

# Impact of the COVID-19 Pandemic: Results from a U.S. Household Pulse Survey

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**UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE. CONFERENCE OF EUROPEAN STATISTICIANS.  
Online meetings on measuring poverty and inequality**

Geneva, Switzerland (online meetings), 2-4 December 2020 Virtual

(revised 3 December 2020)



# Disclaimer

This presentation is designed to share information about ongoing research within our respective agencies and to promote the exchange of ideas. The views expressed are ours as co-authors and should not be construed to represent the position of our individual federal agencies.

# Outline

- Setting the stage
- Federal Statistical System response
  - *Household Pulse Survey*
  - Design
  - Partners
- Dynamic situation
- Result highlights
- Next Steps



# COVID-19 Pandemic in U.S. Part of Worldwide Pandemic

- **December 31, 2019:** WHO informed of outbreak of a cluster of “pneumonia of unknown cause” in Wuhan
- **January 20, 2020:** first American case of COVID-19 was reported
- **January 31, 2020:** President declared the U.S. outbreak a public health emergency, flight restrictions
- **February 2020:** first known American deaths in February, but not known to be caused by COVID-19 until **April**
- **March 13, 2020:** President declared a national emergency
- **March 27, 2020:** Coronavirus Aid, Relief, and Economic Security (CARES) Act was passed by Congress and signed into law by the President, included
  - Economic Stimulus Payment: maximum \$1200 or \$2400 if married and filing jointly, plus \$500 for each qualifying child (one time with first payments in April)
  - Extra \$600 per week unemployment benefits (set to expire at end of year)
  - Provided for food and housing programs and activities
  - Other provisions

# Federal Statistical System Response

## Development of *Household Pulse Survey*

- Coordinated at the Census Bureau
- Designed to deploy quickly and efficiently, collecting data on a range of ways in which people's lives impacted by the pandemic
- Since the environment and circumstances rapidly changing, design meant to be able to quickly assess and report on critical issues, as fast as possible

## Timeline

- Development: March 23–April 23, 2020
- Phase 1: April 23–July 21, 2020
- Phase 2: August 19–October 26, 2020
- Phase 3: October 28–December 2020

## Experimental Rapid Response Survey

- Proof of Concept

## Partners

### Phase 1

- \*Bureau of Labor Statistics
- \*National Center for Health Statistics
- \*Housing and Urban Development
- \*National Center for Education Statistics
- \*USDA Economic Research Service
- \*Office of Management and Budget

### Phase 2 Additional Agencies

- >Bureau of Transportation Statistics
- >Social Security Administration

# Platform and Frame

## Platform: Qualtrics

- Census Bureau authority to operate

## Email and Text Invitations to Take an Online Self-Administered Survey

- National Processing Center was shut down due to COVID-19
- Census Bureau could not mail invitations

## Frames: Used Existing Email and Cell-Phone Contact Frames

- Matched to Census Bureau's Master Address File (MAF) records
- Emails and phone numbers from respondent contacts and from third party vendors
  - Phone frame contains over a billion phone/address pairs.
  - Phone frame contains phone/address pairs for over 88% of addresses in the country
  - Three quarters of those phones were acquired in the past two years
  - The email frame contains over 686 million well-formed email/address pairs
  - The email frame contains email/address pairs for almost 80% of addresses in the country
  - Two thirds of those emails were acquired in past two years

# Content: Phase 1 & Phase 2

1. Basic demographics

2. Employment questions

3. Food security questions

4. Program use

5. Health questions

6. Housing questions

7. Education questions

# Content: Phase 1 & Phase 2

## 1. Basic demographics

Age, sex, race, Hispanic origin, marital status, educational attainment

## 2. Employment questions

Employment and employment income (BLS/Census)

Spending source of funds (BLS)

Series on expenditures (BLS)

Commuting and Telework series (BTS)

Transportation Questions (BTS)

## 3. Food security questions

Past and current food sufficiency (USDA-ERS)

Free meals (USDA-ERS)

Money spent on groceries and prepared foods (USDA-ERS)

SNAP receipt (USDA-ERS)

## 4. Program use

Social Security programs (SSA)

Unemployment Insurance (BLS)

## 5. Health questions

Overall health (NCHS)

Mental health and mental health services use (NCHS)

Health insurance (NCHS/Census)

Access and delays in health care (NCHS)

## 6. Housing questions

Tenure (HUD)

Living quarters and bedrooms (HUD)

Rent and mortgage current payment status (HUD) Confidence about paying rent/mortgage next month (HUD)

Eviction and foreclosure expectations (HUD)

## 7. Education questions

Effects of COVID on how K-12 children received education (NCES)

Access to computer/digital device and internet availability (NCES)

Time spent with teachers, spent on educational activities, and studying (NCES)

Post-Secondary questions (NCES)



# Data Collection and Access

## Phase 1

- April 23 – July 21
- Email and text invitations
- Weekly Thursday through Tuesday data collection
- Weekly data releases through interactive data tool, static tables, and public-use microdata file
- National and state-level data. and 15 largest MSAs
- Longitudinal Sample
- Adult weighted U.S. population in households

## Changes for Phase 2

- August 19 – October 26
- Email and text invitations
- Two-week Wednesday to Monday data collection
- Data released every two weeks via interactive data tool, static tables, and public-use microdata file
- National and state-level data. and 15 largest MSAs
- No longitudinal sample
- Adult and household weighted for U.S.

**Survey methods and data via** <https://www.census.gov/programs-surveys/household-pulse-survey.html>

**Data tools and access via** <https://www.census.gov/data-tools/demo/hhp/#/>

# Responses

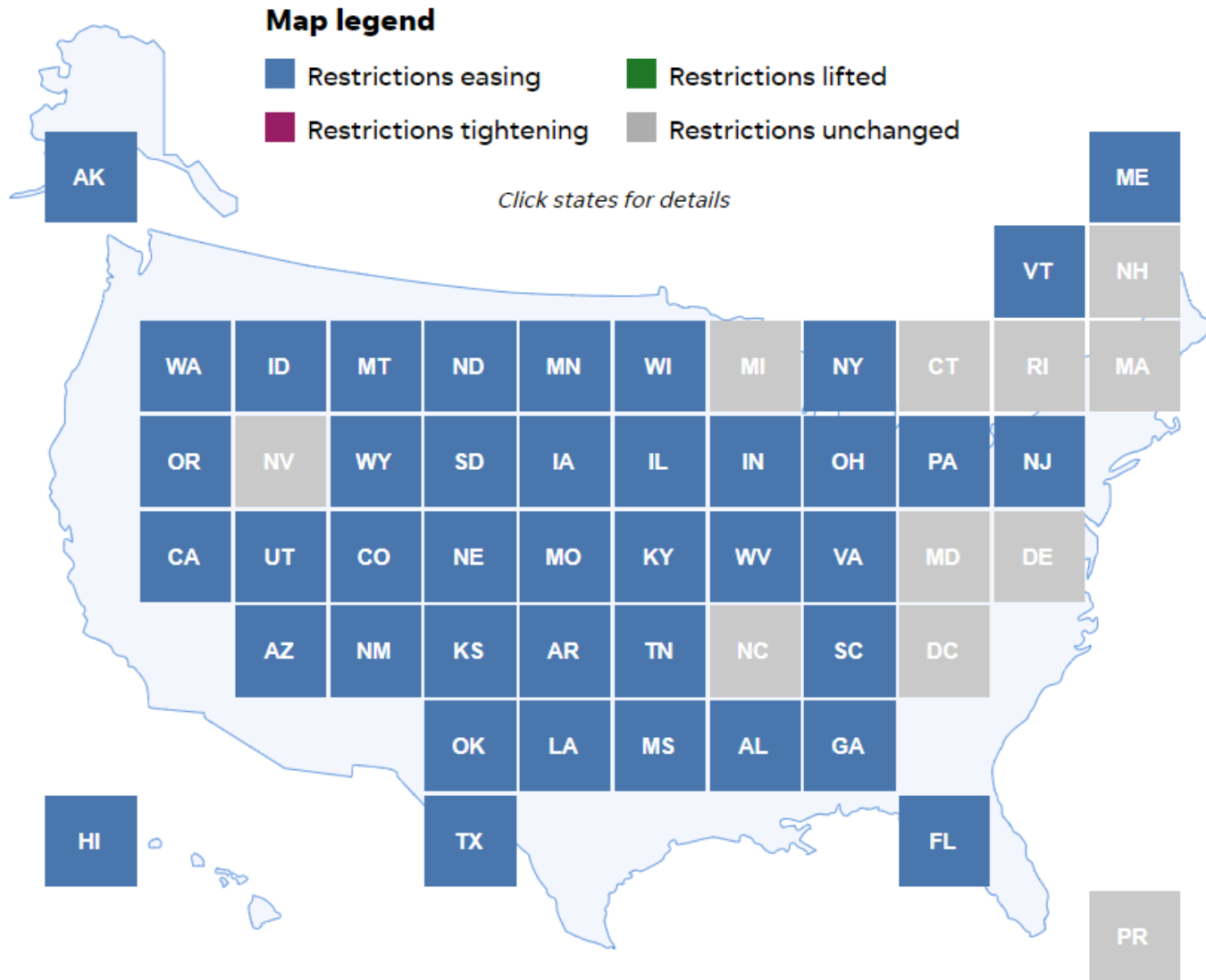
Week	Interviews	Weighted Response Rate
April 23 – May 5 : Week 1 (a+b) <b>PHASE1</b>	74,413	3.8
May 7 – May 12 : Week 2	41,996	1.3
May 14 – May 19 : Week 3	132,961	2.3
May 21 – May 26 : Week 4	101,215	3.1
May 28 – June 2 : Week 5	105,066	3.5
June 4 – June 9 : Week 6	83,302	3.1
June 11 – June 16: Week 7	73,472	2.3
June 18 – June 23: Week 8	108,062	2.9
June 25 – June 30: Week 9	98,663	3.3
July 2 – July 7: Week 10	90,767	3.2
July 9 – July 14: Week 11	91,605	3.1
July 16 – July 21: Week 12	86,792	2.9
August 19 – August 31: Week 13 <b>PHASE 2</b>	109,051	10.3
September 2 – September 14: Week 14	110,019	10.3
September 16 – September 28: Week 15	99,302	9.2
September 30 – October 12: Week 16	95,604	8.8
October 14 – October 26: Week 17	88,716	8.1
<b>TOTAL (19,358,053 Sampled)</b>	<b>1,655,690</b>	<b>8.6</b>

