MEPS HC-218
2020 Jobs File

March 2022

Due to the COVID-19 pandemic, 2020 data collection moved primarily to phone rather than in-person. This posed a challenge in Panel 25 Round 1, which is difficult to start via phone, resulting in a low response rate. To balance this and increase the number of completes to be comparable to previous years, Panels 23 and 24 were extended to nine rounds of data collection. Phone data collection and the challenges of the pandemic present concerns about data quality. Please take this into consideration when comparing to or pooling with previous years.

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Appendices

A. Data Use Agreement

Individual identifiers have been removed from the micro-data contained in these files. Nevertheless, under Sections 308 (d) and 903 (c) of the Public Health Service Act (42 U.S.C. 242m and 42 U.S.C. 299 a-1), data collected by the Agency for Healthcare Research and Quality (AHRQ) and/or the National Center for Health Statistics (NCHS) may not be used for any purpose other than for the purpose for which they were supplied; any effort to determine the identity of any reported cases is prohibited by law.

Therefore in accordance with the above referenced Federal Statute, it is understood that:

1. No one is to use the data in this data set in any way except for statistical reporting and analysis; and

2. If the identity of any person or establishment should be discovered inadvertently, then (a) no use will be made of this knowledge, (b) the Director Office of Management AHRQ will be advised of this incident, (c) the information that would identify any individual or establishment will be safeguarded or destroyed, as requested by AHRQ, and (d) no one else will be informed of the discovered identity; and

3. No one will attempt to link this data set with individually identifiable records from any data sets other than the Medical Expenditure Panel Survey or the National Health Interview Survey. Furthermore, linkage of the Medical Expenditure Panel Survey and the National Health Interview Survey may not occur outside the AHRQ Data Center, NCHS Research Data Center (RDC) or the U.S. Census RDC network.

By using these data you signify your agreement to comply with the above stated statutorily based requirements with the knowledge that deliberately making a false statement in any matter within the jurisdiction of any department or agency of the Federal Government violates Title 18 part 1 Chapter 47 Section 1001 and is punishable by a fine of up to $10,000 or up to 5 years in prison.

The Agency for Healthcare Research and Quality requests that users cite AHRQ and the Medical Expenditure Panel Survey as the data source in any publications or research based upon these data.

B. Background

1.0 Household Component

The Medical Expenditure Panel Survey (MEPS) provides nationally representative estimates of health care use, expenditures, sources of payment, and health insurance coverage for the U.S. civilian noninstitutionalized population. The MEPS Household Component (HC) also provides estimates of respondents' health status, demographic and socio-economic characteristics, employment, access to care, and satisfaction with health care. Estimates can be produced for individuals, families, and selected population subgroups. The panel design of the survey, which typically includes five rounds of interviews covering two full calendar years. In 2020, in order to increase the number of completed interviews, the panel design has been extended to include seven rounds of interviews covering three full calendar years. The panel design of MEPS provides data for examining person level changes in selected variables such as expenditures, health insurance coverage, and health status. Using computer assisted personal interviewing (CAPI) technology, information about each household member is collected, and the survey builds on this information from interview to interview. All data for a sampled household are reported by a single household respondent.

The MEPS HC was initiated in 1996. Each year a new panel of sample households is selected. Because the data collected are comparable to those from earlier medical expenditure surveys conducted in 1977 and 1987, it is possible to analyze long-term trends. Each annual MEPS HC sample size is about 15,000 households. Data can be analyzed at either the person or event level. Data must be weighted to produce national estimates.

The set of households selected for each panel of the MEPS HC is a subsample of households participating in the previous year's National Health Interview Survey (NHIS) conducted by the National Center for Health Statistics. The NHIS sampling frame provides a nationally representative sample of the U.S. civilian noninstitutionalized. In 2006, the NHIS implemented a new sample design, which included Asian persons in addition to households with Black and Hispanic persons in the oversampling of minority populations. NHIS introduced a new sample design in 2016 that discontinued oversampling of these minority groups.

2.0 Medical Provider Component

Upon completion of the household CAPI interview and obtaining permission from the household survey respondents, a sample of medical providers are contacted by telephone to obtain information that household respondents cannot accurately provide. This part of the MEPS is called the Medical Provider Component (MPC) and information is collected on dates of visits, diagnosis and procedure codes, charges and payments. The Pharmacy Component (PC), a subcomponent of the MPC, does not collect charges or diagnosis and procedure codes but does collect drug detail information, including National Drug Code (NDC) and medicine name, as well as amounts of payment. The MPC is not designed to yield national estimates. It is primarily used as an imputation source to supplement/replace household reported expenditure information.

3.0 Survey Management and Data Collection

MEPS HC and MPC data are collected under the authority of the Public Health Service Act. Data are collected under contract with Westat, Inc. (MEPS HC) and Research Triangle Institute (MEPS MPC). Data sets and summary statistics are edited and published in accordance with the confidentiality provisions of the Public Health Service Act and the Privacy Act. The National Center for Health Statistics (NCHS) provides consultation and technical assistance.

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of micro data files and tables via the MEPS website.

Additional information on MEPS is available from the MEPS project manager or the MEPS public use data manager at the Center for Financing, Access, and Cost Trends, Agency for Healthcare Research and Quality, 5600 Fishers Lane Rockville, MD 20857 (301-427-1406).

C. Technical and Programming Information

Section C of this document offers a brief overview of the data provided in MEPS public use release HC-218, as well as the content and structure of the codebook, reserved code values, and variable naming conventions. It is followed by Section D containing the Variable-Source Crosswalk, Appendix 1 containing sample SAS program code, and Appendix 2 containing sample Stata program code. A copy of the survey instrument used to collect the information on this file is available on the MEPS website.

1.0 General Information

This file is being released as a research file and has undergone the standard quality control procedures usually performed on MEPS data files. The file includes a total of 47,776 records, with each record representing a unique job for a person by round. This file presents information about jobs starting on or before 12/31/2020 only. The 2021 Jobs file release will present information on Panel 23, Panel 24, and Panel 25 jobs starting in 2021.

In the Employment section, MEPS collects complete job-related information in the round in which a job is first reported. While they vary by job type (see Section 2.0), the data reported for a job in its first survey round may include earnings by type (gross salary, tips, etc.), start and stop dates, hours and weeks worked, establishment size and industry, occupation, presence of retirement and other benefits, self-employment versus other status, temporary or seasonal situations, and health insurance availability. Minimal data updates are available for later rounds in which the job continues.

This Full-Year Jobs file contains job records from three MEPS panels. The 2020 Jobs file provided in this release, MEPS HC-218, contains job-level information collected in Rounds 5 through 7 for Panel 23, Rounds 3 through 5 for Panel 24, and Rounds 1 through 3 for Panel 25 of the Medical Expenditure Panel Survey.

In order to obtain complete information for a job, users must note the round in which the job is first reported. This is because MEPS collects complete Jobs information in that round only, as noted above.

For the first year panel, in this case Panel 25, data from Rounds 1, 2, and 3 are included in the 2020 Jobs file. Complete information for any Panel 25 job is available, whether that job was first reported in Round 1, 2, or 3. This is the case for any first year panel (the panel that began its first year of interviewing in the given year) in a Full-Year Jobs file.

For the second year panel (the panel that continued with its second year of interviewing in the given year), in this case Panel 24, data from Rounds 3, 4, and 5 are included in this file. If the Round 3, 4, or 5 job continued from Round 1 or Round 2, users must look back to the Jobs file from the previous year (2019) to obtain complete information for the job.

For the third year panel (the panel that continued with its third year of interviewing in the given year), in this case Panel 23, data from Rounds 5, 6, and 7 are included in this file. If the Round 5, 6, or 7 job continued from Round 3 or Round 4, users must look back to the Jobs file from the previous year (2019) to obtain complete information for the job. If the Round 5, 6, or 7 job continued from Round 1 or Round 2, users must look back to the Jobs file from two years prior (2018) to obtain complete information for the job.

Note that in 2020, Panel 23 is a non-traditional cross-over year panel. Panel 23 Round 5 was collected as a traditional terminal panel, the Round 5 interview occurred in 2020 but questions are asked as of 12/31/2019. A traditional cross-over panel (like Panel 23 Round 3) would have the interview in 2020 and ask questions as of the interview date. To compensate, the new Panel 23 Round 6 interview asked questions as of 1/1/2020 (looking further back than the Round 5 interview date). As detailed below, in the Jobs file, adjustments were made so that the file could identify which jobs (and job characteristics) were relevant in the time period between 1/1/2020 and the Panel 23 Round 5 interview date. This allowed for the creation of Panel 23 Round 5 job records, and sometimes resulted in the deletion of Panel 23 Round 6 records (for example, if the Round 6 interview identified a job that ended between 1/1/2020 and Round 5 interview date). More details on this process will follow in Section 1.1.

Appendix 1 includes sample SAS code and Appendix 2 contains sample Stata code to assist users in obtaining this information. Users should note that, because of differences in sample composition between the current year and the previous year files (i.e., a person was included in the previous year's delivery but not the current year or vice versa), or because more accurate information was received in subsequent round comments following the delivery of the Jobs records in the previous year, there occasionally may not be a corresponding job in the previous year file.

Users should note that due to the job adjustment process, Panel 23 Round 5 records contained in the 2020 Jobs file may differ from those contained in the 2019 Jobs file. Specifically, Panel 23 Round 5 job records in the 2019 Jobs file represent jobs (and job characteristics) that occurred between the Round 4 interview and 12/31/2019. In the 2020 Jobs file, Panel 23 Round 5 jobs represent jobs (and job characteristics) that occurred between 1/1/2020 and the Panel 23 Round 5 interview date. Job details for the 2020 portion of Round 5 were collected using a combination of data collected at the Panel 23 Round 5 and Round 6 interviews.

1.1 Third Panel in the 2020 Jobs File

Due to the impact of the COVID-19 pandemic on MEPS collection methods and lower response rates in the 2020 calendar year, AHRQ extended fielding for Panel 23 persons to include two additional rounds, Round 6 and Round 7, that collected information about 2020. As a result, the 2020 MEPS includes three panels of data: Panel 25 Rounds 1, 2, and 3, Panel 24 Rounds 3, 4, and 5, and Panel 23 Rounds 5, 6 and 7.

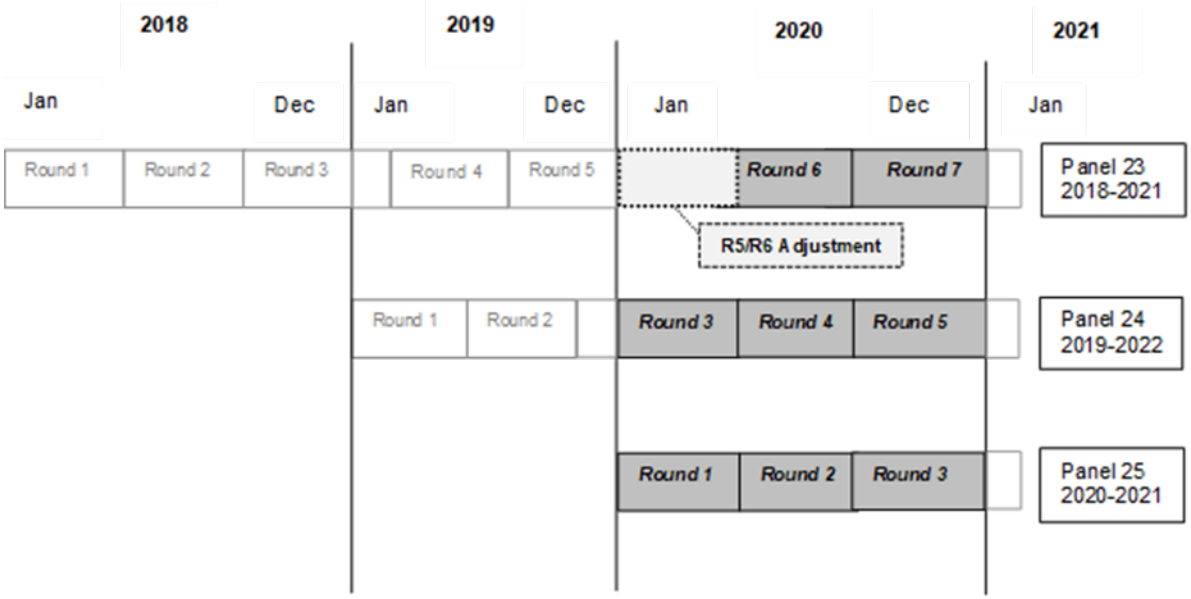
The decision to extend Panel 23 to include additional rounds occurred after Panel 23 Round 5 was fielded. As a result, Round 5 was fielded as a traditional terminal round (where questions asked for information through 12/31/2019. Had the decision been made much earlier, Round 5

would have been fielded as a cross-year round (similar to Round 3), where questions would have covered the events through 2020 up to the Round 5 interview date. Given this impromptu design decision, in order to capture data after 12/31/2019, the Panel 23 Round 6 reference period began on January 1, 2020 (not the Round 5 interview date) and ended anywhere from July through October 2020. This duration (7 to 10 months) exceeds a standard round length, which averages 6 months.

In order to create consistency in employment measures over time, job rosters and employment status were adjusted for FY 2020 public use files so that (a) Round 5 would represent employment for the time period between 1/1/2020 and the Round 5 interview date and (b) Round 6 would represent employment for the time period between the Round 5 interview date and the Round 6 interview date.

Appendix 5 also discusses additional MEPS rounds and extended fielding for Panel 23.

The adjustment lengthens Round 5 to resemble a standard Round 3 cross-year reference period and shortens Round 6 to resemble a standard Round 4 field period, as illustrated below. The adjustment process is further discussed after the description of the file contents and throughout this document. It is important to note that CAPI collected employment status for Panel 25 Round 3, Panel 24 Round 5, and Panel 23 Round 7 as of the interview date in 2021. As a result, adjustments discussed here for third year Panel 23, Round 5 will not be necessary in future data years.



Special 2020 Panel 23 Round 5 and Round 6 Job Roster Adjustment

Persons Eligible for Job Roster Adjustment

Any person who was part of a household in Round 6 and who had one or more Round 6 jobs that began or ended between January 1, 2020 and the Round 5 interview date was eligible for adjustment. In addition, a roster was adjusted if a person became 16 years of age between January 1, 2020 and the Round 5 interview date. Twenty-three persons had their age change from 15 to 16 and nine had a job requiring adjustment.

Number of Jobs and Persons Involved in Special Processing

Job rosters for 610 persons were evaluated for adjustment. These persons had 711 job records whose start and/or stop date was on or before the Round 5 interview date. Some persons had more than one job flagged for review. Of the 610 persons, 188 persons (with 289 job records) either had multiple jobs requiring adjustment or complex Round 5 and Round 6 rosters; these were evaluated and adjusted (described below). The remaining 422 job records were programmatically adjusted based on CAPI flow.

Job Roster Adjustments

The following describes rules for selecting a job for adjustment and the *typical* roster adjustment made:

1. New Panel 23 Round 6 current main job or current miscellaneous jobs where

    a. the job start year is 2020, the job start month is positive and is less than the Round 5 interview month or

    b. the job start year is 2020 and the job start month the same as the Round 5 interview month and the day is the same as or less than the Round 5 interview day (including unknown values) or

    c. the job started before 2020

    Roster adjustment: a new Round 5 job was created from the Round 6 job and the Round 6 job became a reviewed job. In some cases, a new Round 6 job became a new Round 5 miscellaneous job that changed to a main job in Round 6.

