

Household Pulse Survey. Foundation For a Rapid Response, High-Frequency Household Data System

Federal Committee on Statistical Methodology

*Session F-6: Reporting on the Pulse of America –
Rapid Data and Collection and Information Sharing Initiatives in the
Federal Government
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Any opinions and conclusions expressed herein are those of the author and do not represent the views of the U.S. Census Bureau. All results are from the Household Pulse Survey website that notes the following: *The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY22-426.*

The Original Demographic High-Frequency Survey (DHFS): Household Pulse Survey



- The Household Pulse Survey (HPS) was developed to address the need for ongoing and more timely insight into the impacts of the Covid-19 Pandemic on American households.
- The development of HPS involved collaboration with five other Federal agencies and OMB.
- Data collection was completed in one- then two-week and now monthly cycles using a single mode (the internet) because the Census Bureau had suspended its field and production center operations.
- A sample of one million households was selected for each cycle. At the end of each cycle of data collection, the data were processed, and estimates released at national and state levels and for the 15 largest metropolitan areas, enabling policy-makers to track dynamics across multiple dimensions in near real time.
- As the pandemic persisted survey questions were revised, removed or added as information needs changed.
- HPS represents a new approach for producing Federal statistics that are timely and relevant, while preserving the integrity and transparency for which Federal statistics are known.

Household Pulse Survey Overview

Household Pulse Survey (HPS)

Designed to understand impacts of Covid-19 on American families relating to employment, food security, housing, health and educational disruption

Timeline for HPS Data Collection

April 23, 2020 – Current

Partners

Bureau of Labor Statistics (BLS)
Bureau of Transportation Statistics (BTS)
Centers for Disease Control and Prevention (CDC)
Consumer Financial Protection Bureau (CFPB)
Department of Defense (DOD)
Energy Information Administration (EIA)
Department of Health and Human Services (HHS-ASPE)
Department of Housing and Urban Development (HUD)
Maternal and Child Health Bureau (MCHB)

National Center for Education Statistics (NCES)
National Center for Health Statistics (NCHS)
National Institute for Occupational Safety and Health (NIOSH)
USDA Economic Research Service (USDA-ERS)
USDA Food and Nutrition Service (USDA-FNS)
The White House Council of Economic Advisers (CEA)
The White House Domestic Policy Council (DPC)

Platform: Qualtrics

Frame

Census Contact Frame (Existing email and cell-phone frames)
Matched to Census Bureau's Master Address File (MAF) records
Email and Text Invitations to Take an Online Survey



Current Content

Basic demographics

Age, race, Hispanic origin, marital status, educational attainment
SOGI (Census/OMB/DPC)
Disability status (NCHS/CDC)
Armed forces status (DOD)

Employment questions

Employment and employment income (BLS/Census)
Unemployment Insurance receipt (BLS)
Spending source of funds (BLS)
Series on expenditures and price increases (BLS)
Essential worker occupations (NIOSH)
Telework (BTS)
Child Care Arrangements and Costs (HHS-ASPE)

Food security questions

Past and current food sufficiency (USDA-ERS)
Free meals (USDA-ERS)
SNAP receipt (USDA-ERS)
Access to Infant Formula (USDA-FNS)

Health questions

Health insurance (NCHS/Census)

Vaccination receipt (CDC/HHS-ASPE)
Children's vaccination receipt (CDC/HHS-ASPE)
Long Covid and Ability to Carry Out
Day-to-Day Activities (NCHS)
Covid Testing and Diagnosis (HHS-ASPE)
Covid Treatments (HHS-ASPE)
Pediatric Mental Health (MCHB)
Difficulty with Self Care (NCHS)