# Dynamic situation

Shape  
your future  
START HERE >

United States<sup>®</sup>  
Census  
2020

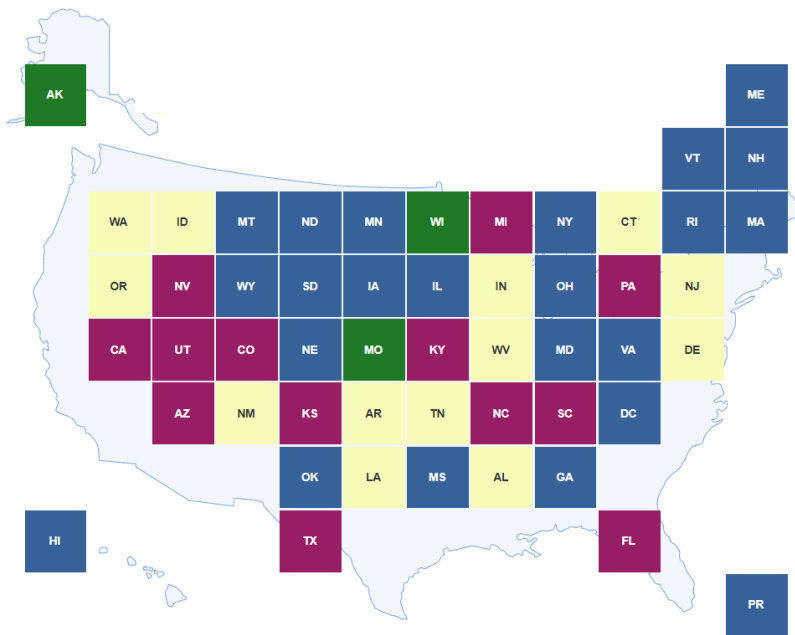
# Coronavirus Reopening: *Map of COVID-19 case reopening status*



## State and local responses

- prohibitions and cancellation of large-scale gatherings
- stay-at-home order
- closure of schools, businesses, etc.

Updated May 6, 2020



July 21, 2020

**State restrictions**

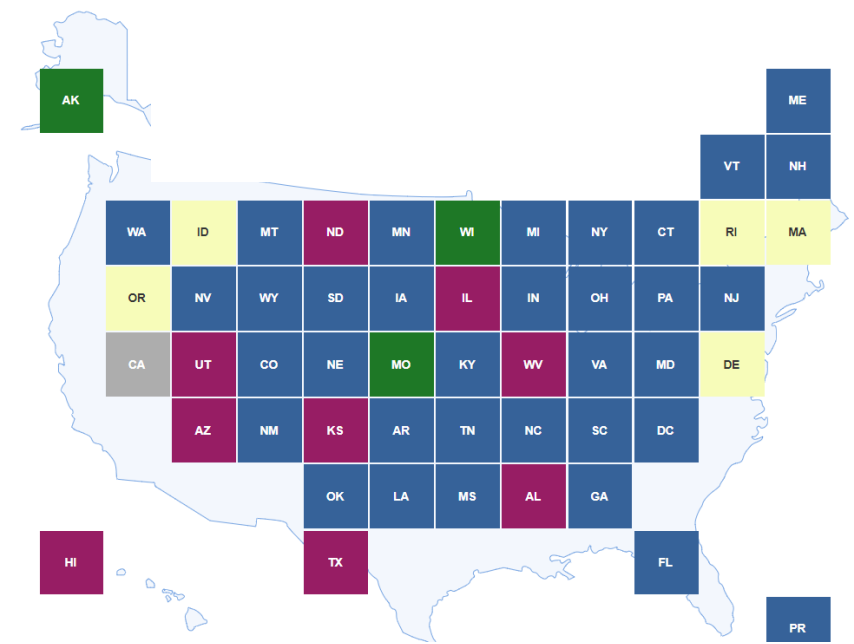
Are states loosening or tightening the rules?

- Restrictions easing
- Restrictions tightening
- Reopening paused
- Restrictions lifted
- Restrictions unchanged

As of December 2, 2020 in the U.S.:

