

Introduction to Household Pulse Survey (HPS)

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Introduction to HPS

- HPS was designed to understand the individuals' experiences of COVID-19 and provide timely information essential for governmental and non-governmental responses to business curtailment and closures, stay-at-home orders, school closures, changes in consumer patterns and the availability of consumer goods, and other abrupt and significant changes to American life.
- In partnership with Bureau of Labor Statistics, National Center for Health Statistics, Department of Agriculture Economic Research Service, National Center for Education Statistics, Department of Housing and Urban Development, Social Security Administration, and Bureau of Transportation Statistics, the U. S. Census Bureau, developed the Household Pulse Survey (HPS).
- HPS has two phases: Phase 1 covered the time period from April 23 to July 21 and phase 2 will cover the time period from August 19 to October 26.
- Phase 1 of HPS includes 12 weekly surveys to collect data on individuals' experiences in terms of employment status, food security, housing, physical and mental health, access to health care and educational disruption.
- Phase 2 of HPS include 5 bi-weekly surveys to collected data on domains previously examined in phase 1 as well as new domains such as application and receipt of benefits, spending patterns, availability of financial resources, post-secondary education disruptions, capacity to telework, and travel practices.

Study Design

- The HPS is a on-line survey, collected via the Qualtrics survey platform
- The sampling frame of the HPS was created by combining Census Bureau's Master Address File (MAF) and email and mobile telephone numbers from the Census Bureau Contact Frame. Once a household was selected and a respondent within the household completed an interview, that household remains in sample for up to two additional weekly survey periods.
- If respondents have been selected to participate in the Household Pulse Survey, they will receive an email from COVID.survey@census.gov or a text message from 39242* (message and data rates may apply) with a link to complete the survey. If Census Bureau has not received a response from the respondents, up to 3 follow-up reminders will be attempted.
- The length of HPS surveys was around 20 minutes
- The HPS is designed to produce estimate at three geographic levels: (1) 15 largest Metropolitan Statistical Areas, (2) each of the 50 states plus the District of Columbia, and (3) the national level.

Study Design

Table 1. Information about the first 13 weeks of HPS Data

Phase #	Week #	Time Period	The Size of Target Population	Sample Size	Number of Respondents	Response Rate	Number of variables
1	Week 1	4/23-5/5	249,170,916	1,867,000	74,413	4%	82
1	Week 2	5/7/-5/12	249,170,916	1,047,000	41,996	4%	82
1	Week 3	5/14-5/19	249,170,916	1,286,674	132,961	10%	82
1	Week 4	5/21-5/26	249,170,916	1,159,411	101,215	9%	82
1	Week 5	5/28-6/2	249,170,916	1,070,820	105,066	10%	82
1	Week 6	6/4-6/9	249,170,916	979,236	83,302	9%	84
1	Week 7	6/11-6/16	249,170,916	1,172,900	73,472	6%	105
1	Week 8	6/18-6/23	249,170,916	1,309,591	108,062	8%	105
1	Week 9	6/25-6/30	249,170,916	1,061,047	98,663	9%	105
1	Week 10	7/2-7/7	249,170,916	1,016,127	90,767	9%	105
1	Week 11	7/9-7/14	249,170,916	1,095,187	91,605	8%	105
1	Week 12	7/16-7/21	249,170,916	1,122,702	86,792	8%	105
2	Week 13	8/19-8/31	249,170,916	1,032,959	109,051	11%	188

Navigating the HPS website

- The HPS website (<https://www.census.gov/programs-surveys/household-pulse-survey.html>)
- Household Pulse Data Tool
 - The Interactive Graphic Tool for Phase 2 surveys (<https://www.census.gov/data-tools/demo/hhp>)
 - The interactive Excel Table for Phase 1 surveys (<https://www.census.gov/content/dam/Census/data/experimental-data-products/household-pulse-survey/phase-one-household-pulse-survey-tool-summary.xlsx>)
- Household Pulse Survey Public Use File (PUF) (<https://www.census.gov/programs-surveys/household-pulse-survey/datasets.html>)
- Household Pulse Survey Technical Documentation (<https://www.census.gov/programs-surveys/household-pulse-survey/technical-documentation.html>)
- More background for Household Pulse Survey (<https://www.census.gov/data/experimental-data-products/household-pulse-survey.html>)

The HPS data on the CFDR Server

- The Location of the HPS data on the CFDR Server:

Name	Date modified
week 1-(4.23-5.5)	7/21/2020 9:42 AM
week 2-(5.7-5.12)	7/21/2020 9:41 AM
week 3-(5.14-5.19)	7/21/2020 9:41 AM
week 4-(5.21-5.26)	7/21/2020 9:41 AM
week 5-(5.28-6.2)	7/21/2020 9:41 AM
week 6-(6.4-6.9)	7/21/2020 9:41 AM
week 7-(6.11-6.16)	7/21/2020 9:41 AM
week 8- (6.18-6.23)	7/21/2020 9:40 AM
week 9- (6.25-6.30)	7/21/2020 9:40 AM
week 10-(7.2-7.7)	9/9/2020 9:45 PM
week 11-(7.9-7.14)	9/9/2020 9:47 PM
week 12-(7.16-7.21)	9/9/2020 9:48 PM
week 13- (8.19-8.31)	10/4/2020 7:46 PM

HPS data

Name	Date modified	Type	Size
pulse2020_data.dictionary_SAS_12.xlsx	7/28/2020 1:15 PM	Microsoft Excel W...	35 KB
pulse2020_puf_12.dta	9/9/2020 9:47 PM	DTA File	14,007 KB
pulse2020_puf_12.sas7bdat	7/22/2020 2:55 PM	SAS7BDAT File	72,792 KB
pulse2020_repwgt_puf_12.dta	9/9/2020 9:48 PM	DTA File	56,466 KB
pulse2020_repwgt_puf_12.sas7bdat	7/22/2020 3:38 PM	SAS7BDAT File	57,984 KB
Source-and-Accuracy-Statement-July-16-...	10/5/2020 5:26 AM	Adobe Acrobat D...	240 KB

Sample Stata codes:

- The attached Stata do and log files file shows:
 - How to analyzing a single-week HPS data
 - How to analyzing multiple-week HPS data

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Conclusions

- The HPS provides timely information about the social and economic impact of Covid-19 on the individual's lives via its weekly or bi-weekly data collection and quick release of data for public use
- The HPS used a national representative sample and allows analyses to be conducted at the level of 15 largest Metropolitan Statistical Areas, the state level, and the national level.
- The phase 1 HPS has only replicate personal weights, and the phase 2 HPS has both personal and household replicates weights. Thus, when using the phase 2 HPS data, researchers can use the household as the unit of analysis.
- The samples do not overlap between phases 1 and 2 surveys
- The wordings of same variables may change across surveys at different weeks, which may influence the estimate of variables across these surveys.
- The response rates of HPS are not very high and may generate unknown estimation bias.
- Only limited editing and imputation was done to the HPS data. For example, for the phase 1 data, only birth year, sex, race, Hispanic origin, educational attainment, number of people, number of children, and the number of adults are edited. Therefore, there may be some inconsistencies or even errors in other HPS variables.
- The estimates from HPS are not entirely comparable with other national data sets (e.g., ACS or CPS) because differences in the sample size, response rates, data collection processes, and editing procedures.
- Because the HPS was designed to quickly provide timely information about the impact of Covid-19, Census Bureau corrects data problems as these problems emerge. Thus, it is very important to follow up on all the **source and accuracy statements of the HPS**