Housing questions

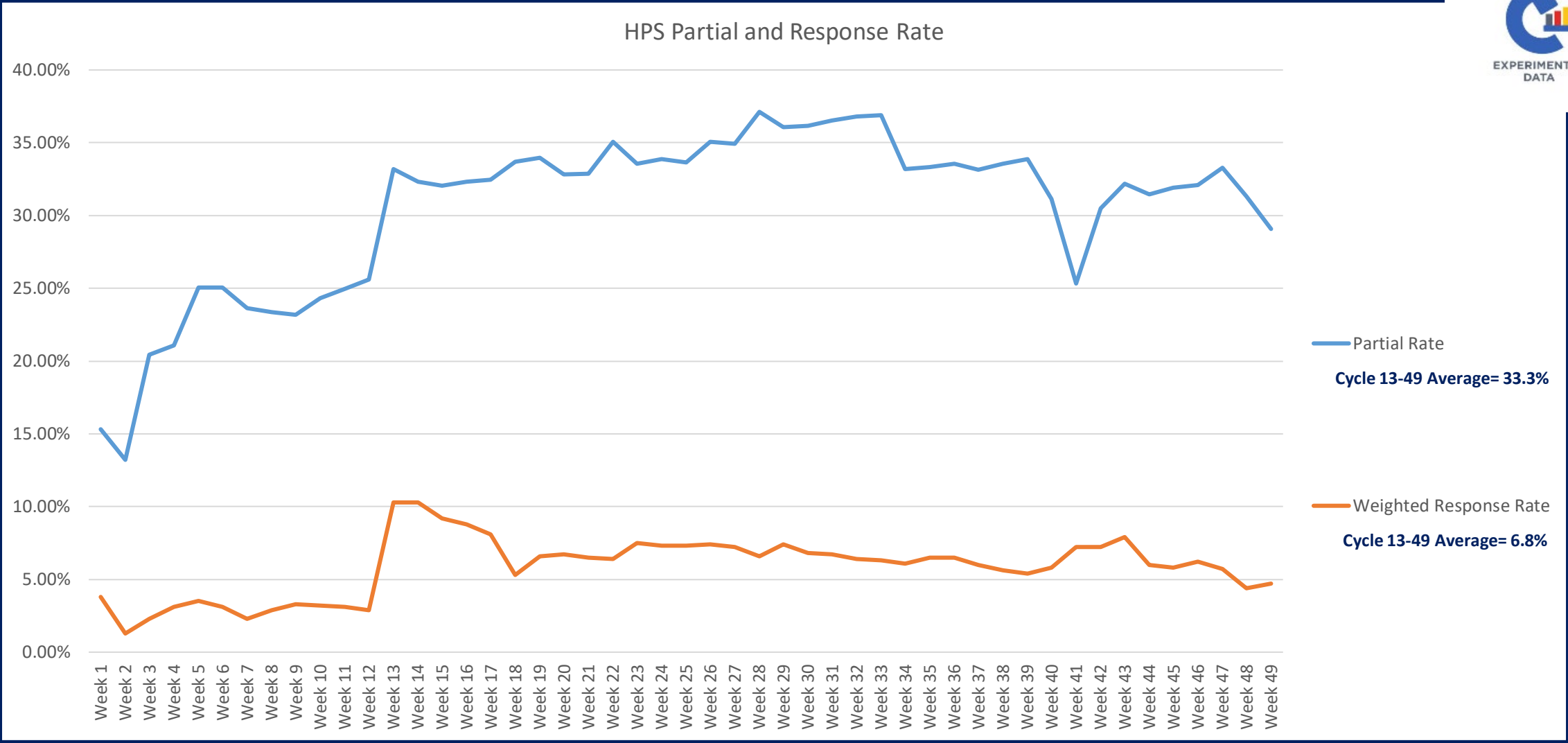
Tenure (HUD)
Living quarters (HUD)
Rent and mortgage current payment status (HUD)
Eviction and foreclosure expectations (HUD)
Months behind on rent/mortgage (CFPB)
Use of rent assistance (CFPB)
Energy assistance and use (EIA)

Education questions

K-12 Enrollment (NCES)
Educational Catch-Up Activities (NCES)