2. New Panel 23 Round 6 former main job and former miscellaneous jobs where

    a. the job stop year is 2020, the stop month is positive, and the job stop month is less than the Round 5 interview month or

b. the job stop year is 2020, the job stop month is the same as the Round 5 interview month and the job stop day is the same as or less than the Round 5 interview day (including unknown values) or

c. the job stop year is positive and less than 2020 or

d. the job start year is 2020, the job start month is positive and is less than the Round 5 interview month or

e. the job start year is 2020 and the job start month the same as the Round 5 interview month and the day is the same as or less than the Round 5 interview day (including unknown values) or

f. the job started before 2020

Roster adjustment: either a new former Round 5 job was created from the Round 6 job and the Round 6 job was deleted or an existing Round 5 job became a former job and the Round 6 job was deleted. For some cases, a new Round 5 current main job was created and the Round 6 job became a reviewed job that ends in Round 6. In cases where a new Round 6 former main job could not be adjusted as the Round 5 current main job because a Round 5 current main job existed, the Round 6 job was retained as reported. No editing was performed in order to retain the more detailed information reported on a former main job.

3. New Panel 23 Round 6 last job outside of reference period job or retirement jobs reported at EM380 where

   a. the job stop year is 2020, the stop month is positive, and the job stop month is less than the Round 5 interview month or

   b. the job stop year is 2020, the job stop month is the same as the Round 5 interview month and the job stop day is the same as or less than the Round 5 interview day (including unknown values) or

   c. the job stop year is positive and less than 2020

   Roster adjustment: the Round 6 job became a Round 5 last job outside of reference period or retirement job. If a retirement job at the same establishment was reported in Round 5, no editing was performed and the Round 6 job was retained.

4. Reviewed Panel 23 Round 5 main or miscellaneous jobs that end in Round 6 where

   a. the job stop year is 2020, the stop month is positive, and the job stop month is less than the Round 5 interview month or

   b. the job stop year is 2020, the job stop month is the same as the Round 5 interview month and the job stop day is the same as or less than the Round 5 interview day (including unknown values) or

c. the job stop year is positive and less than 2020

Roster adjustment: the Round 5 current job became a Round 5 former job and the Round 6 job was deleted.

In some cases, Round 7 job-level variables, such as CREATEQ, ORIGRND, and TYPECHGD, required adjustment.

Adjusted Job Flag

The constructed variable ADJR5 has been added to the 2020 Jobs file to flag those Panel 23 Round 5 and Round 6 jobs that were adjusted or created based on the interval between 1/1/2020 and the Round 5 interview data. ADJR5 is set as follows:

Value	Category
-1	INAPPLICABLE
1	R5 AS REPORTED, NOT ADJUSTED
2	R5 REPORTED AND ADJUSTED
3	R5 CREATED FROM R6 REPORT
4	R6 REPORTED AND ADJUSTED

ADJR5 is set to a value of 1, 2 or 3 for all Panel 23 Round 5 jobs. ADJR5 is set to a value of 4 for Panel 23 Round 6 jobs that were part of the adjustment process. Otherwise, ADJR5 is set to "Inapplicable" (-1).

2.0 Data File Information

2.1 File Contents

Each record in the 2020 Jobs file represents one job reported by a person in a round. All persons age 16 and older in the MEPS are asked to report on jobs held. Depending on an individual's job history, these reported jobs may be held:

- at the interview date,
- in the round but prior to the interview date, or
- prior to the round.

Only those persons reporting a job in a round will have a record in the 2020 Jobs file.

Record Identifiers

The unique record identifier is the variable JOBSIDX, which is composed of a person identifier (DUID + PID), a round identifier (RN), and a job number (JOBNUM). A panel indicator (PANEL) is included on the file to distinguish Round 3 jobs held by Panel 24 persons from Round 3 jobs held by those in Panel 25, as well as Round 5 jobs held by Panel 23 persons from Round 5 jobs held by those in Panel 24. The DUID identifier in this data release includes a 2-digit code to identify the panel and, as a result, JOBSIDX includes a panel identifier via DUID. The variable OrigRnd indicates the round a job was created. Therefore, it may or may not contain the same value as RN.

Each identifier variable (JOBSIDX, DUID, DUPERSID) begins with the 2-digit panel number. This allows analysts to easily identify records delivered in a previous year Jobs file (when panel is used in conjunction with other variables, such as RN and OrigRnd). In addition, CAPI assigns a unique job number that *may not be used in subsequent rounds* on different jobs. This 3-byte number, JOBNUM, is unique to the *reporting unit* (RU) and is set to a value that corresponds with the RU in which a person's job was first reported (e.g. A RU is '1', B RU is '2', C RU is '3', etc).

Initial Reporting Round

Most persons held only one job at the first interview date – their "Current Main Job." For persons who held more than one job at the round's interview date (a current job), respondents were asked to identify the main job. This job was classified as the "Current Main Job" and any other simultaneously held job was classified as a "Current Miscellaneous Job." The MEPS also obtained some information on any former job (Former Main Job or Former Miscellaneous Job) held in the reference period but not at the interview date. For those persons neither working at the interview date nor earlier in the reference period, limited information on the last job the person held was collected. Additionally, for those persons age 55 or older who were identified as having retired from a job, the MEPS obtained some job-level information (Retirement Job).

The variable SUBTYPE indicates the type of job record – current main (1), current miscellaneous (2), former main (3), former miscellaneous (4), last job outside reference period (5), or retirement job (6). When a job is initially reported, MEPS asks for detailed information about any "Current Main Job" and basic information about other job types. Refer to the questionnaire to see which information was asked for each job type. The following variable list identifies when a variable could be set based on the job SUBTYPE. Self-employed and wage-earner status at a job also defines when a variable may be set. (Note: wage-earner is used to describe workers who are not self-employed.) The last column indicates if the variable is populated in the round in which the job is first reported (collection only), when the job is reviewed (review only), or both (collection and review).

Variables Set for Each SUBTYPE

Variable	Self-Employed Jobs	Wage Earner Jobs	Current Main	Current Miscellaneous	Former Main	Former Miscellaneous	Last Job Outside Reference Period	Retirement	When Populated
JOBTYPE	x	x	x	x	x	x	x	x	collection only
JSTRTM	x	x	x	x	x	x			collection only
JSTRTY	x	x	x	x	x	x			collection only
JSTOPM	x	x			x	x	x	x	collection and review
JSTOPY	x	x			x	x	x	x	collection and review
RETIRJOB	x	x						x	collection and review
SUBTYPE	x	x	x	x	x	x	x	x	collection and review
JOBHASHI	x	x		x	x	x	x	x	collection only
NUMEMPS		x	x		x				collection only
ESTMATE1_M19		x	x		x				collection only
MORELOC		x	x		x				collection only
BUSINC	x		x		x				collection only
PROPRIET	x		x		x				collection only
TYPEEMPL		x	x		x	x if not self-employed & retired	x	x	collection only
YLEFT_M18		x			x		x		collection only
YNOBUSN_M18	x				x		x		collection only
HRSPRWK	x	x	x	x	x				collection only
HRS35WK	x	x	x		x				collection only
SICKPAY		x	x		x				collection only

Variable	Self-Employed Jobs	Wage Earner Jobs	Current Main	Current Miscellaneous	Former Main	Former Miscellaneous	Last Job Outside Reference Period	Retirement	When Populated
PAYDRVST		x	x		x				collection only
PAYVACTN		x	x		x				collection only
RETIRPLN		x	x		x				collection only
SESNLJOB	x	x	x	x	x				collection only
TEMPJOB	x	x	x	x	x				collection only
WKLYAMT	x	x		x					collection only
EMPLINS	x	x	x						collection only
OFFRDINS	x	x	x	x	x	x	x	x	collection only
DIFFPLNS	x	x	x	x	x	x	x	x	collection only
ANYINS	x	x	x	x	x	x	x	x	collection only
INUNION	x	x	x	x	x	x	x	x	collection only
PROVDINS	x	x	x	x	x	x	x	x	collection only
HHMEMBER_M18	x		x	x	x	x	x	x	collection only
TOTLEMP_M18	x		x	x	x	x	x	x	collection and review
TotNumEmp	x		x	x	x	x	x	x	collection only
RvwTotNumEmp	x		x	x					review only
SALARIED		x	x		x				collection and review
HOWPAID		x	x		x				collection and review
DAYWAGE		x	x		x				collection and review
HRSPRDY		x	x		x				collection and review
MAKEAMT		x	x		x				collection and review

Variable	Self-Employed Jobs	Wage Earner Jobs	Current Main	Current Miscellaneous	Former Main	Former Miscellaneous	Last Job Outside Reference Period	Retirement	When Populated
PERUNIT_M18		x	x		x				collection and review
MORE10		x	x		x				collection and review
MORE15		x	x		x				collection and review
MOREMINM		x	x		x				collection and review
GROSSPAY		x	x		x				collection and review
GROSSPER		x	x		x				collection and review
SALRYWKS		x	x		x				collection and review
HRSALBAS		x	x		x				collection and review
EARNTIPS		x	x		x				collection and review
EARNBONS		x	x		x				collection and review
EARNCOMM		x	x		x				collection and review
TIPSUNIT_M18		x	x		x				collection and review
TIPSAMT		x	x		x				collection and review
BONSUNIT		x	x		x				collection and review
BONSAMT		x	x		x				collection and review
COMMUNIT		x	x		x				collection and review
COMMAMT		x	x		x				collection and review
HRLYWAGE		x	x		x				collection and review
STILLAT	x	x	x						review only
MAIN_JOB	x	x	x						review only
DIFFWAGE		x	x						review only

Variable	Self-Employed Jobs	Wage Earner Jobs	Current Main	Current Miscellaneous	Former Main	Former Miscellaneous	Last Job Outside Reference Period	Retirement	When Populated
StillWorkFTPT	x	x	x						review only
WhyChngPTToFT	x	x	x						review only
WhyChngFTToPT	x	x	x						review only
STILLWRK	x	x		x					review only
OFFTAKEI	x	x	x	x					review only
NOWTAKEI	x	x	x	x					review only
ESTBTHRU	x	x	x	x					review only
INSESTB	x	x	x	x					review only
WHY_LEFT_M18	x	x			x	x			review only

For last jobs outside of reference period and retirement jobs that ended more than two years prior to the beginning of the reference period, certain questions (HHMEMBER_M18 and TOTLEMP_M18) are not asked. The precise calculation of the two-year cut-off date is not possible for some persons due to allowed negative values on stop year, stop month, and reference period start month. Therefore, HHMEMBER_M18 and TOTLEMP_M18 may be collected for some jobs that ended more than two years prior to the reference period.

Skip Patterns

Due to many skip patterns, it is recommended that users of the 2020 Jobs file become familiar with the Employment section in the MEPS questionnaire. To aid users, a crosswalk between variables and MEPS questionnaire numbers is provided in this release. The following examples of variables involved in skip patterns are presented to be illustrative; these examples do not represent the full range of variables affected by questionnaire skip patterns.

In one example of a skip pattern, the MEPS does not obtain job-related benefits such as vacation, sick leave, and pension information for self-employed jobs, so those variables are coded as "Inapplicable" (-1) for those types of jobs. Nor does the MEPS attempt to obtain wage, salary, and information regarding whether the job was in the private sector, federal or local government (TYPEEMPL) for the self-employed. So again, due to the skip pattern, TYPEEMPL is coded as "Inapplicable" (-1) for self-employed jobs.

Conversely, the questions relating to business organization type (BUSINC, PROPRIET) are asked only of the self-employed, so the skip pattern results in those variables being coded as "Inapplicable" (-1) for jobs performed by wage earners.

Job Updates and "Inapplicable" (-1) Values

The MEPS used dependent interviewing in Rounds 5, 6, and 7 for Panel 23, Rounds 3, 4, and 5 for Panel 24 and in Rounds 2 and 3 for Panel 25 (see Section RJ in the Employment section of the questionnaire). In these rounds, the MEPS asked about current main and current miscellaneous jobs held at the previous round interview date to determine whether the jobholder continued to work at these jobs. For other job types (former, last, or retirement) reported in the previous round, MEPS does not ask any follow-up questions. These jobs, by definition, are no longer held by the person and therefore are not included on the file except in the round they are first reported.

With dependent interviewing, if a person still held a Current Main Job from the previous round, the MEPS asked whether the job was still the main job. For most jobholders, it was reported that they still worked at the same job and it was still their main job. If, in a subsequent interview, a job was no longer held, it was designated as a former job for that follow-up round. It is also possible, although unusual, for a job to change from main to miscellaneous (or vice versa) in a round subsequent to the initial report.

If job status remained the same for a continuing job (either main or miscellaneous), the MEPS asked only a subset of the employment questions as a review. Because the MEPS asked only this subset of questions if job status for a person did not change in later rounds, many job-level variables on the subsequent round's job records are coded as "Inapplicable" (-1); the complete information for a continued job is located on the record for the job in the first round in which it was reported. Thus, it is important to determine whether a job continues from the previous round when working with the job records. In rounds where this applies, the variables STILLAT (for jobs that were current main in the previous round) and STILLWRK (for jobs that were current miscellaneous in the previous round) indicate whether a person still holds the job at the subsequent round interview date. The variable SUBTYPE on the subsequent round record indicates whether the job is main or miscellaneous in that subsequent round. Note that if a Panel 24 job included in this 2020 file is continued from a Round 1 or 2 job or a Panel 23 job included in this 2020 file is continued from a Round 3 or 4 job (in the 2019 file), much of the information will be contained in the 2019 Jobs file (HC-211). Likewise, if a Panel 23 job included in this 2020 file is continued from a Round 1 or Round 2 job (in the 2018 file), much of the information will be contained in the 2018 Jobs file (HC-203).Use that file to obtain the desired job characteristics. Appendix 1 provides a sample SAS program showing how to do this, and Appendix 2 provides a sample Stata program showing how to do this. Both sample programs take into account the addition of the third panel.

Any new job reported in a round following the initial interview is collected the same way as in the first interview round.

Variables that relate only to the review of a job reported in a previous round (DIFFWAGE, ESTBTHRU, INSESTB, MAIN_JOB, NOWTAKEI, OFFTAKEI, STILLAT, StillWorkFTPT, STILLWRK, RvwTotNumEmp, WHY_LEFT_M18, WhyChngPTToFT, WhyChngFTToPT) were not asked in Round 1, and these variables are coded as "Inapplicable" (-1) on a Jobs record for the round in which the job is initially reported.

Another type of job update pertains to situations where a reviewed current miscellaneous job becomes the current main job in the round. The flag variable TYPECHGD indicates if a job changed from a current miscellaneous job to a current main job. For these types of jobs, questions asked when the job was first reported as a current miscellaneous job are not re-asked, with three exceptions.

1. Responses to either EM540 or EM620 (typical hours worked per week) are used to populate the variable HRSPRWK. When originally reported, the current miscellaneous job was asked EM620 (but not asked EM540). As a current main job, it will now be asked EM540 instead of EM620. Consequently, there may be different values on HRSPRWK between rounds.

2. Responses to either EM560 or EM630 (whether job is temporary) are used to populate the variable TEMPJOB. When originally reported, the current miscellaneous job was asked EM630 (but not asked EM560). As a current main job, it will now be asked EM560 instead of EM630. Consequently, there may be different values on TEMPJOB between rounds.

3. Responses to either EM570 or EM640 (whether job is seasonal) are used to populate the variable SESNLJOB. When originally reported, the current miscellaneous job was asked EM640 (but not asked EM570). As a current main job, it will now be asked EM570 instead of EM640. Consequently, there may be different values on SESNLJOB between rounds.

Exceptions to the "Inapplicable" (-1) Rule

Unlike the situation explained above for most variables on the file, for certain variables a value other than "Inapplicable" (-1) does not necessarily mean that a job is newly reported. For a small subset of variables, previous round variables are carried forward to the next round, even if there have been no updates to the variables since they were originally reported. There are two distinct situations in which this special treatment is used, due to internal processing needs.