- Confirmed cases: 13,861,243
- Deaths: 272,552

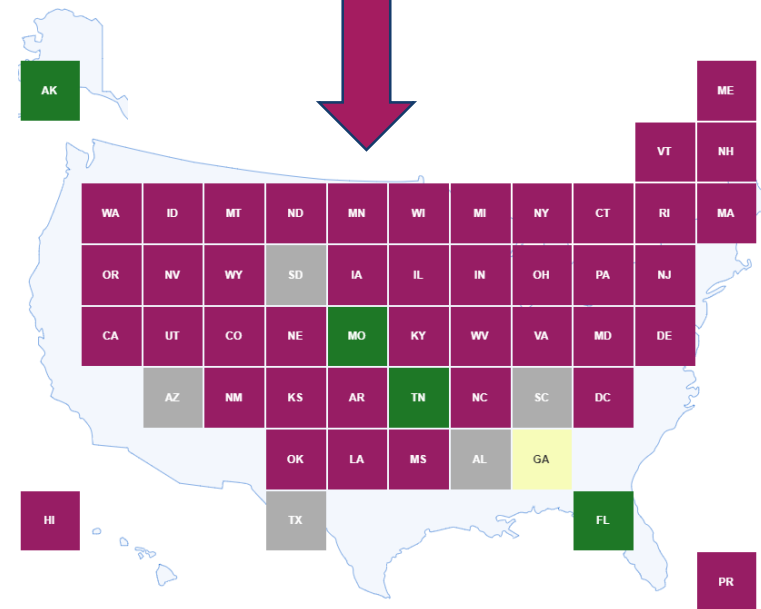
2020CENSUS.GOV



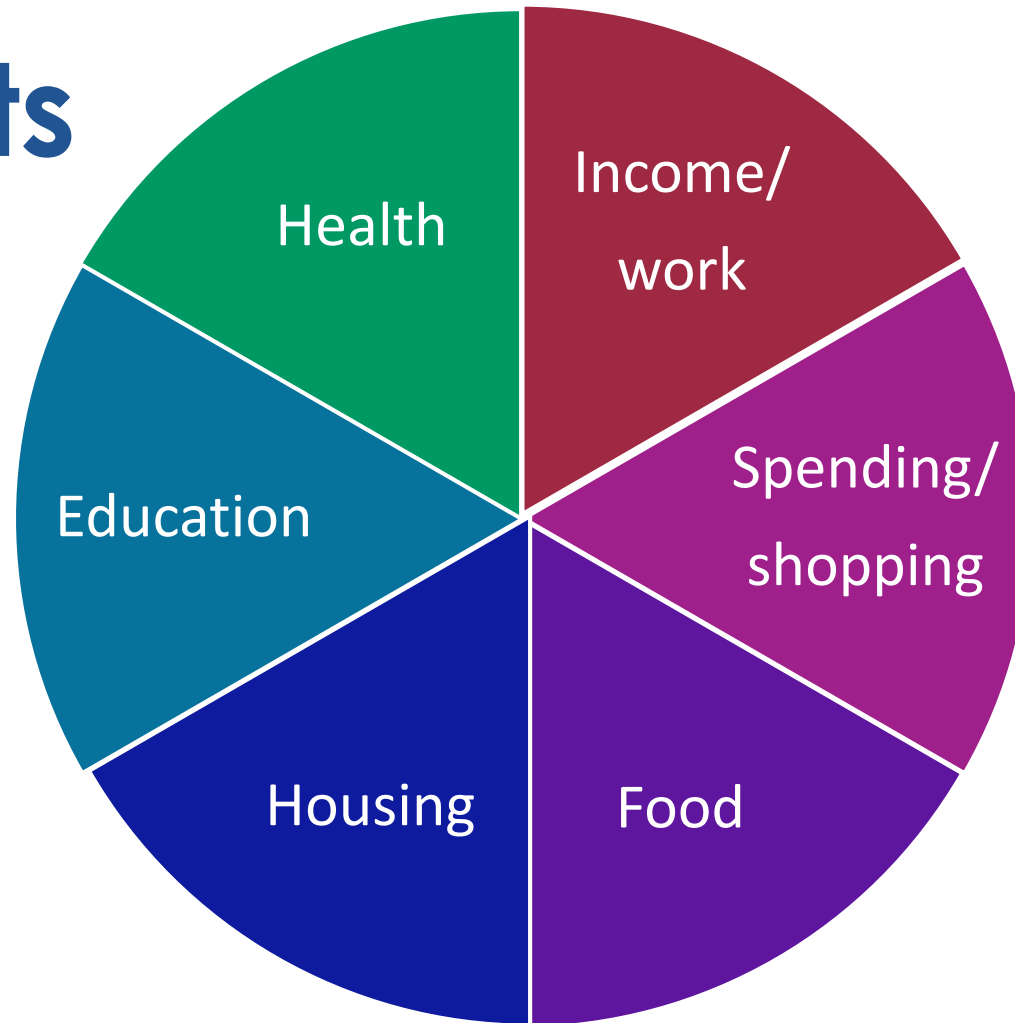
September 29, 2020



December 2, 2020



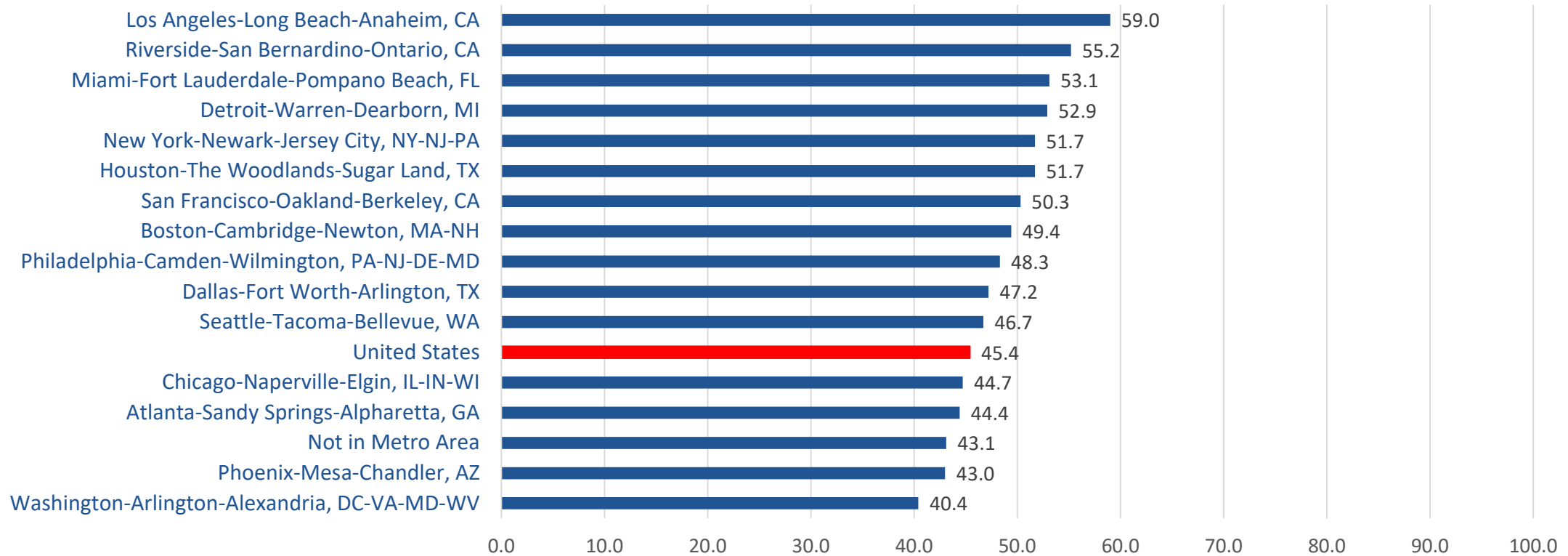
# Early Results



# Phase 2 - Percentage of Adults in Households Where Someone Lost Employment Income Since March 13

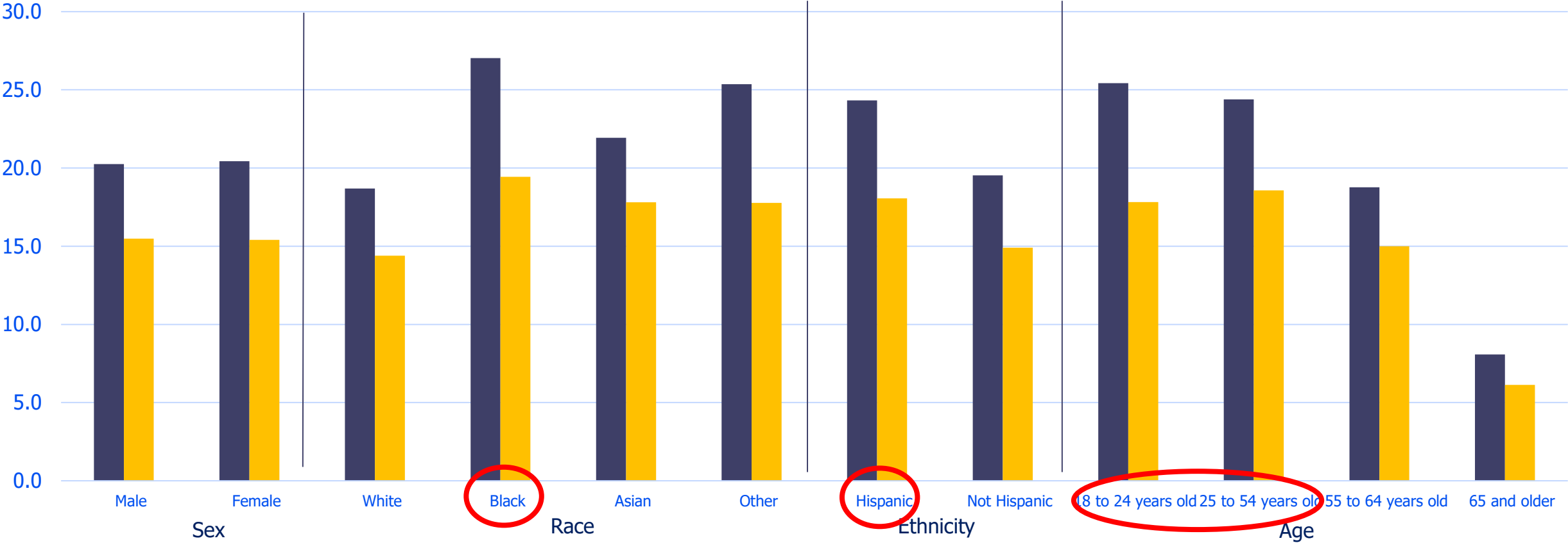
15 Largest Metros: September 30 – October 12, 2020

Percent of Adults in Households with a Loss in Employment Income



# Phase 2-Since March 13, 2020: Application for and Receipt of UI Benefits by Demographics

Percent of adult population who *applied for UI benefits* and *received UI benefits*