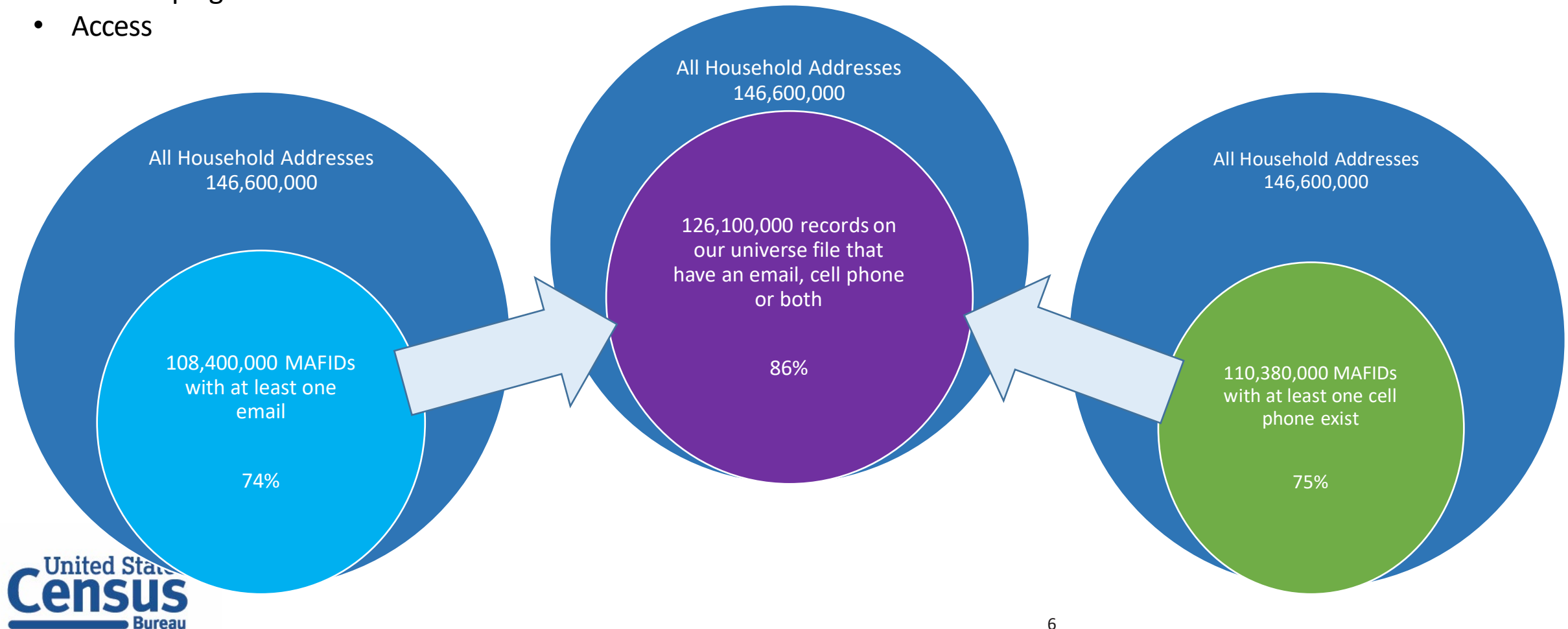
Figure 1. Response



Frame

Contact frame challenges

- Coverage
- Accuracy
- Gatekeeping
- Access



Weighting



Table 7. Person-Level Coverage Ratios at the National Level for Household Pulse Survey Before and After Raking for Collection Week* 49: September 14, 2022 – September 26

Demographic Characteristic	Before Raking	After Raking
Total Population	1.04	1.01
Male	0.99	1.02
Female	1.08	1.00
Age 18-24	0.47	0.82
Age 25-29	0.70	1.00
Age 30-34	0.86	1.03
Age 35-39	1.09	1.02
Age 40-44	1.22	1.12
Age 45-49	1.25	1.07
Age 50-54	1.23	1.02
Age 55-64	1.24	1.07
Age 65+	1.14	0.98
Hispanic	0.70	1.02
Non-Hispanic white-only	1.21	1.01
Non-Hispanic black-only	0.64	0.90
Non-Hispanic other races	1.05	1.12
No high-school diploma	0.21	0.61
High-school diploma	0.46	1.17
Some college or associate's degree	1.13	1.01
Bachelor's degree or higher	1.78	1.01

Source: U.S. Census Bureau, Household Pulse Survey

* For Phase 3.6 the Household Pulse Survey continues to call these collection periods "weeks" for continuity with Phase 1.