The first type of exception occurs when questions related to the affected variables are skipped over as "Inapplicable" (-1) during the interview in rounds subsequent to the one in which the job was initially reported, but have their originally reported response carried forward from round to round. This group includes the following 14 variables: EMPLINS, HRSPRWK, HRS35WK, JOBTYPE, JSTRTY, JSTRTM, MORELOC, NUMEMPS, OFFRDINS, PROVDINS, TYPEEMPL, JOBHASHI, HRSALBAS, and RETIRJOB. Note that HRSALBAS and RETIRJOB may also be updated in subsequent rounds.

The second type of exception occurs for certain questions that are asked during the review of a job in rounds following the round in which the job was initially reported. If there is no change based on the review, the value for the affected variable is copied forward from the previous round. If there is a change, the variable is updated to reflect the new information. These five variables are: JSTOPY, NOWTAKEI, OFFTAKEI, SUBTYPE, and TOTLEMP_M18.

Variables related to earnings (such as HRLYWAGE, GROSSPAY, SALARIED) are treated similarly to the five variables just discussed. In the review section, the MEPS attempted to obtain information regarding changes in wages for the same job from round to round. If there were no wage changes (indicated by the DIFFWAGE variable), then the most recent round's information was carried forward. If changes were recorded, then the relevant variables were updated. For every new job reported for a person, the MEPS attempted to obtain current wage information.

Top-Coding, Bottom-Coding, Editing, and Confidentiality

Outlier Wage Editing on Current Main Jobs

In most years, wage information on current main job records is logically edited for consistency using established rules and guidance from AHRQ. However, in 2020 the typical wage outlier editing process was not performed. In typical years, outliers are checked for persons who report a wage change and the new reported wage (a) is substantially different from prior wage (change >=100%), (b) is no different than prior wage, (c) is low in value ($0 < wage < $1) or, (d) has a value higher than prior year's top code value. There are numerous sources for these types of errors, including keystroke or respondent error.

In a typical year, approximately 100 wages are reviewed per panel, resulting in approximately 50 wage edits (overall). Users should keep in mind that such edits were not performed in 2020 when using the wage variables, especially when comparing 2020 to other data years. To help users identify cases that would have been reviewed (but not necessarily edited) in this process, the 2020 Population Characteristics Public Use file data includes wage outlier flag variables, OUTFLAGrr. These round-specific wage outlier flag variables OUTFLAG31, OUTFLAG42, and OUTFLAG53 indicate that a person's updated wage at the current main job would have been programmatically selected for review during the 2020 wage outlier editing process (but not necessarily edited). The flag is constructed prior to wage imputation, consistent with the timing of full year wage outlier review. A wage is selected for review if one (and only one) of the following is true:

1. A wage is greater than 0 and less than 1 (Low).
2. A wage where the absolute change between any other wage is more than 100% (i.e., wage more than doubled) (Subst Diff).
3. An "updated" wage shows no difference in the calculated wage amount (No wage change).
4. A wage is greater than the previous year wage top code value (High).

Sometimes, a person's wages can meet several conditions. In some cases, the OUTFLAG31, OUTFLAG42, and OUTFLAG53 will be set to a value that represents a combination, for example, values 5 or 6:

5. A wage meets the conditions for both (a) greater than 0 and less than 1 (category 1, Low) and (b) absolute change in wage is more than 100% (category 2, Subst Diff).

6. A wage meets the conditions for both (a) greater than previous year wage top code (category 4, High) and (b) absolute change in wage is more than 100% (category 2, Subst Diff).

In other cases those cases are given a default value based on whether they are a high wage or low wage. Specifically, in rare circumstances, a person may have a mix of "updated" wage with no difference in calculated wage amount (category 3 – no wage change) with either of the following categories: low wage (category 1 - low) or high wage (category 4 - high). OUTFLAG is set to either "Low wage outlier" (1) or "High wage outlier" (4) respectively for these cases.

The values for the OUTFLAG variables are shown below.

Value	Description
-1	Inapplicable
1	Low wage outlier
2	Substantial difference
3	No wage change outlier
4	High wage outlier
5	Subst diff and low outlier
6	Subst diff and high outlier

Users should also keep in mind that many of the high wage outlier amounts identified in OUTFLAG have wages that are subsequently top coded, as described below.

Note that the wage outlier flag is included on the 2020 Population Characteristics Public Use file only. Users of the 2020 Jobs file can link to the 2020 Population Characteristics Public Use file through the variable DUPERSID, as described in Section 2.3 (Person-Level Estimates).

Wage Top-Coding

For reasons of confidentiality, earnings variables on the 2020 Jobs file were top-coded. The earnings variables include HRLYWAGE, BONSAMT, COMMAMT, TIPSAMT, DAYWAGE, WKLYAMT, GROSSPAY, and MAKEAMT. A value of "TOP CODED" (-10) for one of these variables on a record indicates that the variable had a positive value and that the hourly rate for that earnings variable for the record was greater than or equal to $103.36. The process by which the top-code value for the Jobs file is derived incorporates the wage top-code process used in the

2020 Population Characteristics Public Use file top-coding process. The purpose of top-coding is to ensure confidentiality for each person across files.

In addition to using wages from the first report of a current main job, updated wages from that job reported in any subsequent round are also included in deriving the wage top-code value. On the 2020 Population Characteristics Public Use file, any person who has a wage for any job in any round that is greater than or equal to the top-code value will have all wages for all jobs top-coded, regardless of round. Any person whose wages are top-coded on the 2020 Population Characteristics Public Use file also has *all* wages on *all* jobs top-coded in the 2020 Jobs file.

Moreover, because other jobs where wages are reported are included in the 2020 Jobs file but not summarized in the 2020 Population Characteristics Public Use file (i.e., newly reported former main jobs and current/former miscellaneous jobs), and these wages may exceed the current year top-code value, wages for these jobs and all jobs belonging to the same jobholder are top-coded on the 2020 Jobs file. In turn, the wages of these persons are top-coded in the 2020 Population Characteristics Public Use file as well.

Note that there are also some jobs where respondents indicate that a supplemental wage, such as a commission, tip, or bonus, is greater than or equal to the wage top-code value but, at that same job, base wage such as the annual salary is not. For these cases, only the tips, commissions, or bonus amounts were top-coded on the job where they are greater than or equal to the wage top-code value (note, these supplemental wages only reside on the 2020 Jobs file). All other wage amounts for all jobs for these persons were left as reported. (This applies to wages and jobs on both the 2020 Population Characteristics Public Use and 2020 Jobs files.)

Beginning in 2020, wages are also top-coded to -10 on the Jobs file for two situations where wages were formerly reset to “Cannot Be Computed” (-15) in prior year Jobs files. These situations are:

1. If wages at a current main job were imputed on the Full Year Population Characteristics file to a value less than the top code value but calculated on the Full Year Jobs file greater than or equal to the top code value, or

2. If wages at a current main job that changes to a current miscellaneous job are greater than or equal to the top code value. Note that wages earned through a miscellaneous job are not reported on the Full Year Population Characteristics file.

Additional Wage Information

To improve the quality of wage reports, CAPI prompts the respondent to confirm wages reported in the Employment Wage section if a wage amount falls outside a specified wage range. Ranges vary depending on the unit of pay as follows:

Unit of Pay	Wage Range
Per year	$5,000.00 - $200,000.00
Per month	$375.00 - $20,000.00

Unit of Pay	Wage Range
Per 2-week period	$150.00 - $10,000.00
Per week	$75.00 - $5,000.00
Per day	$10.00 - $750.00
Per hour	$1.00 - $125.00

To calculate the hourly rate for earnings types not reported on an hourly basis, the number of hours per week worked and in some cases the number of weeks worked were used in conjunction with the various amounts. These hours and weeks are included on the file along with the reported earnings amounts, but not the calculated hourly rates. (Earnings variables were not reconciled with income data collected elsewhere in the MEPS.)

Establishment Size Information

The establishment size variable for the self-employed is TOTLEMP_M18. In addition, two variables are available containing the individual responses collected at RJ110 and EM740 (number of employees at a self-employed job). They are RvwTotNumEmp (establishment size at continuing self-employed job) and TotNumEmp (establishment size at newly reported self-employed job), respectively.

The establishment size for wage-earners can be found in NUMEMPS (establishment size at non-self-employed job); this value is collected at EM430 (number of employees). Respondents who did not know the actual establishment size (NUMEMPS) are asked in question EM440 to choose approximate establishment size from a number of size ranges. These responses are used to create the variable ESTMATE1_M19. The categorical values available to respondents in EM440 are as follows.

Value	Category
-1	Inapplicable
-7	Refused
-8	Don’t Know
2	2-9
3	10-25
4	26-49
5	50-100
6	101-500
7	501-1,000
8	1001-5,000
9	5001+

The value “Cannot Be Computed” (-15) is not an allowed value for ESTMATE1_M19.

In 2019, the constructed variable ESTMATE1_M18 contained a second coding schema for categorical values available to respondents in EM440 prior to Panel 24 Round 3 and Panel 23 Round 5. As of 2020, ESTMATE1_M18 is no longer delivered in this file.

For confidentiality reasons, NUMEMPS, TOTLEMP_M18, RvwTotNumEmp and TotNumEmp were top coded to "-10 # OF EMP >= 13,000" for establishment sizes greater than or equal to 13,000 employees.

Job Start/Stop Year

In addition to top coding wages and establishment size, the start year of job (JSTRTY) and the stop year of job (JSTOPY) are bottom-coded. This is done because a person's age may be calculated using the job start or stop year and that age may indicate that the jobholder is older than 85 years, the age top-code value. This value is calculated by taking the current delivery year (e.g. 2020), subtracting the age top-code value (i.e. 85 years of age), then adding back 15 (i.e. the age of a person in the year before entering the work force as defined in MEPS). For the 2020 Jobs file, the bottom code value for the job start and stop year on jobs reported in Panel 25 Round 1, Round 2, or Round 3, Panel 24 Round 4 or Round 5, and Panel 23 Round 6 or Round 7 is 1950. For Jobs that began in Panel 24 Round 1, Round 2 or Round 3, or Panel 23 Round 4 or Round 5, JOBSIDX were delivered in the 2019 Jobs file. These records may retain the 2019 bottom code value of 1949. For Jobs that began in Panel 23 Round 1, Round 2 or Round 3, JOBSIDX were delivered in the 2018 Jobs file. These records may retain the 2018 bottom code value of 1948.

Temporary and Seasonal Jobs

Two variables on the file pertain to the temporary and seasonal nature of a person's main or miscellaneous job. The variable TEMPJOB indicates whether a main or miscellaneous job is temporary (i.e., is a current main job for a limited amount of time or until the completion of a project). The variable SESNLJOB indicates either that a main or miscellaneous job is available only during certain times of the year or that the individual is working throughout the entire year at that job. Teachers and other school personnel who work only during the school year are considered to work year round. These questions are asked of newly reported jobs only. These variables are set to "-1 INAPPLICABLE" for all subsequent rounds. These questions are not asked of newly reported former miscellaneous jobs, last jobs outside of reference period, and retirement jobs.

Reason No Longer at Place of Employment

In cases where a former job is newly reported, questions are asked regarding why the person is no longer at that place of work. For wage earners, this information is found in YLEFT_M18. For self-employed persons, this information is collected in YNOBUSN_M18.

It is important to note that the retirement job classification in the variable SUBTYPE is independent of any retirement response in the following variables:

- YNOBUSN_M18, which relates to the question why a person no longer has a self-employed business;
- WHY_LEFT_M18, which relates to the question why a person left a job in the current round.

Health Insurance Data

Questions about employment-related health insurance are asked both when any type of job is newly reported and when any continuing job is reviewed. For main jobs, either newly reported or changing from miscellaneous, the variable that indicates whether insurance is held through that establishment is EMPLINS. For all non-main jobs, the variable JOBHASHI indicates whether insurance is held through that establishment.

For a newly reported job, depending on whether employment-related insurance is held or not, there may be follow-up information gathered which is contained in the following variables:

- OFFRDINS, which notes whether health insurance is offered through the job in cases where the jobholder reports that they do not hold health insurance through the job;
- DIFFPLNS, which notes whether a choice of health insurance plans is available for cases where the jobholder reports that health insurance is either offered or held through the job;
- ANYINS, which notes whether health insurance coverage through the job is available to any other employees at the establishment in cases where the jobholder does not hold health insurance through the job and is not offered health insurance coverage through the job.

For a continuing job, when no health insurance was held through the job in the round in which the job was first reported but health insurance was offered through the job, the question RJ70 OFFTAKEI is asked in later rounds to determine whether the employee now holds the health insurance that is offered through the job. (Note: if health insurance through this job was reported as being held via RJ70 in the prior round, RJ70 is not asked in the current round.)

Similarly, the insurance status question RJ80 (NOWTAKEI) is asked to determine whether health insurance is now held through the job in the following cases:

- insurance through the job ended in a prior round or
- insurance coverage was never reported through the job and the person was not offered insurance through the job in the round a job was first reported or

- the respondent disavows coverage through the job in the Health Insurance section that was previously indicated in the Employment section of the interview

MEPS then includes several clarifying questions regarding health insurance availability at an employer. Where the person does not report, does not know, or refuses to indicate the insurance coverage status through the job at RJ70 or reports no insurance coverage through the job at RJ80, the respondent is asked if the person was offered insurance through the job at RJ90 (ESTBTHRU).

Lastly, when a respondent indicates that the jobholder of a reviewed job neither holds insurance through the job nor was offered health insurance at the job, the respondent is asked if *any other* employees were offered health insurance through the job at RJ100 (INSESTB).

In some cases, respondents will indicate in the Health Insurance section that health insurance reported in the Employment section was either wholly or partially reported in error. This is referred to as insurance being "disavowed." If newly reported health insurance through the job is disavowed in the Health Insurance section, follow-up questions (HX21, HX22, HX23) regarding whether health insurance is offered at the job, whether more than one plan is available, and whether health insurance is offered to any employees are asked in the Health Insurance section. This information is used in an editing process whereby responses in the Health Insurance section are transferred into the Employment or Review of Jobs sections. As a result, the disavowal process may result in a change to values originally collected in the Employment or Review of Jobs section (wherever the health insurance was initially reported). The complete list of variables potentially impacted includes: EMPLINS, JOBHASHI, OFFRDINS, DIFFPLNS, ANYINS, and PROVDINS, collected in the Employment section, and NOWTAKEI, OFFTAKEI, ESTBTHRU, and INSESTB, collected in the Review of Jobs section. In some cases, a disavowal may result only in a change to the value of PROVDINS.

Health insurance through an employer can be disavowed in MEPS based on a respondent's answer to one of four questions (HX14, HX15, HX20, HP70). To help users understand the source of the disavowal, the variable HIDISAVW indicates which of the following questions resulted in the disavowal. HIDISAVW will include only one source among these options. Please note, however, that it is possible for a respondent to disavow one source of coverage at HX15 and then later disavow the second source of coverage at HP70. In these cases, HIDISAVW will be set to HP70.

1. HX14 – This question is asked if both employer and union coverage are reported at EM710 (PROVDINS) to determine if there is 1 ONE PLAN, 2 TWO PLANS, or if 3 INSURANCE WAS REPORTED IN ERROR. HIDISAVW = HX14 indicates that HX14 = 3 and that there is neither insurance coverage through the employer nor insurance coverage through the union and that updates were made to the insurance variables collected in the Employment section (EMPLINS, JOBHASHI, OFFRDINS, DIFFPLNS, ANYINS, NOWTAKEI, OFFTAKEI, ESTBTHRU, INSESTB, PROVDINS) during the disavowal clean-up process.

2. HX15 – This question is asked if, at HX14, the respondent indicates 1 ONE PLAN (HX14 = 1). At HX15, the respondent must select either insurance coverage through the employer or insurance coverage through the union. Depending on which of these are chosen (employer or union) the other source of coverage was disavowed. For

example, if HX14 = 1 and HX15 = employer, the insurance coverage through the union will be disavowed. The originally reported value of PROVDINS = 3, both employer and union, will be edited to PROVDINS = 1, employer only. Conversely, if HX15 = union, the insurance coverage through the employer will be disavowed, and the originally reported value of PROVDINS = 3 will be edited to PROVDINS = 2, union only.