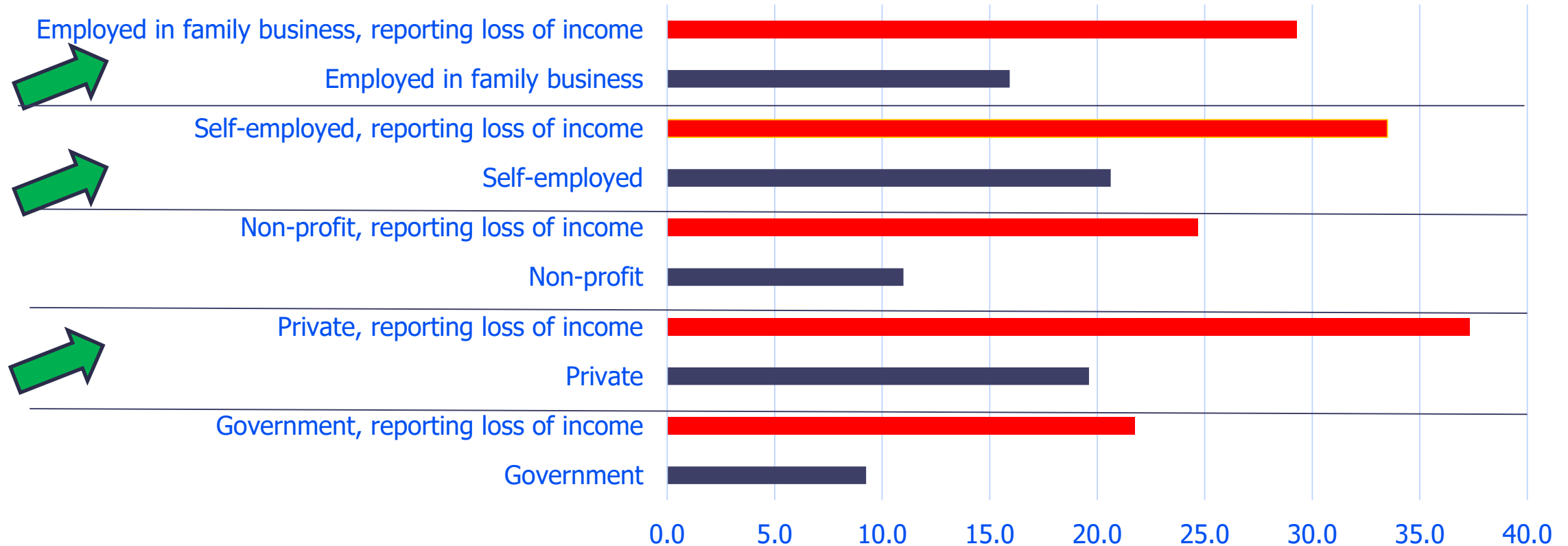
Source: U.S. Census Bureau Household Pulse Survey, Phase 2: week periods 13 (beginning August) through 17 (ending October 26).





# Phase 2 - Since March 13, 2020: Adults who Reported a Loss of Income More Likely to Apply for UI Benefits

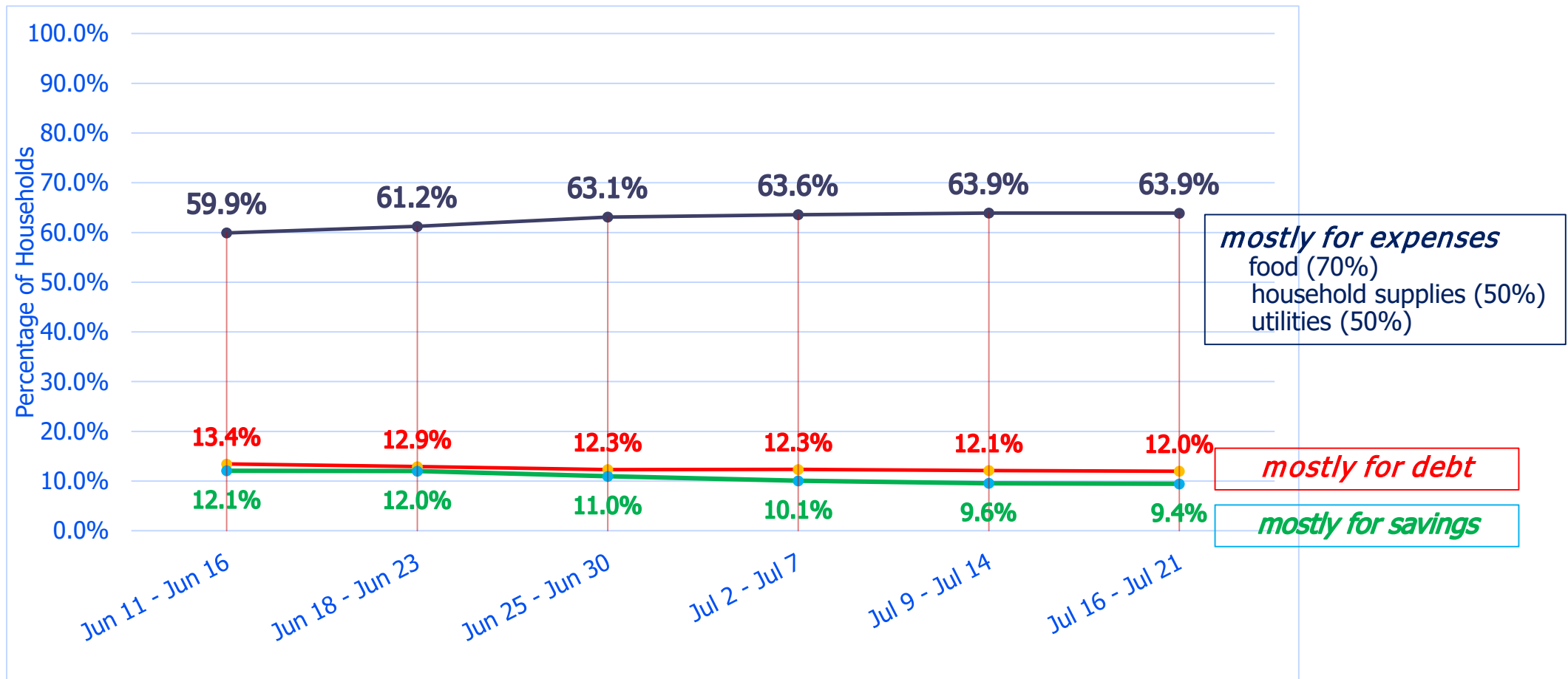
Percent of population who *reported a loss of income* and *applied for UI benefits*



Source: U.S. Census Bureau Household Pulse Survey, Phase 2: week periods 13 (beginning August) through 17 (ending October 26).



# Phase 1 - Receipt (expected to receive) and Use (or expected use) of Economic Stimulus Payment



NOTE: Responses across categories are mutually exclusive.

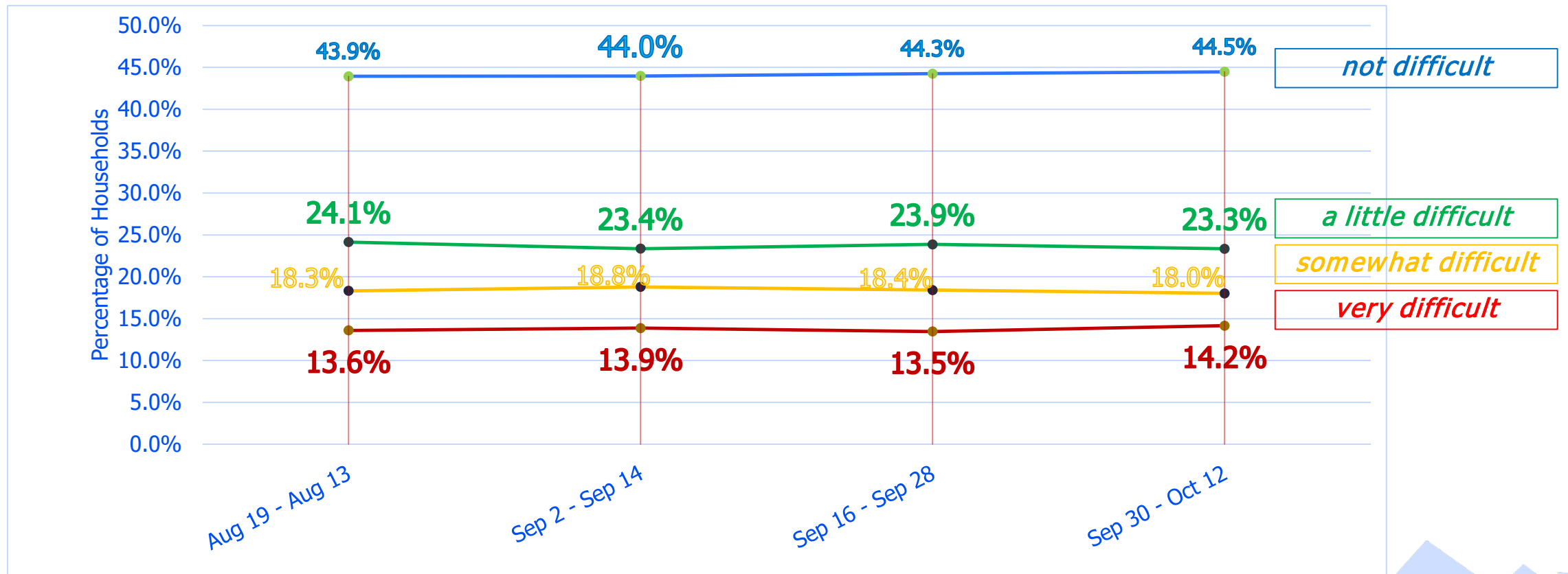
Source: U.S. Census Bureau Household Pulse Survey. Phase 1, pooled data from week periods 7-12 with no specific reference period.