Figure 2. Percent of Adults Expecting Loss in Employment Income

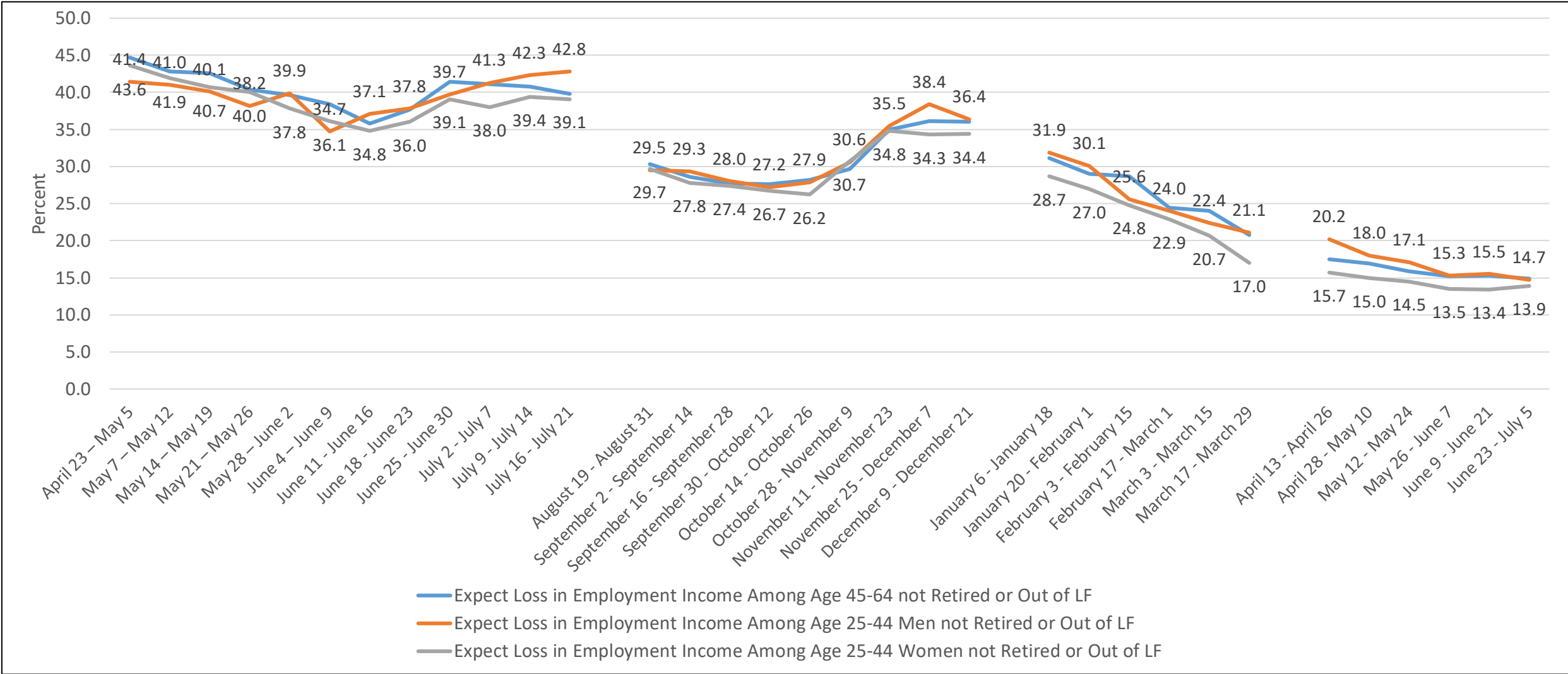
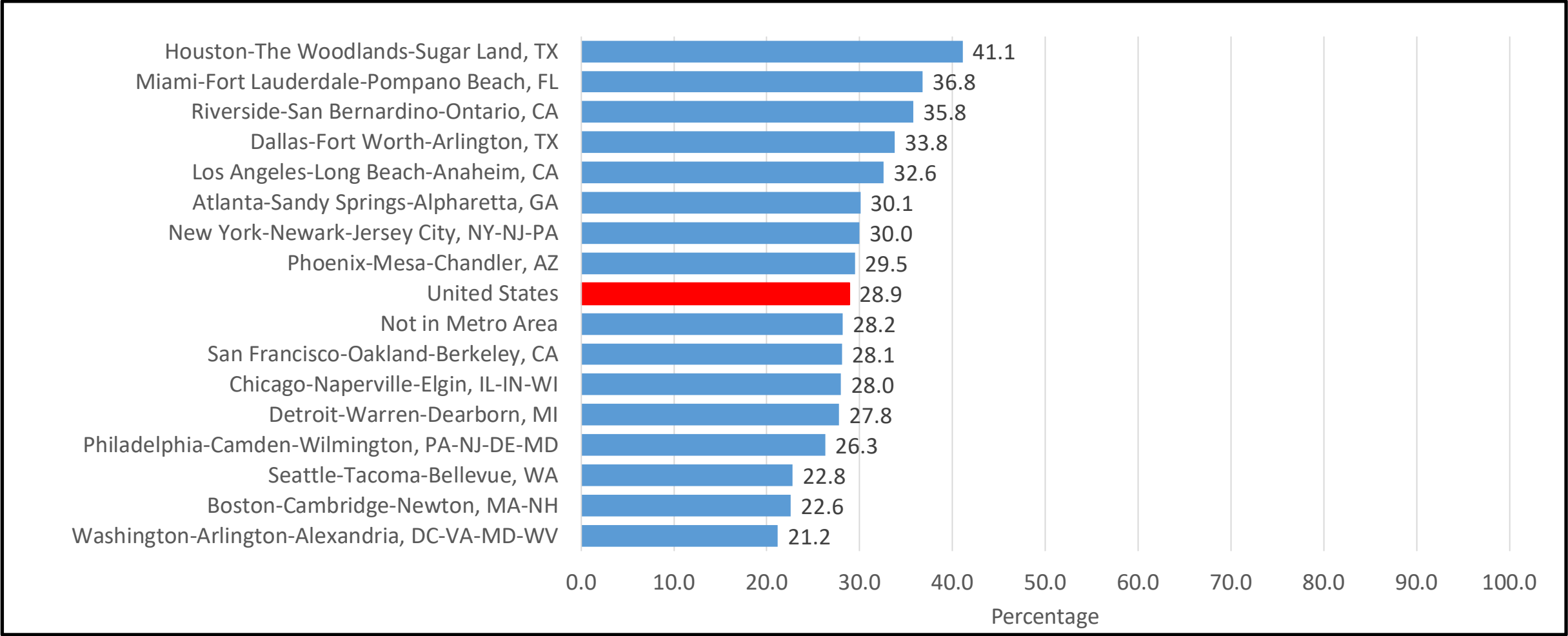


Figure 3. Percentage of Adults in Households Having Difficulty Paying Energy Bill

15 Largest Metros: Cycle 34 - Cycle 38: July 21 - September 27, 2021



Source: U.S. Census Bureau, Household Pulse Survey, July 21 – September 27, 2021.
Universe limited to adults in households where ENERGY was in (1,2,3,4)
Percentage reporting one or more months limiting other expenses to pay energy bill in the last 12 months.