3. HX20 – This question is asked if either insurance coverage through the employer only or insurance coverage through the union only are reported at EM660 ((EMPLINS or JOBHASHI=1) and INUNION<>1) or EM710 (PROVDINS = 1 EMPLOYER ONLY or 2 UNION ONLY). If the respondent volunteers that the job-related insurance coverage reported at HX20 was in error, the insurance coverage reported in the Employment or Review of Jobs section is removed during the disavowal clean-up process.

4. HP70 – This question is asked of private health insurance coverage through a job that was reported in the Employment section. The respondent is asked to verify that the jobholder is the policyholder of the job related insurance coverage. If the response is NO, REFUSED, DON'T KNOW, the job-related insurance coverage is removed during the disavowal clean-up process.

For Panel 23 persons who underwent adjustment of Round 5 and/or Round 6 jobs variables, health insurance variables EMPLINS, JOBHASHI, OFFTAKEI, and NOWTAKEI reflect insurance status as of the adjusted end reference period date.

Industry and Occupation Coding

Industry and occupation codes were assigned by professional coders at the Census Bureau based on verbatim descriptions provided by respondents during the survey interview. The codes are determined at a detailed 4-digit level and then collapsed into broader groups on the file to ensure the confidentiality of the records. INDCODEX contains industry information and OCCCODEX contains occupation information. Appendices 3 and 4 contain crosswalks between the detailed and collapsed codes for industry and occupation.

With the 2010 file, the Census Bureau began using 2007 Industry and 2010 Occupation codes, which were developed for the Bureau's Current Population Survey and American Community Survey. These updated coding schemes incorporate minor changes from the 2003 industry and occupation codes used for the 2002-2009 files; therefore, INDCODEX and OCCCODEX for 2010 and later files will be comparable to those variables on the 2002-2009 files. (Industry and occupation variables for pre-2002 files are not comparable to those for later files.)

2.2 Other 2020 File Considerations

Round-to-Round Changes to Job Rosters

COVID-19 greatly impacted response rates, increasing the likelihood that job characteristics of MEPS job holders vary more than typical MEPS round-to-round changes. Jobholder sex, race, educational attainment, industry, occupation, establishment size, and job place flexibility all impact employment stability more so since the advent of COVID-19.

Users should also note that non-responding households in Panel 25 produced a higher drop-off in jobs reviewed in Round 2 than in prior first year panels. For instance, between Round 1 and Round 2, there was a 54% drop-off in job records in Panel 25, 14% more than the drop-off seen in Panel 24 between Round 1 and 2, and 15% more than the drop-off seen in Panel 23 between Round 1 and Round 2. For these reasons, it will be important for users to compare jobholder and job characteristics in their analysis. Moreover, since over 80% of all jobs in a panel are reported in the first round of the survey, given the low response rates in Round 1 and drop-off of reviewed jobs in Round 2, COVID-19 will have a sustained impact on Panel 25 employment data more so than in any other panel.

Questions where Respondents Note COVID-19 Impacts

Users of the 2020 Jobs file may find it helpful to know where in Employment sections field interviewers documented COVID-related impacts from respondent comments:

- temporary increase or reduction in hours worked (EM540 HRSPRWK, EM550 HRS35WK, RJ40 StillWorkFTPT, RJ50/RJ55 WhyChngFTToPT/PTToFT)
- layoffs (RJ110 WHY_LEFT_M18, EM520 YLEFT_M18, RJ10 STILLAT, RJ60 STILLWRK, RJ20 MAIN_JOB, RJ40 StillWorkFTPT, RJ50/RJ55 WhyChngFTToPT/PTToFT, RJ120_01 JSTOPM, RJ120_03 JSTOPY)
- wage changes (both wage reduction and bonuses or other ‘special’ pay obtained for work during the COVID pandemic)
- impact on benefits (EM580 SICKPAY, EM590 PAYDRVST, EM600 PAYVACTN, EM610 RETIRPLN)
- impact on health insurance (EM660 EMPLINS and JOBHASHI, EM670 OFFRDINS, RJ70 OFFTAKEI, RJ80 NOWTAKEI, RJ90 ESTBTHRU, RJ100 INSESTB)
- temporary and/or seasonal nature of employment (EM560 TEMPJOB, EM570 SESNLJB)
- number of employees at establishment (EM430 NUMEMPS, EM740 TotNumEmp, RJ110 RvwTotNumEmp)

2.3 Person-Level Estimates

This 2020 Jobs file does not include any weights necessary to extrapolate this data to the U.S. population. To make person-level estimates, link to any of the 2020 MEPS files and use the person-level weight for the appropriate panel. The link should be made through the variable DUPERSID. Note that not all persons in the MEPS have positive weights and job records; only those persons who have either a positive person-level or family-level weight in the 2020 Population Characteristics Public Use file are included in the 2020 Jobs file.

2.4 Codebook Structure

For each variable on the 2020 Jobs file, an unweighted frequency is provided in the accompanying codebook file.

2.5 Reserved Codes

The following reserved code values are used:

Value		Definition
-1	INAPPLICABLE	Question was not asked due to skip pattern
-7	REFUSED	Question was asked and respondent refused to answer question
-8	DK	Question was asked and respondent did not know answer or the information could not be ascertained
-10	TOP CODED	Variable was top-coded for confidentiality, as described above
-15	CANNOT BE COMPUTED	Value cannot be derived from data

The value -15 (CANNOT BE COMPUTED) assigned to MEPS constructed variables in cases where there is not enough information from the MEPS instrument to calculate the constructed variable. “Not enough information” is often the result of skip patterns in the data or from missing information resulting from MEPS responses of -7 (REFUSED) or -8 (DK). Note that reserved code -8 includes cases where the information from the question was “not ascertained” or where the respondent chose “don’t know”.

2.6 Codebook Format

This codebook describes an ASCII dataset (with related SAS, SPSS, R, and Stata programming statements and data user information), although the data are also provided in a SAS data set, SAS transport file, Stata data set, and Excel file. The file contains 84 variables and has a logical record length of 269 with an additional 2-byte carriage return/line feed at the end of each record. The following codebook items are provided for each variable:

Identifier	Description
Name	Variable name
Description	Variable descriptor
Format	Number of bytes
Type	Type of data: numeric (indicated by NUM) or character (indicated by CHAR)
Start	Beginning column position of variable in record
End	Ending column position of variable in record

2.7 Variable Source and Naming Conventions

Beginning in 2018, as variable collection, universe, or categories are altered, the variable name will be appended with "_Myy" to indicate in which year the alterations took place. Details about these alterations can be found throughout this document.

In general, variable names reflect the content of the variable. Due to system changes, variable names are no longer restricted to 8 characters. Variables contained on this file were derived from the questionnaire itself or from the CAPI. The source of each variable is identified in Section D. Variable-Source Crosswalk. Sources for each variable are indicated in one of two ways:

1. Variables derived from CAPI or assigned in sampling are so indicated as "CAPI Derived" or "Assigned in Sampling," respectively;

2. Variables that come from one or more specific questions have those questionnaire sections and/or question numbers listed in the "Source" column.

3.0 Discussion of Pandemic Effects on Quality of 2020 MEPS Data

3.1 Summary

Data collection for in-person sample surveys in 2020 presented real challenges after the onset of the COVID-19 pandemic at a national level in mid-March of that year. After major modifications to the standard MEPS study design, it was possible to collect data safely, but there were naturally concerns about the quality of the data after such modifications. Preliminary evaluations of survey estimates based on the sample weights established for the FY 2020 Population Characteristics PUF suggest that useful estimates can be obtained from the data provided on this PUF. However, such evaluations are continuing as part of the development of the FY 2020 Consolidated PUF to be released later in 2022, and there may be updates to the variables appearing on the FY 2020 Population Characteristics PUF as a result.

3.2 Overview

The onset of the COVID-19 pandemic in 2020 had a major impact on the MEPS Household Component (MEPS-HC) as it did for most major federal surveys and, of course, American life generally. The following discussion describes 1) the general impact of the pandemic on three major federal surveys (the effects on two of which also affect MEPS); 2) modifications to the MEPS sample design and field operations in 2020 due to the pandemic; and 3) potential data quality issues in the FY 2020 MEPS data related to the COVID-19 pandemic.

3.3 The Impact of the Pandemic: Other Major Federal Surveys

Many important federal surveys were collecting data when the pandemic became national in scope in March 2020. Among them were the Current Population Survey (CPS), the American Community Survey (ACS), and the National Health Interview Survey (NHIS). The ACS and the NHIS field fresh samples each year. The CPS includes rotating panels, meaning some of the sampled households fielded had participated in prior years while others were fresh. Two of these surveys have important roles in MEPS. CPS subgroup estimates serve as raking control totals in the MEPS weighting process while the Round 1 households fielded for MEPS are selected annually as a subsample from the set of NHIS responding households from the prior year.

All three of these surveys have reported bias concerns resulting from the data collected in 2020 being of lower than usual quality. In fact, the ACS decided not to release a standard database for single year 2020 due to the uncertain quality of the 2020 data, while the CPS and the NHIS released data but included reports discussing concerns about bias. All three surveys have reported evidence of nonresponse bias, specifically, that households in higher socio-economic levels were relatively more likely to respond and the sample weighting was unable to fully compensate for this. As a result, analysts have been cautioned about the accuracy of survey estimates and the ability to compare resulting estimates to estimates obtained in the years prior to the pandemic. For instance, in the documentation for the Current Population Survey, 2021 Annual Social and Economic (ASEC) Supplement, in Appendix G (beginning on page G-6) the impact of the pandemic on survey estimates is discussed. The two following statements appear at the beginning and end of the section:

> *Data users should exercise caution when comparing estimates for data years 2019 and 2020 from the reports or from the microdata files to those from previous years due to the effects that the coronavirus (COVID-19) had on G-9 interviewing and response rates. Interviewing for the March 2020 CPS began on March 15, 2020.*
>
> *…*
>
> *Using administrative data, Census Bureau researchers have documented that there are more (and larger) differences between respondents and nonrespondents in 2020 and 2021 than in earlier years. Of particular interest for the estimates in the ASEC reports are the differences in median income and*

educational attainment, indicating that respondents in 2020 and 2021 had relatively higher income and were more educated than nonrespondents.

The full document, 2021 Annual Social and Economic Supplement (census.gov), is available on the Census Bureau web site.

The quality of CPS data is of particular importance to MEPS as CPS estimates serve as the control totals for the raking component of the MEPS weighting process. These control totals are based on the following demographic variables: age, sex, race/ethnicity, region, MSA status, educational attainment, and poverty status. The CPS estimates used in the development of the FY 2020 MEPS PUF weights that were based on the variables of age, sex, race/ethnicity, region, and MSA status were evaluated by the Census Bureau and determined to be of high quality. However, similar evaluations of the corresponding CPS estimates associated with educational attainment and poverty status found that these estimates suffered from bias, as reported in the documentation quoted above. For the MEPS FY 2020 Population Characteristics PUF weights, an approach based on a regression model to incorporate educational attainment was developed that appears quite acceptable. The use of poverty status in some form for the FY 2020 Consolidated PUF weights is still under consideration.

A set of references discussing the fielding of these three surveys during the pandemic and resulting bias concerns can be found in the References section.

3.4 The Impact of the Pandemic: MEPS-HC

To set the stage, for the MEPS-HC, face-to-face interviewing ceased due to the COVID-19 pandemic on March 17, 2020. At that time, there were two MEPS panels in the field for which 2020 data were being collected: Round 1 of Panel 25 and Round 3 of Panel 24. The sampled households for Panel 25 were being contacted and asked to participate in MEPS for the first time while those from Panel 24 had already participated in MEPS for two rounds. A third MEPS panel was also in the field in early 2020, Round 5 of Panel 23, collecting data for the last portion of 2019.

In developing a plan for how best to resume MEPS data collection, the primary issues were how to do so safely for both sampled household members and interviewers and the potential impact on data quality. Telephone data collection, although not the preferred method of data collection in general for MEPS-HC, was the natural option because it did not require in-person contact with respondents and could be implemented relatively quickly. Telephone numbers for Panel 24 were readily available as they had been routinely collected during earlier rounds. Telephone numbers were also generally available for Panel 25 Round 1 households from the NHIS data collection effort. However, the impact of changing to telephone on both response rates and data quality was expected to be larger for Panel 25 Round 1. Round 1 response rates are always the lowest of the five rounds, telephone survey response rates are typically lower than those for in-person surveys, and Round 1 respondents are new to the task of keeping track of health care events and are not expected to report them as reliably as previous MEPS participants who have been encouraged to keep records of health care events for the next interview.

Moreover, at the time in-person interviewing stopped in mid-March 2020 completion rates for Panels 23 and 24 were substantially higher than those for Panel 25, as the older panels typically begin data collection earlier in the calendar year and take less effort to complete than the new panel. Weighted analyses show, if each panel were to represent the full MEPS target population individually, Panel 23 in-person interviews would represent about 72 percent of the MEPS target population, with Panel 24, about 61 percent; and Panel 25 about 53 percent.

With all this in mind, there were important data quality concerns related to Panel 25 resulting in a decision to change the MEPS-HC study design to mitigate the potential impact on FY 2020 data. It was decided to field Panel 23 for at least one more year, asking Panel 23 respondents if they would be open to further participation in MEPS in newly added Rounds 6 and 7. Extending Panel 23 was meant to both offset the decrease in the number of cases in the FY 2020 data related to lower expected sample yields for Panel 25 and to improve data quality by retaining a set of participants who were familiar with MEPS.

These changes necessitated operational changes, including: interviewer training to support telephone work, training and distribution of personal protective equipment (PPE) for COVID-19 safety for limited in-person contact, developing a respondent website for show cards and other materials, and adding a fall Panel 23 Round 6 interview covering all 2020 events from January 1, 2020 to the date of the interview.

3.5 Data Quality Issues for MEPS for FY 2020

An article by Zuvekas and Kashihara (2021) provides useful background information on how the MEPS study design was modified in 2020 in response to the pandemic and mentions analyses undertaken to examine potential impacts on data quality. Such analyses continue into 2022 to gain a more complete understanding of any data quality issues prior to the release of health care events and expenditure data on the Full Year 2020 Consolidated PUF scheduled for later in 2022.

One set of analyses has focused on comparing preliminary (not finalized) data on health care events between panels. These comparisons have served as a tool to help assess survey estimates based on the Full Year 2020 Population Characteristics PUF data and weights. The strategy has been to compare event estimates between panels, based on the weights developed for each of the three individual panels. Following is an explanation of this strategy.

For these analyses, data from Panel 24 are considered the least affected by MEPS study design changes (i.e., shifting from in-person to telephone interviewing, extending participation) in response to COVID-19. Thus, Panel 24 is regarded as the panel whose estimates would most accurately reflect the behavior of the MEPS target population both at the time of the onset of the pandemic and over the course of 2020. This assessment was based on a number of considerations. Panel 24 had reference periods that were of the usual length for MEPS Rounds 3 and 4, unlike Panel 23, which in Round 6 had to report on events going back to January 1, 2020. Panel 24 Round 3 response rates were only slightly lower than Round 3 response rates for previous panels, unlike the much lower-than-usual Panel 25 Round 1 response rates, and Panel 24 respondents were familiar with MEPS after having previously participated in the two prior rounds, unlike Panel 25 respondents who were new to MEPS.

While using the Panel 24 data alone for this FY 2020 PUF was an option, including the data from the other two panels increases precision of the estimates and provides more power to detect differences. Typically there are not differences in health care utilization between panels in a data year, and so any differences in event estimates between Panel 24 and Panel 23 or between Panel 25 and Panel 24 may point to bias concerns arising from the challenges of collecting data in 2020. As discussed below, such bias concerns do arise.