# Phase 2 - Difficulty Paying for Usual Household Expenses

(e.g., food, rent or mortgage, car payment, medical, student loans, etc.) in Last 7 Days

Nearly 1 out of 3 adults reported difficulty (somewhat & very)



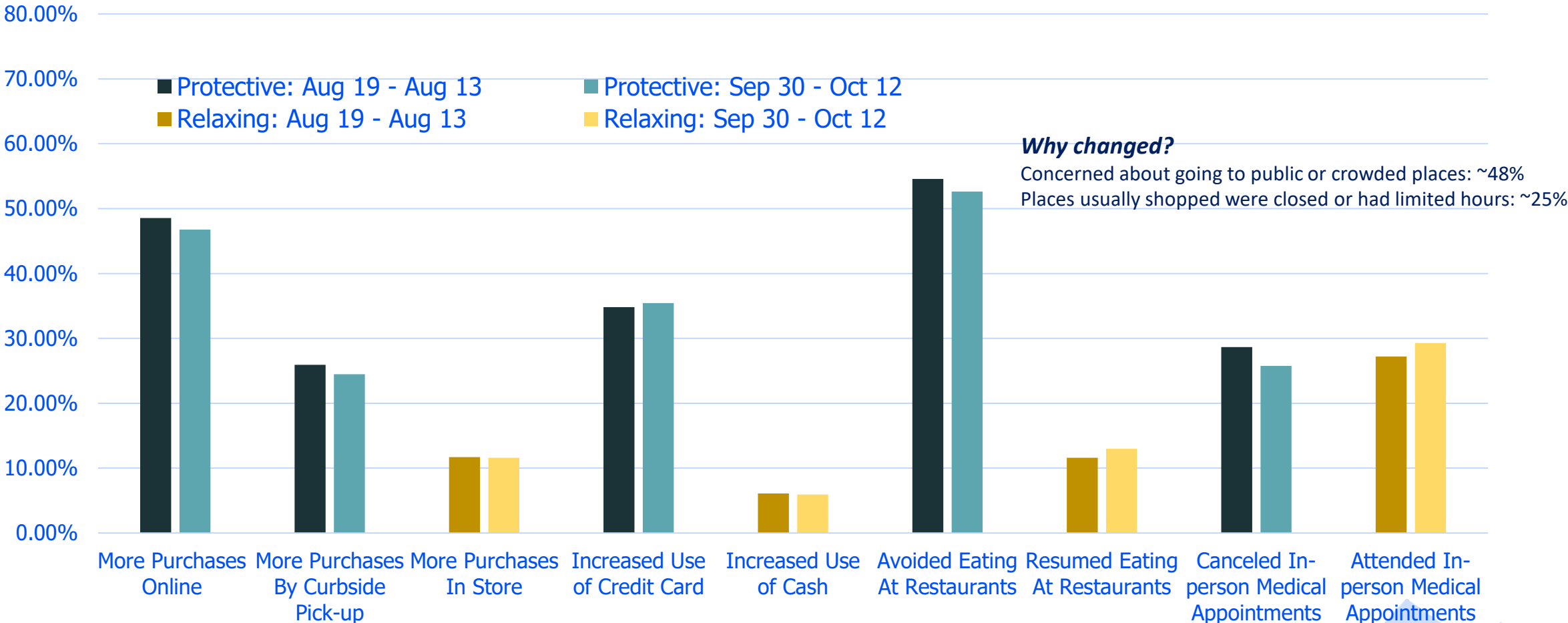
NOTE: Responses across categories are mutually exclusive. Reference period the last 7 days.

Source: U.S. Census Bureau Household Pulse Survey. Pooled data pooled data from week periods 13-16..

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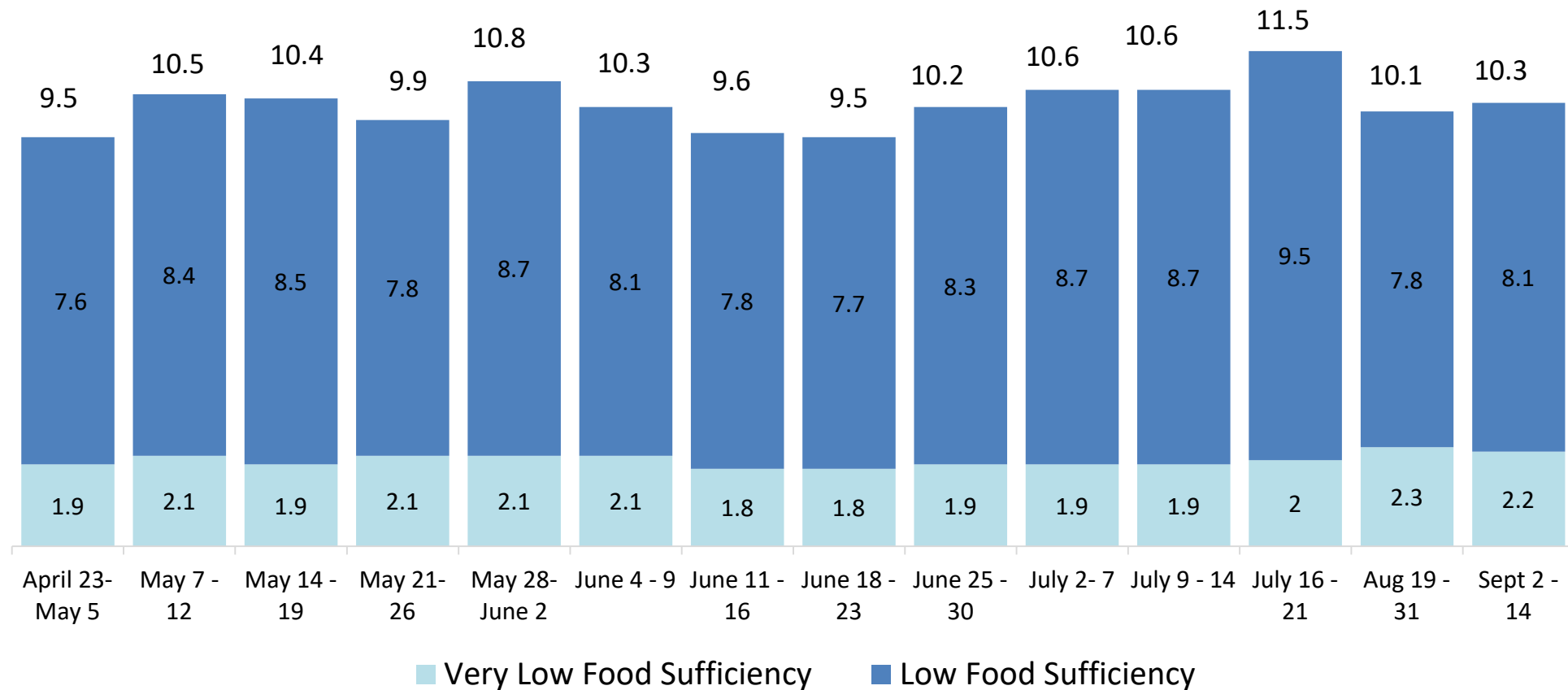
# Phase 2 - Changes in Spending or Shopping Behavior in Last 7 Days



NOTE: Responses across categories are not mutually exclusive. Reference period the last 7 days.  
 Source: U.S. Census Bureau Household Pulse Survey, Phase 2 independent week periods: 13 and 16.  
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# Phase 1 & 2 -Percent of Adults Reporting for Their Households in Last 7 Days: **LOW** (food in household -sometimes not enough) and **Very Low Food Sufficiency** (often not enough)