Interactive Tool - Unable to Pay Energy Bill



Household Pulse Survey



Select an Estimate:

Unable to Pay Energy Bill

Filter By:

States: ---

Metro Areas: ---

Map and Chart Display:

Week: 38

Show: States

Reset

The Household Pulse Survey is designed to deploy quickly and efficiently, collecting data on a range of ways in which people's lives have been impacted by the pandemic. Data will be disseminated in near real-time to inform federal and state response and recovery planning.

Notes:

- Percentages are based on reporting distributions and do not include the populations that did not report to specific items.
- A margin of error is a measure of an estimate's variability. This number, when added to and subtracted from the estimate, forms the 90-percent

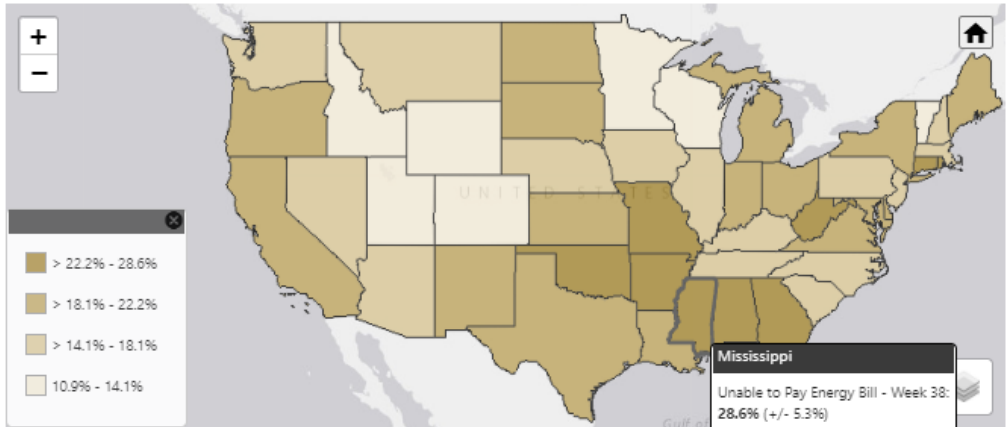


Unable to Pay Energy Bill

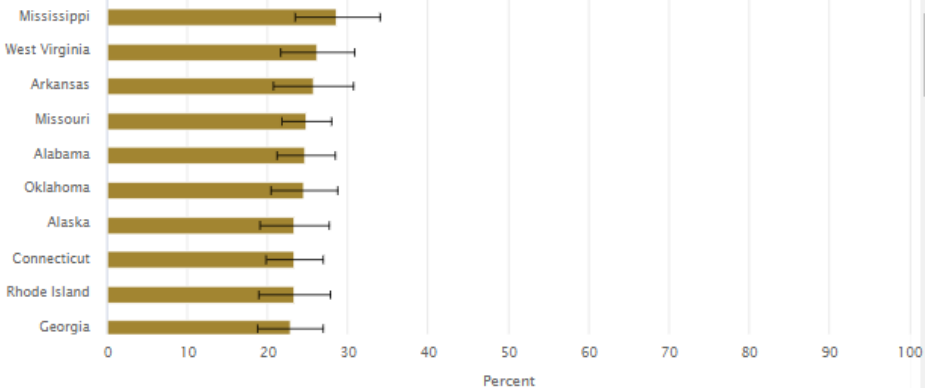
Percentage of adults in households that were unable to pay an energy bill in full in the last 12 months



Week 38



Week 38



Source: U.S. Census Bureau, Household Pulse Survey



Unable to Pay Energy Bill: Adults in households that were unable to pay an energy bill in full in the last 12 months

		Total Unable to Pay Energy Bill		Percent Unable to Pay Energy Bill					
Week	Area	Number	Margin of Error +/-	Percent	MOE +/-	Measure Universe	Total Population age 18+		
38	United States	36,320,118	1,307,362	19.2	0.7	189,309,476	250,265,449		
38	Alabama	677,325	102,639	24.7	3.6	2,742,761	3,737,637		
38	Alaska	101,142	18,963	23.3	4.3	433,780			
38	Arizona	699,940	158,274	15.7	3.3	4,458,215			
38	Arkansas	422,581	88,242	25.7	5.0	1,684,512			

Is this page helpful?