Comparisons of Panel 24 with Panel 23 health care events data indicate that the longer-than-usual reference period for Panel 23 Round 6 may have resulted in recall issues for respondents. Round 6 was initially fielded in the late summer and early fall of 2020, and because the Round 5 reference period ended December 31, 2019, the recall period for health care events and related information extended back to January 1, 2020, much longer than for typical MEPS rounds. There is evidence that events of a less memorable nature such as dental visits and office-based physician visits occurring in early 2020 were under-reported. This evidence was obtained through both the examination of data related to reported events early in 2020 as well as statistical comparisons of Panel 23 estimates of the mean number of events for 2020 to corresponding estimates for Panel 24.

Comparisons of Panel 25 with Panel 24 health care events data show evidence that Panel 25 estimates overstate the mean number of events for several event types. As noted by Zuvekas and Kashihara, nonresponse bias for Panel 25 (the sample with no previous MEPS experience) mirrors that reported for the CPS, the ACS, and the NHIS, where participants with higher socio-economic status (as measured by higher education levels) contributed disproportionately to preliminary Panel 25 survey estimates of the mean number of events. The authors expected that nonresponse and raking adjustments associated with educational attainment would serve to reduce this source of bias. Nevertheless, while the educational attainment variable played a more prominent role than in prior years in the nonresponse adjustment component of the MEPS weighting process and was used in the raking component as well, the bias was not fully eliminated. Age group comparisons suggest that the disproportionate contributions are most evident for events associated with those in the age range 18-64.

With evidence of bias leading to an overestimate of events for some event types in Panel 25 and an underestimate in Panel 23, the question remained what the combined effect would be on the estimates. A further analysis compared estimates based on the three panels pooled together using the Full Year 2020 Population Characteristics PUF weight with the estimates based only on Panel 24 data and weights and found them to be similar. Using the same approach, comparisons were made for health insurance estimates (some private, only public, no health insurance) with the same results. The results also held true when the age ranges 0-17, 18-64, and 65 or older were considered separately.

Based on these analyses, the weights for the FY 2020 Population Characteristics PUF should serve a useful purpose for the development of preliminary estimates and analyses while further assessments of the MEPS weights and data quality are made.

4.0 Longitudinal Analysis

Panel-specific longitudinal files are available for downloading in the data section of the MEPS website. For all three panels (Panel 23, Panel 24, and Panel 25), the longitudinal file comprises MEPS survey data obtained in Rounds 1 through 5 of the panel and can be used to analyze changes over a two-year period. In addition, for Panel 23 a file representing a three-year period will also be established. Variables in the file pertaining to survey administration, demographics, employment, health status, disability days, quality of care, health insurance, and medical care use and expenditures were obtained from the MEPS full-year Consolidated files from the years covered by that panel. For more details or to download the data files, please see Longitudinal Weight Files.

4.1 Using MEPS Data for Trend Analysis

First, of course, we note that there are uncertainties associated with 2020 data quality for reasons discussed in Section 3.5. Preliminary evaluations of a set of MEPS estimates of particular importance suggest that they are of reasonable quality. Nevertheless, analysts are advised to exercise caution in interpreting these estimates, particularly in terms of trend analyses since access to health care was substantially affected by the COVID-19 pandemic as were related factors such as health insurance and employment status for many people. Further evaluations of data will be undertaken as part of the effort in developing the Full Year 2020 Consolidated PUF.

In terms of other factors to be aware of, MEPS began in 1996, and the utility of the survey for analyzing health care trends expands with each additional year of data; however, it is important to consider a variety of factors when examining trends over time using MEPS. Tests of statistical significance should be conducted to assess the likelihood that observed trends are not attributable to sampling variation. The length of time being analyzed should also be considered. In particular, large shifts in survey estimates over short periods of time (e.g., from one year to the next) that are statistically significant should be interpreted with caution unless they are attributable to known factors such as changes in public policy, economic conditions, or MEPS survey methodology.

With respect to methodological considerations, in 2013 MEPS introduced an effort focused on field procedure changes such as interviewer training to obtain more complete information about health care utilization from MEPS respondents with full implementation in 2014. This effort likely resulted in improved data quality and a reduction in underreporting starting in the 2014 full year files and have had some impact on analyses involving trends in utilization across years. The implementation of a new NHIS sample design in 2016 could also potentially affect trend analyses. The new NHIS sample design is based on more up-to-date information related to the distribution of housing units across the U.S. As a result, it can be expected to better cover the full U.S. civilian, noninstitutionalized population, the target population for MEPS, as well as many of its subpopulations. Better coverage of the target population helps to reduce the potential for bias in both NHIS and MEPS estimates.

Another change with the potential to affect trend analysis involved modifications to the MEPS instrument design and data collection process, particularly in the events sections of the

instrument. These were introduced in the Spring of 2018 and thus affected data beginning with Round 1 of Panel 23, Round 3 of Panel 22, and Round 5 of Panel 21. Since the Full Year 2017 PUFs were established from data collected in Rounds 1-3 of Panel 22 and Rounds 3-5 of Panel 21, they reflected two different instrument designs. In order to mitigate the effect of such differences within the same full year file, the Panel 22, Round 3 data and the Panel 21 Round 5 data were transformed to make them as consistent as possible with data collected under the previous design. The changes in the instrument were designed to make the data collection effort more efficient and easy to administer. In addition, expectations were that data on some items, such as those related to health care events, would be more complete with the potential of identifying more events. Increases in service use reported since the implementation of these changes are consistent with these expectations. **Data users should be aware of possible impacts on the data and especially trend analyses for these data years due to the design transition.**

Process changes, such as data editing and imputation, may also affect trend analyses. For example, users should refer to Section 2.5.11 in the 2020 Consolidated Public Use file (HC-224) and, for more detail, the documentation for the prescription drug file (HC-220A) when analyzing prescription drug spending over time.

As always, it is recommended that data users review relevant sections of the documentation for descriptions of these types of changes that might affect the interpretation of changes over time before undertaking trend analyses.

Analysts may also wish to consider using techniques to smooth or stabilize analyses of trends using MEPS data such as comparing pooled time periods (e.g., 1996-97 versus 2011-2012), working with moving averages or using modeling techniques with several consecutive years of MEPS data to test the fit of specified patterns over time.

Finally, statistical significance tests should be conducted to assess the likelihood that observed trends are not attributable to sampling variation. In addition, researchers should be aware of the impact of multiple comparisons on Type I error. Without making appropriate allowance for multiple comparisons, undertaking numerous statistical significance tests of trends increases the likelihood of concluding that a change has taken place when one has not.

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D. Variable-Source Crosswalk

FOR MEPS PUBLIC USE RELEASE HC-218

SURVEY ADMINISTRATION VARIABLES - PUBLIC USE

VARIABLE	DESCRIPTION	SOURCE
JOBSIDX	Job-round identifier	CAPI Derived/Encrypted
JOBIDX	Person's unique job identifier	CAPI Derived/Encrypted
JOBNUM	Unique DU-job identifier	CAPI Derived
DUPERSID	Person ID (DUID + PID)	Assigned in Sampling
DUID	Panel # + encrypted DU identifier	Assigned in Sampling
PID	Person Number	Assigned in Sampling
RN	Round	CAPI Derived
OrigRnd	Round job reported	CAPI Derived
PANEL	Panel to which Jobholder Belongs	Assigned in Sampling

EMPLOYMENT VARIABLES - PUBLIC USE

VARIABLE	DESCRIPTION	SOURCE
JSTRTM	Job start date – month	EM60_02, EM90_02, EM110_02, EM130_02, EM190_02, EM250_02
JSTRTY	Job start date – year	EM60_01, EM90_01, EM110_01, EM130_01, EM190_01, EM250_01
JSTOPM	Job stop date – month	EM140_02, EM200_02, EM260_02, EM310_02, EM400_02, RJ120_02

VARIABLE	DESCRIPTION	SOURCE
JSTOPY	Job stop date – year	EM140_01, EM200_01, EM260_01,EM310_01, EM400_01, RJ120_01
RETIRJOB	Person retired from this job	EM50, EM80, EM100, EM270, EM380
SUBTYPE	Job sub-type	EM50, EM80, EM100, EM120, EM180, EM270, EM340, EM380, EM390, EM410, RJ10/RJ60
STILLAT	Still works at main job establishment	RJ10
TYPECHGD	Job sub-type changed between rounds	Constructed
MAIN_JOB	Still main job or business	RJ20
DIFFWAGE	Any change in wage amount	RJ30
StillWorkFTPT	Still works full or part time	RJ40
WhyChngPTToFT	Why change part to full time	RJ50
WhyChngFTToPT	Why change full to part time	RJ55
STILLWRK	Still works at misc job establishment	RJ60
OFFTAKEI	Offered insurance and now take	RJ70
NOWTAKEI	Now offered and take insurance	RJ80
ESTBTHRU	Offered insurance, did not take (review)	RJ90
INSESTB	Insurance offered to any employees (review)	RJ100
HIDISAVW	Capi q where health insur thru emp/union disavowed	Constructed
RvwTotNumEmp	Establishment size at continuing self-employed job	RJ110
WHY_LEFT_M18	Reason why no longer at job now	RJ130
JOBTYPE	Self-employed or works for someone else	EM420
NUMEMPS	Establishment size at not self-employed job	EM430
ESTMATE1_M19	Categorical approximate establishment size	EM440
MORELOC	Employer has more than one location	EM450

VARIABLE	DESCRIPTION	SOURCE
BUSINC	Business incorporated	EM460
PROPRIET	Proprietorship or partnership	EM470
TYPEEMPL	Employee type	EM480
YLEFT_M18	Reason why no longer at job	EM520
YNOBUSN_M18	Reason why no longer has business	EM530
HRSPRWK	Number of hours worked per week	EM540, EM620
HRS35WK	Works at least 35 hours per week	EM550
TEMPJOB	Job at employer is temporary	EM560, EM630
SESNLJOB	Job available certain time of year	EM570, EM640
SICKPAY	Has paid sick leave thru job	EM580
PAYDRVST	Has paid sick leave for doc visit thru job	EM590
PAYVACTN	Has paid vacation leave thru job	EM600
RETIRPLN	Has pension/retirement plan thru job	EM610
WKLYAMT	Usual weekly gross income at misc job	EM650
EMPLINS	Has health insurance thru current main job	EM660
JOBHASHI	Has health insurance thru job	EM660
OFFRDINS	Offered insurance but chose not to take	EM670
DIFFPLNS	Choice of different health insurance plans	EM680
ANYINS	Health insurance offered to any employees	EM690
INUNION	Belongs to labor union	EM700
PROVDINS	Employer, union, both provides health ins	EM710
HHMEMBER_M18	Any other hh member wrk at this business	EM730
TOTLEMP_M18	Current establishment size at self-employed job	Constructed from EM740 and RJ110
TotNumEmp	Establishment size at new self-employed job	EM740
SALARIED	Person salaried, paid by hour, some other way	EW10

VARIABLE	DESCRIPTION	SOURCE
HOWPAID	How is person paid	EW20
DAYWAGE	Person's daily wage rate	EW30
HRSPRDY	Number of hours person worked in one day	EW40
MAKEAMT	How much money does person make	EW50
PERUNIT_M18	Period for which person is paid	EW60
HRLYWAGE	How much person makes per hour	EW70, EW140, EW190
MORE10	Person makes more or less than $10/hour	EW80, EW150, EW200
MORE15	Person makes more or less than $15/hour	EW90, EW160, EW210
MOREMINM	Person makes more or less than min. wage	EW100, EW170, EW220
GROSSPAY	Person’s salary before taxes (gross)	EW110
GROSSPER	Period in which gross salary was earned	EW120
SALRYWKS	Number of weeks per year salary is based	EW130
HRSALBAS	Hours per week salary based on	EW180
EARNTIPS	Person earns tips	EW230A
EARNBONS	Person earns bonuses	EW230B
EARNCOMM	Person earns commission	EW230C
TIPSAMT	How much are person’s tips	EW240
TIPSUNIT_M18	Period which tip earnings are based on	EW250
BONSAMT	How much are person’s bonuses	EW260
BONSUNIT	Period which bonuses are based on	EW270
COMMAMT	How much are person’s commissions	EW280
COMMUNIT	Period which commissions are based on	EW290
INDCODEX	Condensed industry code	EM490
OCCCODEX	Condensed occupation code	EM500, EM510
ADJR5	P23 job adj in 2020 special R5/6 job processing	Constructed

Appendix 1
Sample SAS Program

```
*** APP20.sas ***;

          OPTIONS LS=132 PS=79;

        ------------------------------------------------------------------------------
        ***   Program Name:  SAMPLE.SAS
        ***
        ***   Description:   This job provides an example of how to get job info
        ***                  from Round 1 or Round 2 in the FY2018 JOBS file
        ***                  or Round 3 or Round 4 in the FY2019 when a continuation
        ***                  current main job in the FY2020 JOBS file is
        ***                  first reported in either FY2018 or FY2019 JOBS File.
        ***
        ***                  This example creates a dataset of continuation JOBS
        ***                  records with a SICKPAYX variable copied from the
        ***                  Round 1, 2, 3, or 4 newly reported job.
        ***
        ------------------------------------------------------------------------------;

         libname  jobs18   "c:\mydata\jobs18";
         libname  jobs19   "c:\mydata\jobs19";
         libname  jobs20   "c:\mydata\jobs20";

        ***  a.                                                                    ***
        ***  Select continuing Panel 23 Round 5 or Panel 24 Round 3                ***
        ***  Current Main JOBS (SUBTYPE=1, STILLAT=1) from the FY 2020 JOBS file   ***
        ***  and print selected variables from the first 20 observations           ***;

         data j20r53;
            set jobs20.jobs20;
                if      ((panel=23 and rn=5 and origrnd<5)
                          or (panel=24 and rn=3 and origrnd<3))
                and     subtype=1
                and     stillat=1
                and     sickpay=-1
                ;
         run;

         proc print data=j20r53 (obs=20);
            title1 'Print Sample of Continuation Current Main JOBS';
            title2 'Panel 23 Round 5 or Panel 24 Round 3 Records';
               var jobidx panel rn origrnd subtype stillat sickpay;
         run;


        ***  b.                                                                    ***
        ***  Select newly reported Panel 23 or Panel 24 Current Main JOBS          ***
        ***  records from the FY 2019 JOBS file and print selected variables       ***
        ***  from the first 20 observations.                                       ***;

         data j19;
              set jobs19.jobs19;
                 if     ((panel=23 and rn in (3,4))
                          or (panel=24 and rn in (1,2)))
                 and    subtype=1
                 and    stillat=-1
                 ;
         run;

         proc print data= j19 (obs=20);
            title1 'Print Sample of Newly Reported Current Main JOBS';
            title2 'Panel 23 Round 3 or 4 or Panel 24 Round 1 or 2 Records';
         var jobidx panel rn origrnd subtype stillat sickpay;
         run;

         proc freq data= j19 ;
              tables sickpay/list missing;
              title1 'Sickpay Value of FY2019 Newly Reported Current Main JOBS';
              title2 'Panel 23 Round 3 or 4 or Panel 24 Round 1 or 2 Records';
         run;
```

```
 title2;


***  c.                                                                      ***
***  Select newly reported Panel 23 Current Main JOBS records from           ***
***  the FY 2018 JOBS file and print selected variables from the             ***
***  first 20 observations.                                                  ***;

 data j18;
      set jobs18.jobs18;
      if        subtype=1
      and       stillat=-1
      and       panel=23
      and       rn in (1,2);
 run;


 proc print data=j18 (obs=20);
    title1 'Print Sample of Newly Reported Current Main JOBS';
    title2 'Panel 23 Round 1 or 2 Records';
      var jobidx panel rn subtype stillat sickpay;
 run;

 proc freq data=j18;
      tables sickpay/list missing;
      title1 'Sickpay Value of FY2018 Newly Reported Current Main JOBS';
      title2 'Panel 23 Round 1 or 2 Records';
 run;


***  d.                                                                      ***
***  Sort and merge datasets into J20R53F                                    ***
***  Prepare FY2018, FY2019 and FY2020 data for merge                        ***;

 proc sort data=j20r53;
      by jobidx;
 run;

 proc sort data=j19;
      by jobidx;
 run;

 proc sort data=j18;
      by jobidx;
 run;

***  e.                                                                      ***
***  Create a dataset (J20R53F) that includes all variables                  ***
***  for the continuation Panel 23 Round 5 or Panel 24 Round 3               ***
***  Current Main JOBS and create the new variable SICKPAYX by               ***
***  copying SICKPAY from the corresponding Round 1, Round 2, Round 3        ***
***  or Round 4 newly reported job record. Users may prefer to drop          ***
***  "yy" variables at this point                                            ***;

  data j20r53f;
       merge j20r53 (in=a)
             j19    (in=b  keep = jobidx sickpay rename=(sickpay=SICKPAY19))
             j18    (in=c  keep = jobidx sickpay rename=(sickpay=SICKPAY18));
       by jobidx;

  if a and b and SICKPAY19 ^= .
       then SICKPAYX = SICKPAY19;

  else if a and c and SICKPAY18 ^= .
       then SICKPAYX = SICKPAY18;

  if a and (b or c);
  run;

  proc freq data=j20r53f;
       tables panel*rn*sickpay*sickpayx/list missing;
       title1  'Diagnostic Post-Merge - Sickpay * Sickpayx';
       title2  'Panel 23 Round 5 or Panel 24 Round 3 Continuation Current Main JOBS';
  run;

  ------------------------------------------------------------------------------;
```