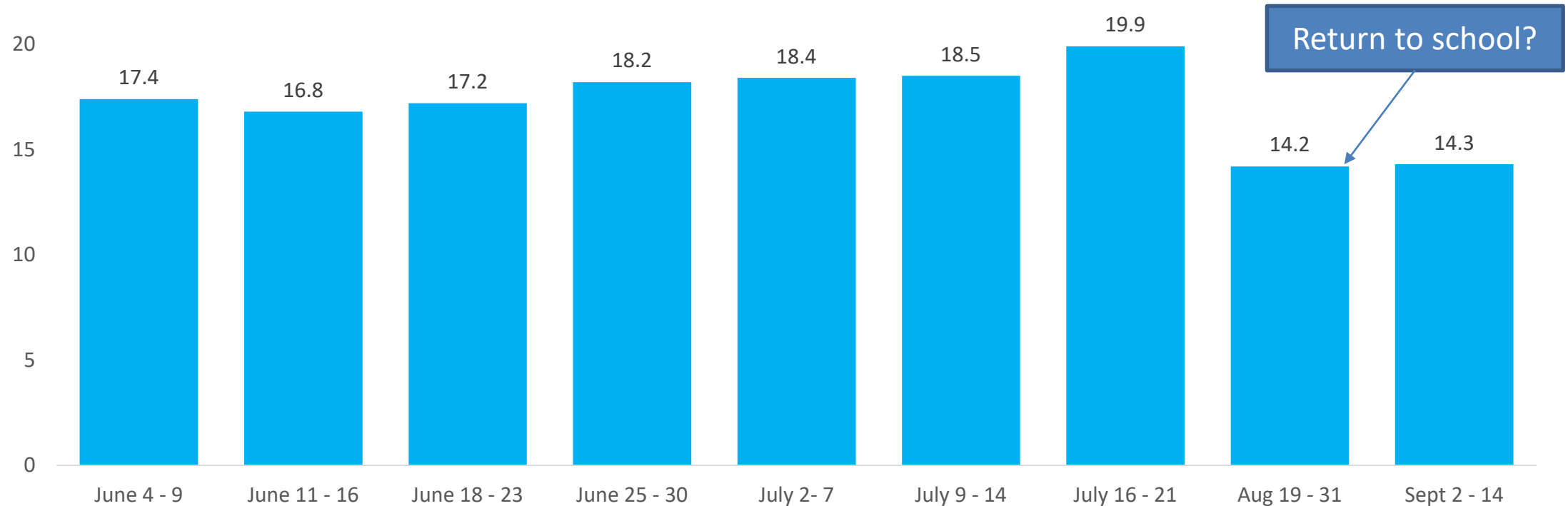


Source: ERS calculation using Census Household Pulse Survey Data. Phases 1 and 2. Questions about not enough to eat in past 7 days.



# Phases 1 & 2 - Percent of Adults Reporting Children in Households: Food Insufficient in Last 7 Days

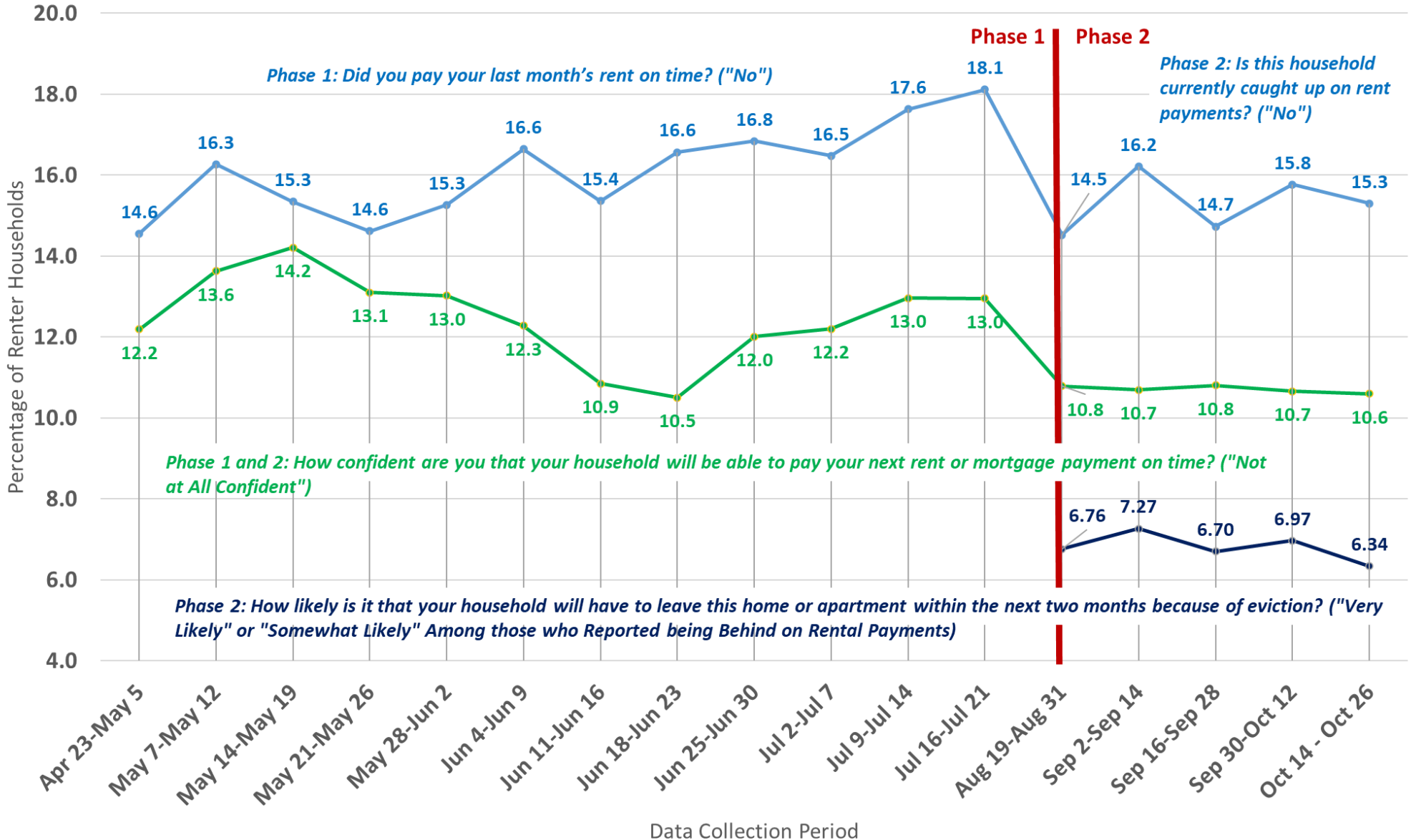
(children not eating enough because often or sometimes could not afford enough food)



Source: ERS calculation using Census Household Pulse Survey Data. Phases 1 and 2. Children not eating enough because the household could not afford enough food in the last 7 days, often or sometimes true.



# Census Household Pulse Survey (Phase 1 and Phase 2), Percentage of U.S. Renter Households Experiencing Housing Instability, COVID-19 Pandemic (April 23, 2020 to October 12, 2020)



## Key Findings: Renters



# Key Findings: Homeowners

Household Pulse Survey Phase 2, Homeowner Circumstance Findings from Weeks 13-17					
Reported Homeowner Circumstance	Week 13 (Aug 19-Aug 31)	Week 14 (Sep 2-Sept 14)	Week 15 (Sep 16-Ser 28)	Week 16 (Sep 30-Oct 12)	Week 17 (Oct 14 - Oct 26)
	Weighted %	Weighted %	Weighted %	Weighted %	Weighted %
Owner households with a mortgage that reported not being up to date with mortgage payments	<b>8.74</b>	<b>9.32</b>	<b>9.08</b>	<b>9.02</b>	<b>8.92</b>
Homeowner households behind on mortgage payments that reported foreclosure was "very likely" in the next two months	<b>4.52</b>	<b>4.58</b>	<b>5.45</b>	<b>3.94</b>	<b>4.95</b>
Homeowner households behind on mortgage payments that reported foreclosure was "somewhat likely" in the next two months	<b>15.7</b>	<b>15.2</b>	<b>13.5</b>	<b>14.3</b>	<b>11.0</b>