Detailed Housing Table 4 – Energy



Housing Table 4. Household Energy Use and Spending in the last 12 Months, by Select Characteristics: United States											
Source: U.S. Census Bureau Household Pulse Survey, Week 38.											
Note: These data are experimental. Users should take caution using estimates based on subpopulations of the data – sample sizes may be small and the standard errors may be large.**											
Total Population 18 Years and Older											
Select characteristics	Total*	Household reduced or forwent expenses for basic household necessities, such as medicine or food, in order to pay an energy bill					Household kept home at a temperature that felt unsafe or unhealthy				
		Almost every month	Some months	1 or two months	Never	Did not report	Almost every month	Some months	1 or two months	Never	Did not report
Total	250,265,449	14,926,293	23,057,005	16,173,788	134,863,528	61,244,835	9,318,530	14,391,901	10,556,079	155,007,527	
7 or more people in the household	15,622,600	1,669,739	2,101,682	1,013,314	4,968,892	5,868,973	982,571	1,069,989	1,015,041	6,717,399	
Presence of children under 18 years old											
Children in household	93,798,737	6,602,423	10,142,104	6,695,704	42,450,470	27,908,036	3,535,431	5,257,164	3,251,634	54,050,817	
No children	156,466,712	8,323,870	12,914,901	9,478,083	92,413,059	33,336,799	5,783,099	9,134,738	7,304,445	100,956,710	
Respondent or household member experienced loss of employment income in last 4 weeks											
Yes	40,986,654	6,563,523	7,633,232	4,218,427	12,516,697	10,054,775	2,984,889	5,195,303	2,916,347	19,921,928	
No	198,355,240	8,343,401	15,406,293	11,914,171	122,152,697	40,538,679	6,289,233	9,176,374	7,630,969	134,877,932	
Did not report	10,923,554	19,369	17,481	41,189	194,134	10,651,381	44,408	20,225	8,763	207,667	
Respondent employed in the last 7 days											
Yes	135,925,108	7,103,476	12,547,103	9,640,825	81,422,733	25,210,971	4,623,365	7,292,108	6,166,029	92,675,144	
No	102,637,241	7,714,862	10,437,213	6,450,712	53,090,282	24,944,171	4,603,376	7,013,525	4,382,439	61,888,427	
Did not report	11,703,100	107,955	72,688	82,250	350,513	11,089,693	91,790	86,268	7,611	443,955	
Household income											
Less than \$25,000	26,728,741	5,605,014	5,792,002	2,957,033	12,165,381	209,311	2,879,111	4,068,514	2,638,037	16,985,143	
\$25,000 - \$34,999	19,724,951	2,685,692	3,932,673	2,591,261	10,224,239	291,086	1,298,701	2,364,814	1,351,797	14,532,025	
\$35,000 - \$49,999	21,742,459	2,368,752	3,464,648	2,632,962	13,133,322	142,776	921,462	2,189,981	1,944,816	16,571,611	
\$50,000 - \$74,999	31,063,898	1,774,550	3,810,495	3,311,689	22,099,280	67,884	1,361,083	2,429,201	1,861,997	25,354,034	
\$75,000 - \$99,999	24,164,920	1,027,618	2,109,643	1,787,208	19,156,908	83,544	812,885	1,129,016	808,902	21,351,694	
\$100,000 - \$149,999	27,543,616	622,275	1,640,923	1,418,867	23,820,271	41,279	819,776	831,949	950,209	24,885,070	
\$150,000 - \$199,999	12,953,771	172,288	461,095	573,048	11,723,032	24,308	310,715	443,917	360,975	11,807,098	
\$200,000 and above	14,281,742	147,651	245,401	306,102	13,564,358	18,230	384,089	240,287	218,196	13,413,762	
Did not report	72,061,351	522,454	1,600,125	595,618	8,976,738	60,366,417	530,708	694,222	421,150	10,107,091	
Used in the last 7 days to meet spending needs*											
Regular income sources like those received before the pandemic	170,403,613	7,635,221	14,370,513	11,609,997	118,022,498	18,765,384	5,484,102	8,293,292	7,426,127	130,636,229	



Economic Hardship Declined in Households With Children as Child Tax Credit Payments Arrived



POPULATION

Adults in Households With Children More Likely to Report Loss in Employment Income During COVID-19