Sample SAS Program Log

```
6          *** APP20.sas ***;
7
8                    OPTIONS LS=132 PS=79;
9
10    ------------------------------------------------------------------------------
11    ***   Program Name:  SAMPLE.SAS
12    ***
13    ***   Description:   This job provides an example of how to get job info
14    ***                  from Round 1 or Round 2 in the FY2018 JOBS file
15    ***                  or Round 3 or Round 4 in the FY2019 when a continuation
16    ***                  current main job in the FY2020 JOBS file is
17    ***                  first reported in either FY2018 or FY2019 JOBS File.
18    ***
19    ***                  This example creates a dataset of continuation JOBS
20    ***                  records with a SICKPAYX variable copied from the
21    ***                  Round 1, 2, 3, or 4 newly reported job.
22    ***
23    ------------------------------------------------------------------------------;
24
25    libname  jobs18   "c:\mydata\jobs18";
26    libname  jobs19   "c:\mydata\jobs19";
27    libname  jobs20   "c:\mydata\jobs20";
28
29    ***  a.                                                                    ***
30    ***  Select continuing Panel 23 Round 5 or Panel 24 Round 3                ***
31    ***  Current Main JOBS (SUBTYPE=1, STILLAT=1) from the FY 2020 JOBS file    ***
32    ***  and print selected variables from the first 20 observations            ***;
33
34                  data j20r53;
35                     set jobs20.jobs20;
36                         if      ((panel=23 and rn=5 and origrnd<5)
37                                   or (panel=24 and rn=3 and origrnd<3))
38                         and     subtype=1
39                         and     stillat=1
40                         and     sickpay=-1
41                         ;
42                  run;

NOTE: There were 47776 observations read from the data set JOBS20.JOBS20.
NOTE: The data set WORK.J20R53 has 7379 observations and 84 variables.
NOTE: Compressing data set WORK.J20R53 decreased size by 5.13 percent.
      Compressed is 37 pages; un-compressed would require 39 pages.
NOTE: DATA statement used (Total process time):
      real time           1.08 seconds
      cpu time            0.04 seconds


43
44                  proc print data=j20r53 (obs=20);
45                     title1 'Print Sample of Continuation Current Main JOBS';
46                     title2 'Panel 23 Round 5 or Panel 24 Round 3 Records';
47                         var jobidx panel rn origrnd subtype stillat sickpay;
48                  run;

NOTE: There were 20 observations read from the data set WORK.J20R53.
NOTE: The PROCEDURE PRINT printed page 1.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.10 seconds
      cpu time            0.01 seconds

49
50
51    ***  b.                                                                    ***
52    ***  Select newly reported Panel 23 or Panel 24 Current Main JOBS          ***
53    ***  records from the FY 2019 JOBS file and print selected variables       ***
54    ***  from the first 20 observations.                                       ***;
55
56                  data j19;
57                       set jobs19.jobs19;
58                          if     ((panel=23 and rn in (3,4))
59                                   or (panel=24 and rn in (1,2)))
60                          and    subtype=1
```

```
61                          and    stillat=-1
62                          ;
63                  run;

NOTE: There were 50334 observations read from the data set JOBS19.JOBS19.
NOTE: The data set WORK.J19 has 8924 observations and 84 variables.
NOTE: Compressing data set WORK.J19 decreased size by 6.38 percent.
      Compressed is 44 pages; un-compressed would require 47 pages.
NOTE: DATA statement used (Total process time):
      real time           1.06 seconds
      cpu time            0.07 seconds

64
65                  proc print data= j19 (obs=20);
66                     title1 'Print Sample of Newly Reported Current Main JOBS';
67                     title2 'Panel 23 Round 3 or 4 or Panel 24 Round 1 or 2 Records';
68                  var jobidx panel rn origrnd subtype stillat sickpay;
69                  run;

NOTE: There were 20 observations read from the data set WORK.J19.
NOTE: The PROCEDURE PRINT printed page 2.
NOTE: PROCEDURE PRINT used (Total process time):

70
71                  proc freq data= j19 ;
72                      tables sickpay/list missing;
73                      title1 'Sickpay Value of FY2019 Newly Reported Current Main JOBS';
74                      title2 'Panel 23 Round 3 or 4 or Panel 24 Round 1 or 2 Records';
75                  run;

NOTE: There were 8924 observations read from the data set WORK.J19.
NOTE: The PROCEDURE FREQ printed page 3.
NOTE: PROCEDURE FREQ used (Total process time):
      real time           0.06 seconds
      cpu time            0.03 seconds

76
77                  title2;
78
79
80    ***  c.                                                                    ***
81    ***  Select newly reported Panel 23 Current Main JOBS records from         ***
82    ***  the FY 2018 JOBS file and print selected variables from the           ***
83    ***  first 20 observations.                                                ***;
84
85                  data j18;
86                       set jobs18.jobs18;
87                       if        subtype=1
88                       and       stillat=-1
89                       and       panel=23
90                       and       rn in (1,2);
91                  run;

NOTE: There were 53323 observations read from the data set JOBS18.JOBS18.
NOTE: The data set WORK.J18 has 7774 observations and 85 variables.
NOTE: Compressing data set WORK.J18 decreased size by 7.14 percent.
      Compressed is 39 pages; un-compressed would require 42 pages.
NOTE: DATA statement used (Total process time):
      real time           0.81 seconds
      cpu time            0.12 seconds


92
93
94                  proc print data=j18 (obs=20);
95                     title1 'Print Sample of Newly Reported Current Main JOBS';
96                     title2 'Panel 23 Round 1 or 2 Records';
97                       var jobidx panel rn subtype stillat sickpay;
98                  run;

NOTE: There were 20 observations read from the data set WORK.J18.
NOTE: The PROCEDURE PRINT printed page 4.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.00 seconds
      cpu time            0.00 seconds

99
100                 proc freq data=j18;
```

```
101                     tables sickpay/list missing;
102                     title1 'Sickpay Value of FY2018 Newly Reported Current Main JOBS';
103                     title2 'Panel 23 Round 1 or 2 Records';
104                run;

NOTE: There were 7774 observations read from the data set WORK.J18.
NOTE: The PROCEDURE FREQ printed page 5.
NOTE: PROCEDURE FREQ used (Total process time):
      real time           0.00 seconds
      cpu time            0.00 seconds

105
106
107    ***  d.                                                                  ***
108    ***  Sort and merge datasets into J20R53F                                ***
109    ***  Prepare FY2018, FY2019 and FY2020 data for merge                    ***;
110
111                proc sort data=j20r53;
112                     by jobidx;
113                run;

NOTE: There were 7379 observations read from the data set WORK.J20R53.
NOTE: SAS sort was used.
NOTE: The data set WORK.J20R53 has 7379 observations and 84 variables.
NOTE: Compressing data set WORK.J20R53 decreased size by 5.13 percent.
      Compressed is 37 pages; un-compressed would require 39 pages.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.10 seconds
      cpu time            0.03 seconds

114
115                proc sort data=j19;
116                     by jobidx;
117                run;

NOTE: There were 8924 observations read from the data set WORK.J19.
NOTE: SAS sort was used.
NOTE: The data set WORK.J19 has 8924 observations and 84 variables.
NOTE: Compressing data set WORK.J19 decreased size by 6.38 percent.
      Compressed is 44 pages; un-compressed would require 47 pages.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.03 seconds
      cpu time            0.03 seconds


118
119                proc sort data=j18;
120                     by jobidx;
121                run;

NOTE: There were 7774 observations read from the data set WORK.J18.
NOTE: SAS sort was used.
NOTE: The data set WORK.J18 has 7774 observations and 85 variables.
NOTE: Compressing data set WORK.J18 decreased size by 7.14 percent.
      Compressed is 39 pages; un-compressed would require 42 pages.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.02 seconds
      cpu time            0.03 seconds

122
123
124    ***  e.                                                                  ***
125    ***  Create a dataset (J20R53F) that includes all variables              ***
126    ***  for the continuation Panel 23 Round 5 or Panel 24 Round 3           ***
127    ***  Current Main JOBS and create the new variable SICKPAYX by           ***
128    ***  copying SICKPAY from the corresponding Round 1, Round 2, Round 3    ***
129    ***  or Round 4 newly reported job record. Users may prefer to drop      ***
130    ***  "yy" variables at this point                                        ***;
131
132                 data j20r53f;
133                     merge j20r53 (in=a)
134                           j19    (in=b  keep = jobidx sickpay rename=(sickpay=SICKPAY19))
135                           j18    (in=c  keep = jobidx sickpay rename=(sickpay=SICKPAY18));
136                     by jobidx;
137
138                if a and b and SICKPAY19 ^= .
139                     then SICKPAYX = SICKPAY19;
140
```

```
141                 else if a and c and SICKPAY18 ^= .
142                      then SICKPAYX = SICKPAY18;
143
144                 if a and (b or c);
145                 run;

NOTE: There were 7379 observations read from the data set WORK.J20R53.
NOTE: There were 8924 observations read from the data set WORK.J19.
NOTE: There were 7774 observations read from the data set WORK.J18.
NOTE: The data set WORK.J20R53F has 7377 observations and 87 variables.
NOTE: Compressing data set WORK.J20R53F decreased size by 5.00 percent.
      Compressed is 38 pages; un-compressed would require 40 pages.

146
147                 proc freq data=j20r53f;
148                      tables panel*rn*sickpay*sickpayx/list missing;
149                      title1  'Diagnostic Post-Merge - Sickpay * Sickpayx';
150                      title2  'Panel 23 Round 5 or Panel 24 Round 3 Continuation Current Main JOBS ';
151                 run;

NOTE: There were 7377 observations read from the data set WORK.J20R53F.
NOTE: The PROCEDURE FREQ printed page 6.
NOTE: PROCEDURE FREQ used (Total process time):
      real time           0.01 seconds
      cpu time            0.01 seconds
```

Sample SAS Program Output

Print Sample of Continuation Current Main JOBS Panel 23 Round 5 or Panel 24 Round 3 Records

Obs	JOBIDX	PANEL	RN	ORIGRND	SUBTYPE	STILLAT	SICKPAY
1	2320019102205	23	5	2	1	1	-1
2	2320019103207	23	5	3	1	1	-1
3	2320019104204	23	5	1	1	1	-1
4	2320022103106	23	5	3	1	1	-1
5	2320024102102	23	5	1	1	1	-1
6	2320027102103	23	5	1	1	1	-1
7	2320028102108	23	5	4	1	1	-1
8	2320032101101	23	5	1	1	1	-1
9	2320032102102	23	5	1	1	1	-1
10	2320035101102	23	5	1	1	1	-1
11	2320038101101	23	5	1	1	1	-1
12	2320041101102	23	5	4	1	1	-1
13	2320043101101	23	5	1	1	1	-1
14	2320043102102	23	5	1	1	1	-1
15	2320045101104	23	5	4	1	1	-1
16	2320045102103	23	5	2	1	1	-1
17	2320050101101	23	5	1	1	1	-1
18	2320051101101	23	5	1	1	1	-1
19	2320057101101	23	5	1	1	1	-1
20	2320057102103	23	5	2	1	1	-1

Print Sample of Newly Reported Current Main JOBS
Panel 23 Round 3 or 4 or Panel 24 Round 1 or 2 Records

Obs	JOBIDX	PANEL	RN	ORIGRND	SUBTYPE	STILLAT	SICKPAY
1	2320002101202	23	3	1	1	-1	2
2	2320002102102	23	4	4	1	-1	2
3	2320006102201	23	4	4	1	-1	2
4	2320019101103	23	3	3	1	-1	2
5	2320019103207	23	3	3	1	-1	2
6	2320022103106	23	3	3	1	-1	2
7	2320028101105	23	3	3	1	-1	1
8	2320028102108	23	4	4	1	-1	1
9	2320028103107	23	3	3	1	-1	2
10	2320034101104	23	3	3	1	-1	1
11	2320034102105	23	3	3	1	-1	2
12	2320034102108	23	4	4	1	-1	2
13	2320034107107	23	3	3	1	-1	1
14	2320036102103	23	4	4	1	-1	2
15	2320041101102	23	4	4	1	-1	2
16	2320045101104	23	4	4	1	-1	1
17	2320069101103	23	3	3	1	-1	-1
18	2320074102103	23	3	3	1	-1	2
19	2320091101104	23	4	4	1	-1	1
20	2320102101102	23	3	3	1	-1	1

Sickpay Value of FY2019 Newly Reported Current Main JOBS Panel 23 Round 3 or 4 or Panel 24 Round 1 or 2 Records

HAS PAID SICK LEAVE THRU JOB

SICKPAY	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-8	276	3.09	276	3.09
-7	14	0.16	290	3.25
-1	1004	11.25	1294	14.50
1	4566	51.17	5860	65.67
2	3064	34.33	8924	100.00

Print Sample of Newly Reported Current Main JOBS
Panel 23 Round 1 or 2 Records

Obs	JOBIDX	PANEL	RN	SUBTYPE	STILLAT	SICKPAY
1	2320002101201	23	1	1	-1	2
2	2320002101203	23	2	1	-1	2
3	2320002102101	23	1	1	-1	1
4	2320003102102	23	1	1	-1	-8
5	2320008102101	23	1	1	-1	1
6	2320019101101	23	1	1	-1	1
7	2320019102203	23	1	1	-1	2
8	2320019102205	23	2	1	-1	-1
9	2320019103201	23	1	1	-1	2
10	2320019104204	23	1	1	-1	1
11	2320022103103	23	1	1	-1	2
12	2320022104104	23	1	1	-1	2
13	2320022104105	23	2	1	-1	1
14	2320024102102	23	1	1	-1	1
15	2320027102103	23	1	1	-1	1
16	2320028102102	23	1	1	-1	2
17	2320032101101	23	1	1	-1	1
18	2320032102102	23	1	1	-1	1
19	2320034101101	23	1	1	-1	1
20	2320034102102	23	1	1	-1	2

Sickpay Value of FY2018 Newly Reported Current Main JOBS Panel 23 Round 1 or 2 Records

HAS PAID SICK LEAVE THRU JOB

SICKPAY	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-8	246	3.16	246	3.16
-7	18	0.23	264	3.40
-1	921	11.85	1185	15.24
1	4066	52.30	5251	67.55
2	2523	32.45	7774	100.00