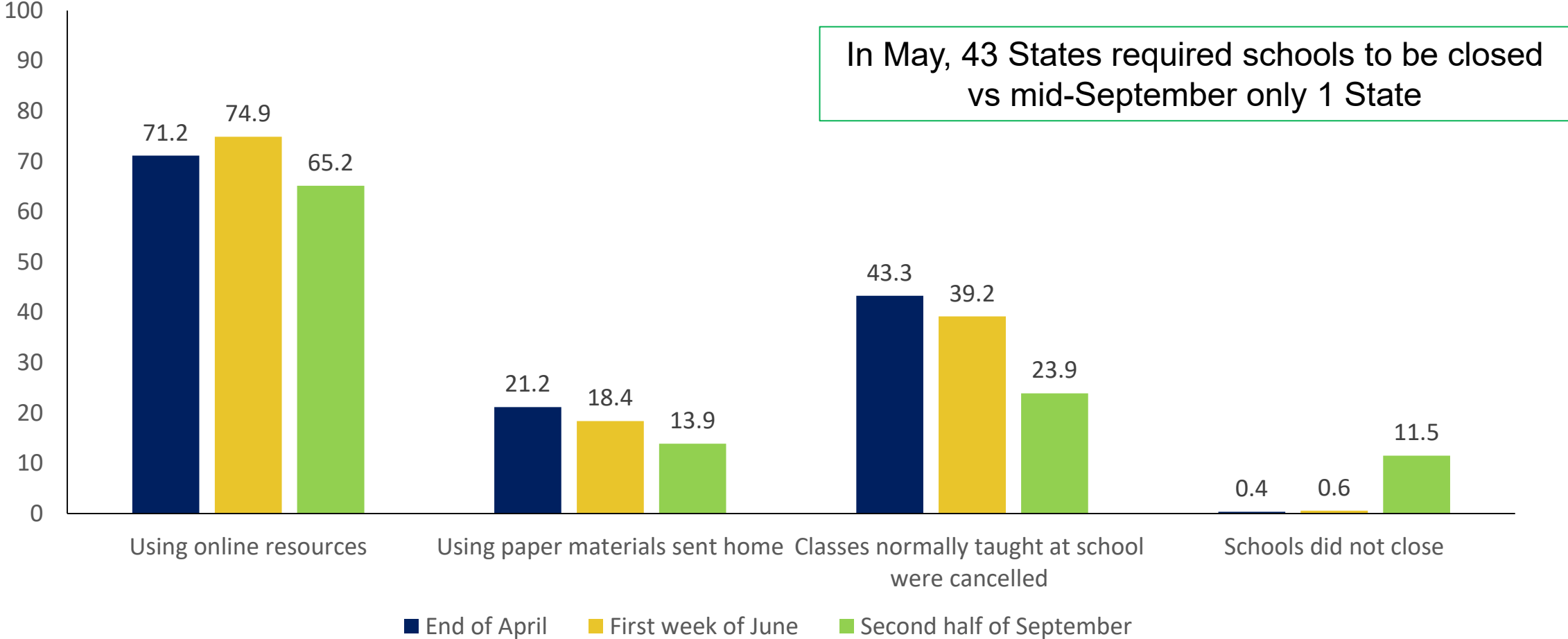
~ 9% not up to date on mortgage payments

**15%-20% expect foreclosure in next 2 months**

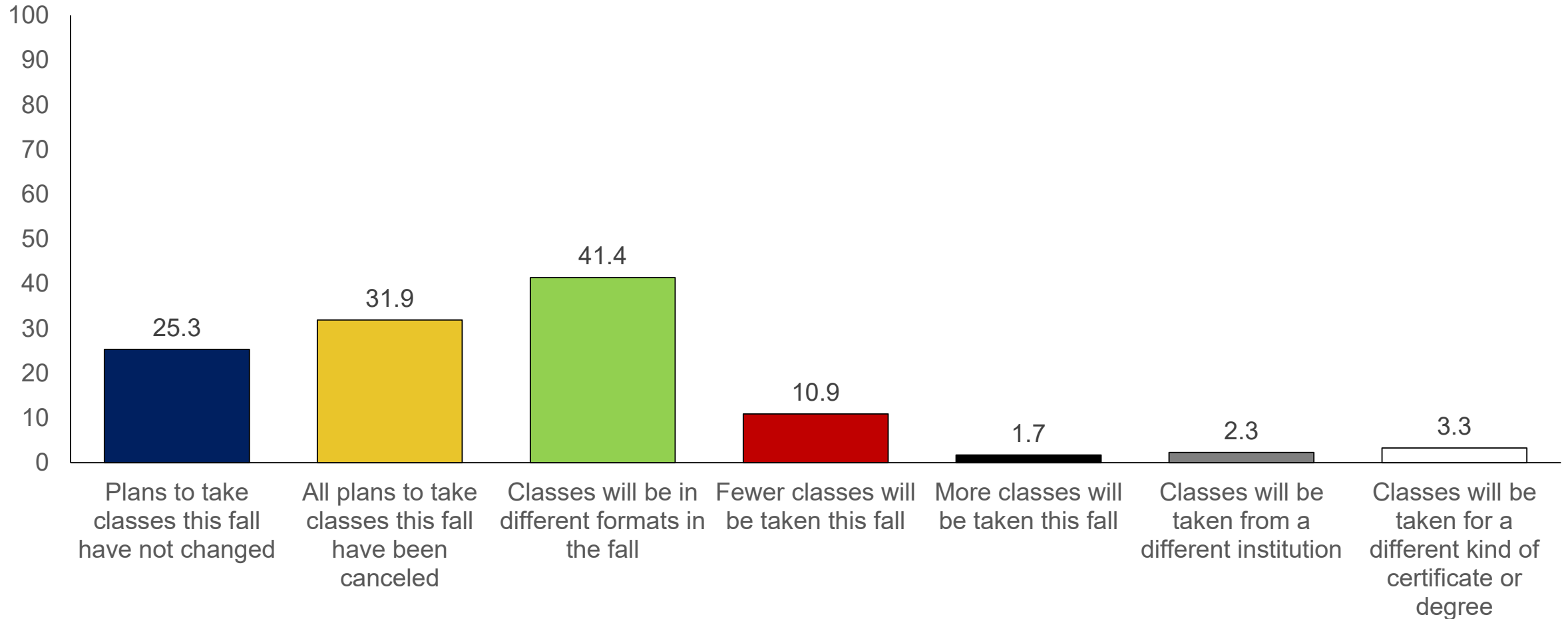




# Phase 1 & 2 - Percent of Adults in Households with Elementary and Secondary Students Reporting How Students Accessed Education

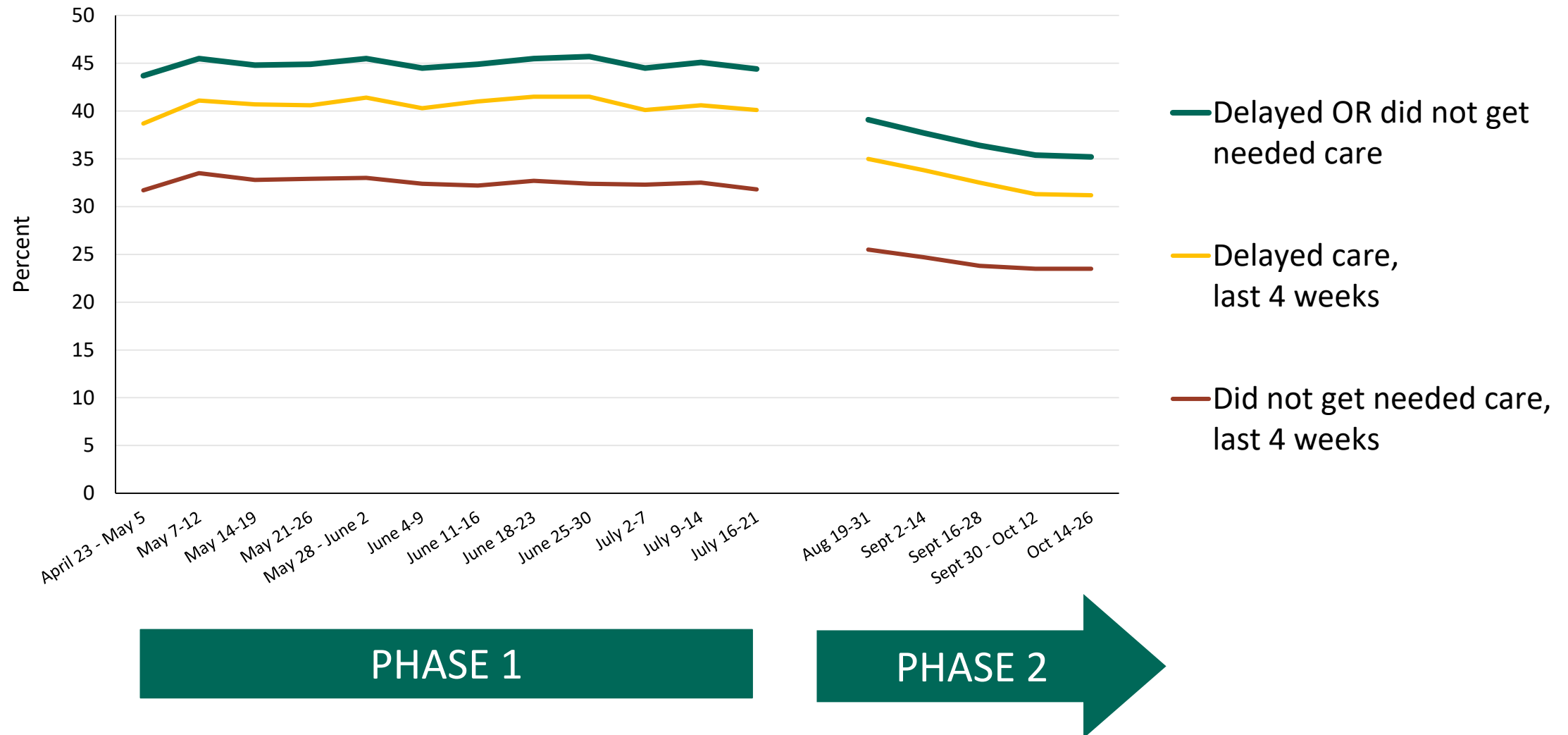


## Phase 2 - Percent of Adults in Households with Members Planning Postsecondary Education prior to Pandemic by Changes in Plans due to Pandemic: Second half of September 2020 Relative to Beginning 2020