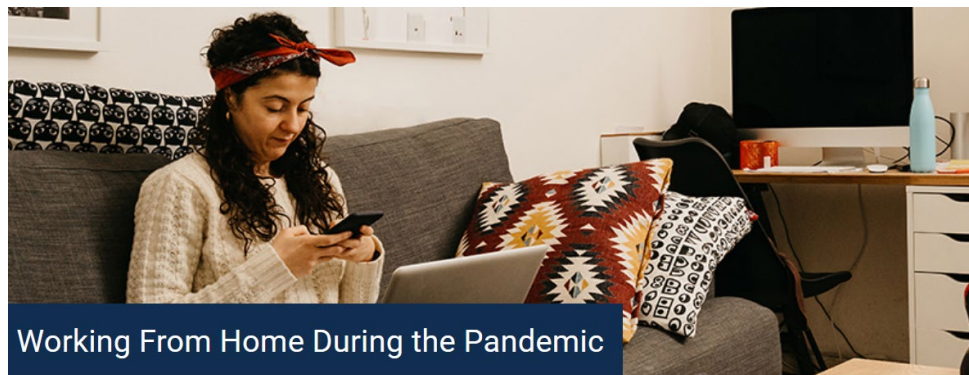
The U.S. Census Bureau's new Household Pulse Survey shows that adults living with children are especially likely to experience lost income and food



POPULATION

Around Half of Unvaccinated Americans Indicate They Will "Definitely" Get COVID-19 Vaccine

The Household Pulse Survey provides insight into attitudes toward COVID-19 vaccines.



Working From Home During the Pandemic



Those Who Switched to Telework Have Higher Income, Education and Better Health



LGBT Community Harder Hit by Economic Impact of Pandemic



Calling In Sick or Going on Vacation, Workers Aren't Showing Up This Summer

Some companies report difficulty keeping operations going due to illness and vacations, saying that maintaining workforces is tougher than at any previous time during the pandemic.

www.wsj.com

Inflation is making homelessness worse

Rising prices and soaring rents are taking their toll across the country

By Abha Bhattarai and Rachel Siegel

July 3, 2022 at 8:00 a.m. EDT

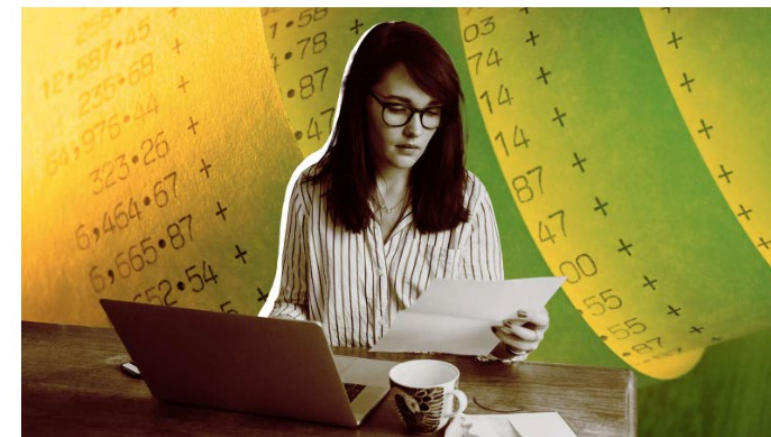


40% of Americans Are Struggling to Pay Their Bills Right Now

Author: Adam Hardy

Published: Jul 22, 2022 | 5 min read

SHARE



Money; Getty Images



How Many People Have Long COVID? The Statistics Are 'Pretty Scary'

Long COVID threatens to amass into a new wave of chronic illness with ramifications for health care systems and the economy for years to come.

www.usnews.com

Reimagining the Household Pulse Survey



- Development of the Demo High-Frequency Surveys (DHFS) Program
- Strengthening guidelines for content inclusion in the DHFS
- Refining sampling and data collection processes
 - Reduce collection frequency
 - Revise SMS and email language
 - Change contact distribution times
 - Testing customized link shortener for SMS messages
 - Analysis of contact frame quality
 - Experiment with mail invitations
 - Utilize adaptive design for targeted reminders and alternate contact methods
- Shifting content focus from COVID-19 to other emergent issues

Developing a Sustainable High-Frequency Surveys Program



- We are prepared to transition from an “emergency” mindset to one that builds upon the capabilities developed from HPS and the other demonstration efforts in two ways
 - Development of a new, **high-frequency surveys program** that becomes an established capability at the Bureau
 - Establishment of a sustainable structure to enable **rapid deployment of surveys** or **production of non-survey data products** as national, regional or state-level events demand
- High-frequency and rapid response outcomes would supplement data collected via established benchmark surveys
- **Build on partnerships with sister Federal statistical agencies** to develop a central service hub and associated assets that enable agencies to meet rapid response data needs as they arise

DHFS Program: Purpose



The Demographic High-Frequency Surveys Program (DHFS Program) is established to produce and disseminate data in near real time to support rapidly emerging or changing program or policy needs