*Diagnostic Post-Merge - Sickpay * Sickpayx*
Panel 23 Round 5 or Panel 24 Round 3 Continuation Current Main JOBS

PANEL	RN	SICKPAY	SICKPAYX	Frequency	Percent	Cumulative Frequency	Cumulative Percent
23	5	-1	-8	94	1.27	94	1.27
23	5	-1	-7	10	0.14	104	1.41
23	5	-1	-1	458	6.21	562	7.62
23	5	-1	1	1969	26.69	2531	34.31
23	5	-1	2	983	13.33	3514	47.63
24	3	-1	-8	73	0.99	3587	48.62
24	3	-1	-7	5	0.07	3592	48.69
24	3	-1	-1	517	7.01	4109	55.70
24	3	-1	1	2254	30.55	6363	86.25
24	3	-1	2	1014	13.75	7377	100.00

Appendix 2
Sample Stata Program

Convert SAS Datasets to .dat Files

Sample SAS Program

```
libname jobs18 "c:\mydata\jobs18";
libname jobs19 "c:\mydata\jobs19";
libname jobs20 "c:\mydata\jobs20";
proc export data=jobs18.jobs18 outfile= jobs18.dta;
run;
proc export data=jobs19.jobs19 outfile= jobs19.dta;
run;
proc export data=jobs20.jobs20 outfile= jobs20.dta;
run;
```

Sample Convert SAS Program Log

```
1          libname  jobs18   "c:\mydata\jobs18";
NOTE: Libref JOBS18 was successfully assigned as follows:
      Engine:        V9
      Physical Name: c:\mydata\jobs18
2          libname  jobs19   "c:\mydata\jobs19";
NOTE: Libref JOBS19 was successfully assigned as follows:
      Engine:        V9
      Physical Name: c:\mydata\jobs19
3          libname  jobs20   "c:\mydata\jobs20";
NOTE: Libref JOBS20 was successfully assigned as follows:
      Engine:        V9
      Physical Name: c:\mydata\jobs20
4
5          proc export data=jobs18.jobs18 outfile=
5        ! "c:\mydata\jobs18\jobs18.dta";
6          run;

NOTE: The export data set has 53323 observations and 85 variables.
NOTE: "c:\mydata\jobs18\jobs18.dta" file was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time           3.71 seconds
      cpu time            0.29 seconds


7
8          proc export data=jobs19.jobs19 outfile=
8        ! "c:\mydata\jobs19\jobs19.dta";
9          run;

NOTE: The export data set has 50334 observations and 84 variables.

NOTE: "c:\mydata\jobs19\jobs19.dta" file was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time           3.01 seconds
      cpu time            0.20 seconds


10
11         proc export data=jobs20.jobs20 outfile=
11       ! "c:\mydata\jobs20\jobs20.dta";
12         run;

NOTE: The export data set has 47776 observations and 84 variables.
NOTE: "c:\mydata\jobs20\jobs20.dta" file was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time           2.96 seconds
      cpu time            0.20 seconds
```

Sample Stata Program

```
*#delimit ;

set linesize 100

log using "c:\mydata\APPdofile.log", replace

-------------------------------------------------------------------------------
*a. Select continuing Panel 23 Round 5 or Panel 24 Round 3
*   Current Main JOBS (SUBTYPE=1, STILLAT=1) from the FY 2020 JOBS file
*   and print selected variables from the first 20 observations
-------------------------------------------------------------------------------

use "c:\mydata\jobs20.dta", clear

format PANEL SUBTYPE STILLAT SICKPAY %3.0f

keep if (PANEL==23 & RN==5 & ORIGRND < 5 & SUBTYPE==1 & STILLAT==1 & SICKPAY==-1) | (PANEL==24 &
RN==3 & ORIGRND < 3 & SUBTYPE==1 & STILLAT==1 & SICKPAY==-1)

-------------------------------------------------------------------------
*Print Sample of Continuation P23 R5 and P24 R3 Current Main Job Records
-------------------------------------------------------------------------

asdoc list JOBIDX PANEL RN ORIGRND SUBTYPE STILLAT SICKPAY if _n<=20, font(arial) fs(8)
separator(0) noobs, save(stata_output.doc) title(Print Sample of Continuation P23 R5 or P24 R3
Records)

sort JOBIDX

save "c:\mydata\j20.dta", replace

-------------------------------------------------------------------------------
*b. Select newly reported Panel 23 or Panel 24 Current Main JOBS
*   records from the FY 2019 JOBS file and print selected variables
*   from the first 20 observations.
-------------------------------------------------------------------------------

use "c:\mydata\jobs19.dta", clear

format PANEL SUBTYPE STILLAT SICKPAY %3.0f

keep if ((PANEL==23 & (RN==3 | RN==4) ) | (PANEL==24 & (RN==1 | RN==2))) & SUBTYPE==1 &
STILLAT==-1

-------------------------------------------------------------------------
*Print Sample of Newly Reported P23 R3 or 4 and P24 R1 or 2 Records
-------------------------------------------------------------------------

asdoc list JOBIDX PANEL RN ORIGRND SUBTYPE STILLAT SICKPAY if _n<=20, font(arial) fs(8)
separator(0) noobs, save(stata_output.doc) title(Print Sample of Newly Reported P23 R3 or 4 and
P24 R1 or 2 Records)

sort JOBIDX

rename SICKPAY SICKPAY19

keep JOBIDX SICKPAY19

save "c:\mydata\j19.dta", replace

-------------------------------------------------------------------------
*Sickpay Value of FY2019 P23 R3 or 4 and P24 R1 or 2 Newly Reported CMJs
-------------------------------------------------------------------------

asdoc tabulate SICKPAY19, font(arial) fs(8), save(stata_output.doc) title(Sickpay Value of FY2019
P23 R3 or 4 and P24 R 1 or 2 Newly Reported CMJs)

-------------------------------------------------------------------------------
```

```
*c. Select newly reported Panel 23 Current Main JOBS records from
*   the FY 2018 JOBS file and print selected variables from the
*   first 20 observations.
-------------------------------------------------------------------------------

use "c:\mydata\jobs18.dta", clear

format PANEL SUBTYPE STILLAT SICKPAY %3.0f

keep if PANEL==23 & (RN==1 | RN==2) & SUBTYPE==1 & STILLAT==-1

-------------------------------------------------------------------
*Print Sample of Newly Reported P23 R1 or 2 Records
-------------------------------------------------------------------

asdoc list JOBIDX PANEL RN SUBTYPE STILLAT SICKPAY if _n<=20, font(arial) fs(8) separator(0)
noobs, save(stata_output.doc) title(Print Sample of Newly Reported P23 R1 or 2 Records)

-------------------------------------------------------------------
*Sickpay Value of FY2018 P23 R1 or 2 Newly Reported CMJs
-------------------------------------------------------------------

sort JOBIDX

rename SICKPAY SICKPAY18

keep JOBIDX SICKPAY18

save "c:\mydata\j18.dta", replace

asdoc tabulate SICKPAY18, font(arial) fs(8), save(stata_output.doc) title(Sickpay Value of FY2018
P23 R1 or 2 Newly Reported CMJs)

-------------------------------------------------------------------------------
*d. Create a dataset (J20R53F) that includes all variables
*   for the continuation Panel 23 Round 5 or Panel 24 Round 3
*   Current Main JOBS and create the new variable SICKPAYX by
*   copying SICKPAY from the corresponding Round 1, Round 2,
*   Round 3, or Round 4 newly reported job record.
-------------------------------------------------------------------------------

use "c:\mydata\j20.dta", clear

merge 1:m JOBIDX using "c:\mydata\j19.dta", generate(matchvar19)

gen SICKPAYX = .
keep if matchvar19 == 1 | matchvar19 == 3
replace SICKPAYX =  SICKPAY19 if SICKPAY19 != .

merge 1:m JOBIDX using "c:\mydata\j18.dta", generate(matchvar18)

keep if matchvar18 == 3 | matchvar19 == 3
replace SICKPAYX = SICKPAY18 if SICKPAY19 == .

save "c:\mydata\j20r53f.dta", replace

-----------------------------------------------------
* Diagnostic Post-Merge - Sickpay * Sickpayx
* Continuation P23 R5 and P24 R3 Current Main Jobs Only
-----------------------------------------------------

asdoc tabulate SICKPAY SICKPAYX, save(stata_output.doc) font(arial) fs(8) title(Diagnostic Post-
Merge - Sickpay * Sickpayx)

log close
-------------------------------------------------------------------------------------------------------
---
```

```
-------------------------------------------------------------------------------------------------
---
name:  <unnamed>
log:  c:\mydata\APPdofile.log
log type:  text
.
. ------------------------------------------------------------------------------
. *a. Select continuing Panel 23 Round 5 or Panel 24 Round 3
. *   Current Main JOBS (SUBTYPE=1, STILLAT=1) from the FY 2020 JOBS file
. *   and print selected variables from the first 20 observations
. ------------------------------------------------------------------------------
.
. use "c:\mydata\jobs20.dta", clear

.
. format PANEL SUBTYPE STILLAT SICKPAY %3.0f

.
. keep if (PANEL==23 & RN==5 & ORIGRND < 5 & SUBTYPE==1 & STILLAT==1 & SICKPAY==-1) | (PANEL==24
& R
> N==3 & ORIGRND < 3 & SUBTYPE==1 & STILLAT==1 & SICKPAY==-1)
(40,397 observations deleted)

.
. ------------------------------------------------------
. *Print Sample of Continuation P23 R5 and P24 R3 Records
. ------------------------------------------------------
.
. asdoc list JOBIDX PANEL RN ORIGRND SUBTYPE STILLAT SICKPAY if _n<=20, font(arial) fs(8)
separator(
> 0) noobs, save(stata_output.doc) title(Print Sample of Continuation P23 R5 or P24 R3 Records)
(File stata_output.doc already exists, option append was assumed)

.
. sort JOBIDX

.
. save "c:\mydata\j20.dta", replace
file c:\mydata\j20.dta saved

.
.
. ------------------------------------------------------------------------------
.*b. Select newly reported Panel 23 or Panel 24 Current Main JOBS
.*   records from the FY 2019 JOBS file and print selected variables
.*   from the first 20 observations.
. ------------------------------------------------------------------------------
.
. use "c:\mydata\jobs19.dta", clear

.
. format PANEL SUBTYPE STILLAT SICKPAY %3.0f

.
. keep if ((PANEL==23 & (RN==3 | RN==4) ) | (PANEL==24 & (RN==1 | RN==2))) & SUBTYPE==1 &
STILLAT==-
> 1
(41,410 observations deleted)

.
. ------------------------------------------------------------------
. *Print Sample of Newly Reported P23 R3 or 4 and P24 R1 or 2 Records
. ------------------------------------------------------------------
.
. asdoc list JOBIDX PANEL RN ORIGRND SUBTYPE STILLAT SICKPAY if _n<=20, font(arial) fs(8)
separator(
> 0) noobs, save(stata_output.doc) title(Print Sample of Newly Reported P23 R3 or 4 and P24 R1 or
2
> Records)
```

```
(File stata_output.doc already exists, option append was assumed)

.
. sort JOBIDX

.
. rename SICKPAY SICKPAY19

.
. keep JOBIDX SICKPAY19

.
. save "c:\mydata\j19.dta", replace
file c:\mydata\j19.dta saved

.
. ------------------------------------------------------------------------
. *Sickpay Value of FY2019 P23 R3 or 4 and P24 R1 or 2 Newly Reported CMJs
. ------------------------------------------------------------------------
.
. asdoc tabulate SICKPAY19, font(arial) fs(8), save(stata_output.doc) title(Sickpay Value of
FY2019
> P23 R3 or 4 and P24 R 1 or 2 Newly Reported CMJs)
(File stata_output.doc already exists, option append was assumed)

.
.
.-----------------------------------------------------------------------------
.*c. Select newly reported Panel 23 Current Main JOBS records from
.*   the FY 2018 JOBS file and print selected variables from the
.*   first 20 observations.
.-----------------------------------------------------------------------------
.
. use "c:\mydata\jobs18.dta", clear

.
. format PANEL SUBTYPE STILLAT SICKPAY %3.0f

.
. keep if PANEL==23 & (RN==1 | RN==2) & SUBTYPE==1 & STILLAT==-1
(45,549 observations deleted)

.
. ------------------------------------------------
. *Print Sample of Newly Reported P23 R1 or 2 Records
. ------------------------------------------------
.
. asdoc list JOBIDX PANEL RN SUBTYPE STILLAT SICKPAY if _n<=20, font(arial) fs(8) separator(0)
noobs
> , save(stata_output.doc) title(Print Sample of Newly Reported P23 R1 or 2 Records)
(File stata_output.doc already exists, option append was assumed)

.
. ------------------------------------------------------
. *Sickpay Value of FY2018 P23 R1 or 2 Newly Reported CMJs
. ------------------------------------------------------
.
. sort JOBIDX

.
. rename SICKPAY SICKPAY18

.
. keep JOBIDX SICKPAY18

.
. save "c:\mydata\j18.dta", replace
file c:\mydata\j18.dta saved

.
```

```
. asdoc tabulate SICKPAY18, font(arial) fs(8), save(stata_output.doc) title(Sickpay Value of
FY2018
> P23 R1 or 2 Newly Reported CMJs)
(File stata_output.doc already exists, option append was assumed)

.
.
. ------------------------------------------------------------------------------
.*d. Create a dataset (J20R53F) that includes all variables
.*   for the continuation Panel 23 Round 5 or Panel 24 Round 3
.*   Current Main JOBS and create the new variable SICKPAYX by
.*   copying SICKPAY from the corresponding Round 1, Round 2,
.*   Round 3, or Round 4 newly reported job record.
.------------------------------------------------------------------------------.
. use "c:\mydata\j20.dta", clear

.
. merge 1:m JOBIDX using "c:\mydata\j19.dta", generate(matchvar19)

    Result                           # of obs.
    -----------------------------------------
    not matched                         7,115
        from master                     2,785  (matchvar19==1)
        from using                      4,330  (matchvar19==2)

    matched                             4,594  (matchvar19==3)
    -----------------------------------------
.
. gen SICKPAYX = .
(11,709 missing values generated)

. keep if matchvar19 == 1 | matchvar19 == 3
(4,330 observations deleted)

. replace SICKPAYX =  SICKPAY19 if SICKPAY19 != .
(4,594 real changes made)

.
. merge 1:m JOBIDX using "c:\mydata\j18.dta", generate(matchvar18)

    Result                           # of obs.
    -----------------------------------------
    not matched                         9,583
        from master                     4,594  (matchvar18==1)
        from using                      4,989  (matchvar18==2)

    matched                             2,785  (matchvar18==3)
    -----------------------------------------

.
. keep if matchvar18 == 3 | matchvar19 == 3
(4,991 observations deleted)

. replace SICKPAYX = SICKPAY18 if SICKPAY19 == .
(2,783 real changes made)

.
.
. save "c:\mydata\j20r53f.dta", replace
file c:\mydata\j20r53f.dta saved

.
.
. ------------------------------------------------------
. * Diagnostic Post-Merge - Sickpay * Sickpayx
. * Continuation P23 R5 and P24 R3 Current Main Jobs Only
. ------------------------------------------------------
.
. asdoc tabulate SICKPAY SICKPAYX, save(stata_output.doc) font(arial) fs(8) title(Diagnostic
Post-Me
> rge - Sickpay * Sickpayx)
```

```
(File stata_output.doc already exists, option append was assumed)

.
. log close
       name: <unnamed>
       log:  c:\mydata\APPdofile.log
       log type: text
-------------------------------------------------------------------------------------------------------
---
```

Appendix 3
MEPS Industry Codes Condensing Rules

MEPS Industry Codes Condensing Rules
FY2010 and Subsequent Files

Condensed Industry Code	Census Industry Code Range	Description
1	0170 – 0290	Natural Resources
2	0370 – 0490	Mining
3	0770	Construction
4	1070 – 3990	Manufacturing
5	4070 – 5790	Wholesale and Retail Trade
6	0570 – 0690, 6070 – 6390	Transportation and Utilities
7	6470 – 6780	Information
8	6870 – 7190	Financial Activities
9	7270 – 7790	Professional and Business Services
10	7860 – 8470	Education, Health, and Social Services
11	8560 – 8690	Leisure and Hospitality
12	8770 – 9290	Other Services
13	9370 – 9590	Public Administration
14	9890	Military
15	9990	Unclassifiable Industry

MEPS uses the 4-digit Census occupation and industry coding systems developed for the Current Population Survey and the American Community Survey.