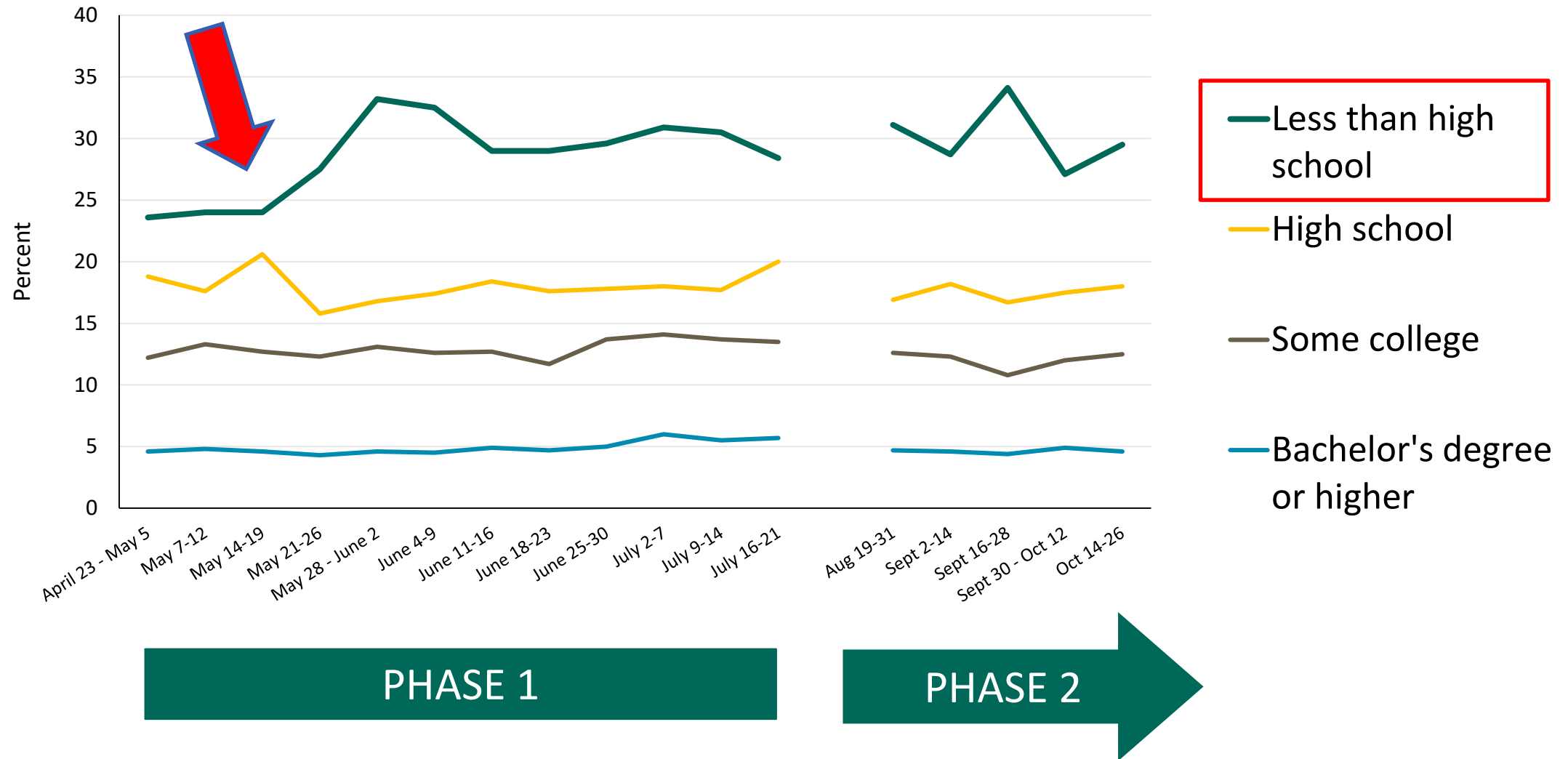
# Phase 1 & 2 - Reduced Access to Care

Household Pulse Survey, April 23 – October 26, 2020



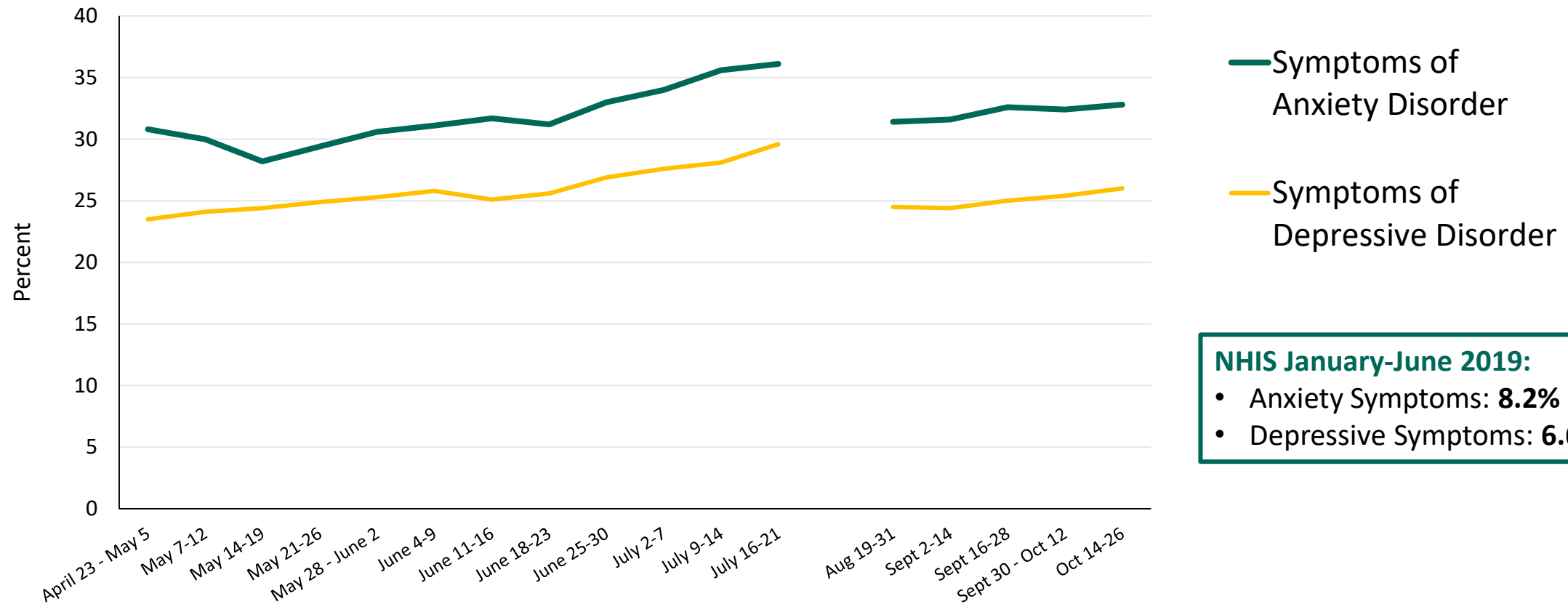
# Phase 1 & 2 - Uninsured as Percentage of All Adults, by Education

Household Pulse Survey, April 23 – October 26, 2020



# Phase 1 & 2 -Symptoms of Anxiety or Depression

Household Pulse Survey, April 23 – October 26, 2020



PHASE 1

PHASE 2

# Impact on Mental Health: A Most Concerning Consequence of the Pandemic...

Headline News...

*The Washington Post*  
3 December 2020, p.1



NOTE: verbally shared during presentation

# Next

- Plans Beyond Current Phase 3
  - Refining questions
  - Dropping content
  - Adding content
  - Potential additional partners
- Continuing Research
  - Multivariate
  - Implications for agency regular surveys

# Contact Information

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<https://youtu.be/PmXA4v1KcT8?t=8>