- Provides a platform to produce estimates that support data-driven decisions in a rapid, efficient, and independent manner
- Supplements traditional Federal surveys, which establish “gold standard” measurements but require a level of development and testing that can take years to implement
- High-frequency surveys are intended to be deployed quickly and for data to be released in near real-time
- The DHFS Program supports Census-appropriated surveys (e.g., the Household Pulse Survey) as well as other high-frequency surveys conducted for other Federal agencies on a cost-reimbursable basis (e.g., the School Pulse Panel)

DHFS Program: Scope




- Distinguished from other survey operations by a **streamlined survey lifecycle** facilitated by a **lighter infrastructure** (e.g., minimal processing, data product limitations) for instrument development, data processing, and dissemination
- Results in surveys having at least one of these characteristics:
 - **Rapid Response:** rapidly developed, deployed, and produces data close to real time in response to emergent events that impact the social and/or economic well-being of the U.S. public (e.g., the COVID-19 pandemic, the 2008 housing market collapse)
 - **High Frequency:** produces data released on a high-frequency, cyclical basis when there is a need to measure rapidly changing circumstances
- Produces data on a **time-limited basis**; once the events prompting the needs have passed, the content is moved off the survey; not intended as a permanent data collection vehicle

Appropriate Use of the DHFS Program

High level guidance for the appropriate use of high-frequency surveys includes:

- Subject matter of inquiry must be in the **public interest** and must be **appropriate for inclusion** in a government-run survey.
- The information must be **needed urgently** and be **otherwise unavailable** from existing surveys, censuses, or administrative data sources within the timeframe needed.
- The questions should be of **factual** nature rather than gathering opinions.

For agencies interested in having the Census Bureau conduct a high-frequency survey for them on a cost-reimbursable basis, the Interagency Agreement will include language that sets forth the features, benefits, and limitations of this approach.



	Criteria for determining whether proposed content is appropriate for inclusion
A	Information needs are highly time-sensitive and critical to an agency's ability to carry out its mission in pressing circumstances.
B	Inclusion of content must be feasible without jeopardizing resources and infrastructure needed to support other demands for the HFDP survey platform.
C	Content must be consistent with the Census Bureau's mission.
D	Content must have a positive or neutral effect on the Census Bureau's reputation.
E	Requests must be consistent with the Census Bureau's commitment to privacy and confidentiality.
F	Requests must be consistent with the Census Bureau's commitment to transparency.
G	Should the use of administrative records be proposed in conjunction with a HFDP survey, such use is in keeping with source agency requirements.
H	Sensitive populations and topics are addressed thoughtfully.

DHFS Program: Key Features



- Only asks questions that meet specific criteria for **urgency, compelling need**, and are **not collected elsewhere**
- Incorporates a core set of questions (e.g., basic demographics), along with additional content that meets the criteria set forth in the guidelines
 - Questions will be removed once the need is reduced, funding is insufficient, or a longer-term operation is identified for data collection
 - Not intended to serve as a vehicle for content over the long term
- May not meet all the Census Bureau's statistical quality standards, such as having lower response rates or imprecise coverage
- Limitations will be clearly documented and made publicly available

Census Quality Standards




Reissued 26 Apr 2022

U.S. Census Bureau Statistical Quality Standards



The leading source of quality data about the nation's people and economy



U.S. Census Bureau Statistical Products		
Core	Experimental	Research-based
<p>Information products with a production system, regular funding, regular release schedule, and active user base.</p> <p>Examples:</p> <ul style="list-style-type: none">• Decennial Census• Economic Census• Principal Federal Economic Indicators	<p>New or innovative products developed to satisfy emerging data user needs.</p> <p>Examples:</p> <ul style="list-style-type: none">• <u>HPS</u>• BTOS• PSEO• MSRS 	<p>Information products that are not core or experimental products.</p> <p>Examples:</p> <ul style="list-style-type: none">• Professional papers• Working papers• Technical reports• Research presentations

Moving the DHFS Program Forward



To strengthen the high frequency data program, the Census Bureau must continue to:

- **Mature the Census Bureau's Contact Frame** (household phone numbers and email addresses) to improve quality of respondent contact, and aid in adaptive respondent contact strategies
- **Establish a management team** to sustainably negotiate, plan and execute high-frequency and as needed, rapid response data production
- **Explore and expand on use of third-party data sources** to supplement or replace direct collection, and facilitate high-frequency surveys
- Establish a mechanism that **enables the Census Bureau to support the rapid response data needs** of other agencies with a minimum of bureaucracy, akin to the **School Pulse Panel**
- **Evaluate and develop methods to adjust for response and selection biases** including the development and integration of auxiliary data and data from multiple collection sources

Household Pulse Resources



Household Pulse Survey main page:

<https://www.census.gov/householdpulsedata>

Technical Documentation:

<https://www.census.gov/programs-surveys/household-pulse-survey/technical-documentation.html>

Survey Respondent overview:

<https://www.census.gov/programs-surveys/household-pulse-survey.html>