For industry coding, MEPS uses the 2007 4-digit Census industry codes. Descriptions of the 4-digit Census industry codes can be found at the U.S. Bureau of Labor Statistics website.

For occupation coding, MEPS uses the 2010 4-digit Census occupation codes. Descriptions of the 4-digit Census occupation codes can be found at the U.S. Bureau of Labor Statistics website.

See Census IO Index for more information on the Census coding systems used by MEPS.

Appendix 4
MEPS Occupation Codes Condensing Rules

MEPS Occupation Codes Condensing Rules
FY2010 and Subsequent Files

Condensed Occupation Code	Census Occupation Code Range	Description
1	0010 – 0950	Management, Business, and Financial Operations Occupations
2	1005 – 3540	Professional and Related Occupations
3	3600 – 4650	Service Occupations
4	4700 – 4965	Sales and Related Occupations
5	5000 – 5940	Office and Administrative Support Occupations
6	6005 – 6130	Farming, Fishing, and Forestry Occupations
7	6200 – 7630	Construction, Extraction, and Maintenance Occupations
8	7700 – 9750	Production, Transportation, and Material Moving Occupations
9	9840	Military Specific Occupations
10	9920	Not in Labor Force
11	9990	Unclassifiable Occupation

MEPS uses the 4-digit Census occupation and industry coding systems developed for the Current Population Survey and the American Community Survey.

For industry coding, MEPS uses the 2007 4-digit Census industry codes. Descriptions of the 4-digit Census industry codes can be found at the U.S. Bureau of Labor Statistics website.

For occupation coding, MEPS uses the 2010 4-digit Census occupation codes. Descriptions of the 4-digit Census occupation codes can be found at the U.S. Bureau of Labor Statistics website.

See the Census IO Index for more information on the Census coding systems used by MEPS.

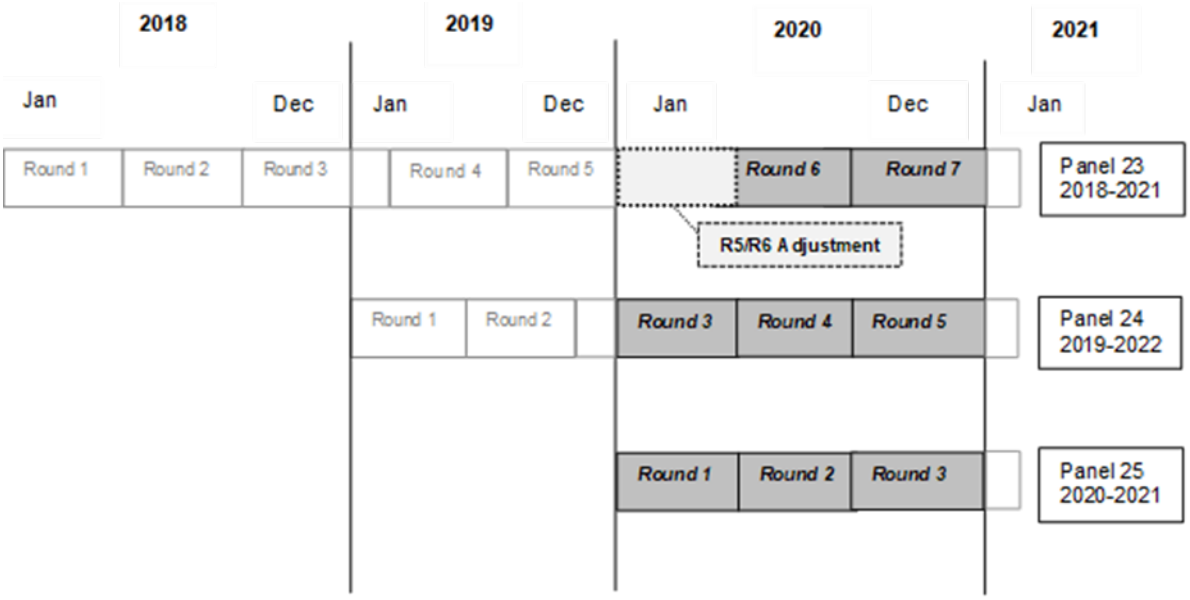
Appendix 5
Modification of Employment Variables for Panel 23

Overview

Due to the impact of the COVID-19 pandemic on MEPS collection methods and lower response rates in the 2020 calendar year, AHRQ extended fielding for Panel 23 persons to include two additional rounds, Round 6 and Round 7, that collected information about 2020. As a result, 2020 MEPS includes three panels of data, Panel 25 Rounds 1, 2, and 3, Panel 24 Rounds 3, 4, and 5, and Panel 23 Rounds 5, 6, and 7.

The decision to extend Panel 23 to include additional rounds occurred after Panel 23 Round 5 was fielded. As a result, Round 5 was fielded as a traditional terminal round where questions are asked of respondents as of 12/31/2019. Had the decision been made much earlier, Round 5 would have been fielded as a cross-year round (similar to Round 3), where questions would have covered the events through 2020 up to the Round 5 interview date. Given this impromptu design decision, in order to capture data after 12/31/2019, the Panel 23 Round 6 reference period began on January 1, 2020 (not the Round 5 interview date) and ended anywhere from July through October 2020. This duration (7 to 10 months) exceeds a standard round length, which averages 6 months.

In an effort to make the Panel 23 employment variables comparable to the data from prior years, a decision was made to use the data collected in Round 6, along with data in reported in prior rounds, to separately identify employment characteristics and jobs that occurred (a) between the Round 4 and the Round 5 interview date and (b) between the Round 5 and the Round 6 interview dates. If these adjustments had not been made, the collected data would have instead identified characteristics between (c) the Round 4 interview date and 12/31/2019 and (c) 1/1/2020 and the Round 6 interview date.



Special 2020 Panel 23 Round 6 Employment Data Processing

Developing 2020 Employment Information

In order to create consistency in employment measures over time, AHRQ requested that job rosters and employment status be adjusted for FY 2020 public use files so that (A) Round 5 would represent employment for the time period between 1/1/2020 and the Round 5 interview date and (B) Round 6 would represent employment for the time period between the Round 5 interview date and the Round 6 interview date.

The adjustment lengthens Round 5 to resemble a standard Round 3 cross-year reference period and shortens Round 6 to resemble a standard Round 4 field period

Persons Eligible for Job Roster Adjustment

Any person who was part of a household in Round 6 and who had one or more Round 6 jobs that began or ended between January 1, 2020 and the Round 5 interview date was eligible for adjustment.

Number of Jobs and Persons Involved in Special Processing

Job rosters for 610 persons were evaluated for adjustment. These persons had 711 job records whose start and/or stop date was on or before the Round 5 interview date. Some persons had more than one job flagged for review. Of the 610 persons, 188 persons (with 289 job records) either had multiple jobs requiring adjustment or complex Round 5 and Round 6 rosters They include persons with multiple miscellaneous jobs or multiple former jobs in addition to jobs

requiring adjustment. These rosters were evaluated and adjusted by experienced Employment section instrument analysts (described below). The remaining 422 job records were programmatically adjusted based on how jobs are allowed to be reported in CAPI flow.

Required Adjustments

Job Roster Adjustments

The following describes rules for selecting a job for adjustment and the *typical* roster adjustment made:

1. New Panel 23 Round 6 current main job or current miscellaneous jobs where

    a. the job start year is 2020, the job start month is positive and is less than the Round 5 interview month or

    b. the job start year is 2020 and the job start month the same as the Round 5 interview month and the day is the same as or less than the Round 5 interview day (including unknown values) or

    c. the job started before 2020

    Roster adjustment: a new Round 5 job was created from the Round 6 job and the Round 6 job became a reviewed job. In some cases, a new Round 6 job became a new Round 5 miscellaneous job that changed to a main job in Round 6.

2. New Panel 23 Round 6 former main job and former miscellaneous jobs where

    a. the job stop year is 2020, the stop month is positive, and the job stop month is less than the Round 5 interview month or

    b. the job stop year is 2020, the job stop month is the same as the Round 5 interview month and the job stop day is the same as or less than the Round 5 interview day (including unknown values)

    c. the job stop year is positive and less than 2020

    d. the job start year is 2020, the job start month is positive and is less than the Round 5 interview month or

    e. the job start year is 2020 and the job start month the same as the Round 5 interview month and the day is the same as or less than the Round 5 interview day (including unknown values) or

    f. the job started before 2020

Roster adjustment: either a new former Round 5 job was created from the Round 6 job and the Round 6 job was deleted or an existing Round 5 job became a former job and the Round 6 job was deleted. For some cases, a new Round 5 current main job was created and the Round 6 job became a reviewed job that ends in Round 6. In cases where a new Round 6 former main job could not be adjusted as the Round 5 current main job because a Round 5 current main job existed, the Round 6 job was retained as reported. No editing was performed in order to retain the more detailed information reported on a former main job.

3. New Panel 23 Round 6 last job outside of reference period job or retirement jobs reported at EM380 where

    a. the job stop year is 2020, the stop month is positive, and the job stop month is less than the Round 5 interview month or

    b. the job stop year is 2020, the job stop month is the same as the Round 5 interview month and the job stop day is the same as or less than the Round 5 interview day (including unknown values)

    c. the job stop year is positive and less than 2020

    Roster adjustment: the Round 6 job became a Round 5 last job outside of reference period or retirement job. If a retirement job at the same establishment was reported in Round 5, no editing was performed and the Round 6 job was retained.

4. Reviewed Panel 23 Round 5 main or miscellaneous jobs that end in Round 6 where

    a. the job stop year is 2020, the stop month is positive, and the job stop month is less than the Round 5 interview month or

    b. the job stop year is 2020, the job stop month is the same as the Round 5 interview month and the job stop day is the same as or less than the Round 5 interview day

    c. the job stop year is positive and less than 2020

    Roster adjustment: the Round 5 current job became a Round 5 former job and the Round 6 job was deleted.

In some cases, Round 7 job-level variables, such as CREATEQ, ORIGRND, and TYPECHGD, required adjustment.

Person-Level Adjustments

Employment variables rely on other person variables. Internal use versions of administrative variables, INSCOP31 and INSCOP42, and demographic variables, AGE31X and AGE42X, were specially recalculated for use in this process.

Scope

Scope is used in Employment variable construction to determine household status between Round 4 and Round 5 interview dates and Round 5 and Round 6 interview dates. For Employment purposes, situations of concern were those where (a) a person had a job in Round 5 but left the RU in Round 6 or (b) a person was not present in Round 5 but was part of the Round 6 interview.

For the first group (a), a person maintained their "in scope" status during adjustment so that Round 5 employment status (EMPST31) reflected employment activity in both calendar years consistent with a second panel Round 3 person whose reference period crosses over from one calendar year into the next. Maintaining an 'in scope' status enabled complete setting of EMPST31 for persons where the following is true:

- Round 5 person has no Round 6 interview
- Person has a Round 5 job that ends in the 2019 portion of Round 5
- Person has no Round 5 job but is present in the household at any time between the 1/1/20 and the Round 5 interview date

Persons in the latter group (b) began participation with MEPS in Round 6, so there was no Round 5 data. Therefore, scope was adjusted for these persons during the adjustment process. These persons were set to either:

- '3', meaning person is not in scope at the start of RU reference period, but is in scope at the end of the RU reference period. (For example, the person is in scope from the date the person joined the RU or the person was in the military in the previous round, but is no longer in the military in the current round) or
- '5', meaning person is out-of-scope for all of the reference period during which he or she is an RU member. (For example, the person is in the military)

With either setting, per existing Employment variable logic, a person's Round 5 employment status, EMPST31, can be derived and Employment variables can reflect employment activity.

The following two tables summarize the extent of person-level recalculations of scope:

2019 R5 INSCOP31	**Internal Use 2020 R5 Scope**	**Number of Persons**
1 INSCOPE FOR WHOLE REF PER	2 INSCOPE AT START OF REF PER, NOT END	3,636
3 NOT INSCOPE START OF REF PER, INSCOPE END	4 INSCOPE REF PER,BUT NO START NOR END	13
5 MEM OF RU BUT OUT-OF-SCOPE ALL REF PER	3 NOT INSCOPE START OF REF PER, INSCOPE END	1
6 OUT OF SCOPE IN RU DURING THIS ROUND	5 MEM OF RU BUT OUT-OF-SCOPE ALL REF PER	1

2019 R5 INSCOP31	Internal Use 2020 R5 Scope	Number of Persons
7 NOT IN RU JOINED LATER ROUND	3 NOT INSCOPE START OF REF PER, INSCOPE END	141

2020 R6 INSCOP42	Internal Use 2020 R6 Scope	Number of Persons
3 NOT INSCOPE START OF REF PER, INSCOPE END	1 INSCOPE FOR WHOLE REF PER	1
2 INSCOPE AT START OF REF PER, NOT END	8 RU NON-RESPONSE	21

R31 Employment variables were constructed for the following groups of persons who had no previous 2019 Round 5 Employment information:

1. There were 142 persons who were 16 or older that became in scope for Round 5 and became eligible to have Employment variables constructed in 2020. This means that Round 5 settings in 2019 Population Characteristics public use release will differ from Round 5 settings in 2020 Population Characteristics public use release. Note that not all persons had a job requiring adjustment.

2. There were an additional 55 persons with a job flagged for adjustment who joined a household in Round 6 between January 1, 2020 and the Round 5 interview. In addition to including the new Round 5 job in the 2020 Jobs File, R31 Employment variables will reflect some form of employment. These persons do not appear in 2019 Population Characteristics public use release.

Age

An internal version of AGE31X was calculated based on the Round 5 interview date instead of 12/31/19. Twenty three persons had their age change from 15 to 16 and nine had a job requiring adjustment, two of which were current main jobs.

Variable Construction Adjustments

Once jobs were adjusted to reflect whether they occurred in round 5 and/or round 6, “31” and “42” variables identifying the job characteristics were constructed for the JOBS file.

Not all person-round level data required for development of Employment variables could be adjusted. Consequently, variable logic was modified to use both Round 5 and Round 6 in variable development. These variables were EMPSTrr, HELDrrX, OFFERrrX, and DISVWrrX.

1. EMPST31 relied on Round 6 data before using Round 5 data. EMPST31 set to ‘Employed at R5 Interview Date (2), ‘Not Employed During R5’ (4), and ‘Cannot Be Computed’ (-15) were highly reliant on Round 6 information. In addition,

EMPST31 was constructed without differentiating '-7' and '-8' from -15 since dependent variables treat these values the same.

2. Logic for standard versions of HELD31X and HELD42X was replicated by creating a series of summary insurance variables. If a Round 5 current main job was created from a Round 6 job, insurance status from Round 6 is reflected in HELD31X. Otherwise, insurance status on HELD31X and HELD42X reflects responses from the interview in the round.

3. Logic on the variables OFFER31X and OFFER42X first sets persons to '1', '2', '-7', or '-8'. For the adjustment process, remaining persons were set to '-15' in a single logical block, instead of at one of several CAPI-specific logical blocks where records are set to '-15.'

4. Like HELD31X and HELD42X, variable logic for DISVW31X and DISVW42X used specially constructed-summary insurance variables and, for DISVW31X, relied on Round 6 insurance settings before deferring to Round 5 settings.