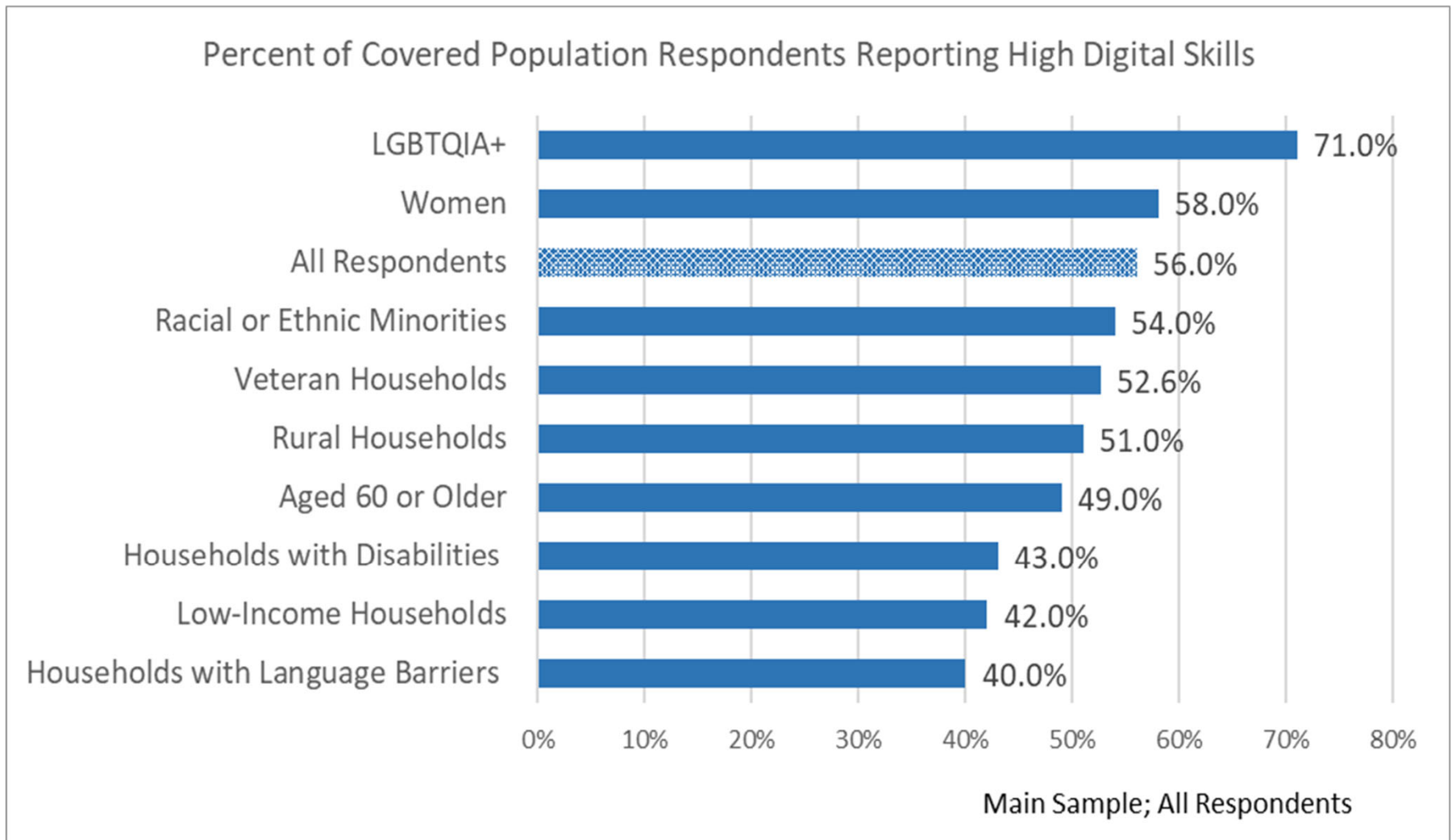
Device Availability Has Also Decreased, in Particular Among Low-Income K-12 Households



Main Topics

1. Adoption Across Covered Populations and Regions
2. Broadband Costs
3. Reasons for Non-Adoption
4. ACP Awareness and Participation
5. Telehealth
6. Access and Devices Among K-12 Households
7. **Digital Skills**

Share of High-Skills Users is Lower Among Non-English-Language HHs, Low-Income HHs, and HHs with Disabilities



THANK YOU

Dr. Hernan Galperin
hernan.galperin@usc.edu

Dr. François Bar
fbar@usc.edu

Dr. Thai V. Le
thaivle@usc.edu

Full 2023 Digital Equity Survey Report:
<https://arnicusc.org/2023-statewide-digital-equity-survey/>