

2009

Add Health Wave IV

Wave IV Data Documentation

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I. Introduction

Sample

The Wave IV data set contains follow-up interviews from 15,701 Wave I respondents. The Wave IV fielded sample consisted of 19,962 of the original 20,745 Wave I respondents. Respondents who were confirmed deceased (N=96) at Wave III and the 687 cases not sampled at Wave III were excluded. Of the 19,962 cases, 80.25% consented to participate in Wave IV. Cases ineligible at Wave IV were sample members who had moved out of the country (N=184), or who were on active duty military stationed out of the country for the duration of the field work (N=87), or who were deceased (N=126).

Pretest – Main Study

The Wave IV pretest was conducted in 3 states during April, May, and early June of 2007 with Add Health respondents. Minor modifications were made to the study protocols and interview questions based on information gained from the pretest for the main study which began in January 2008 and continued through early February 2009. Of the 15,701 interviews, 193 are from the pretest with the remaining interviews being completed during the main study.

Interviews

Wave IV interview questions were administered on laptop computers using Blaise Survey Software. This computer assisted interviewing (CAI) software allows for conditional routing, validity and range checks, computations, hierarchical questionnaire models, and linking to external files, all of which were employed by Add Health for Wave IV. The advanced level of the Blaise software allowed Add Health to collect complex tables of data, such as household rosters and relationship data, and then display the tables back for the respondents to review and correct as necessary. The majority of the interviews were conducted at the respondents' homes. Other interview locations include respondents' work locations, restaurants and coffee shops, libraries, and parent or friend residences.

Biomarkers

Biomarker data were also collected at Wave IV. Height, weight, and waist circumference were measured; blood pressure and pulse measurements were taken; and dried blood spots and saliva samples were collected. Detailed information on the equipment used and the protocols followed for the biomarker collection will be provided in separate reports.

Prison Interviews

Attempts were made at Wave IV to interview all sample members who were incarcerated. Procedures were developed to obtain permission from federal, state, and local authorities to conduct the interviews. Due to the length of time required to obtain approval of the requests from the authorities, some respondents who were located in prison at the end of field work could not be interviewed. Of the 183 incarcerated sample member, 73 were interviewed. Interviews were not conducted where the prisoner's privacy could not be guaranteed. IRB and prison regulations limited the biomarkers that could be requested and the questions that could be asked. The codebooks provide information on which questions and biomarkers were obtained from prisoners.

II. Questionnaire Sections

Section Contents	Variable Prefix
Section 1: Overview and Demographics	H4OD
Section 2: Parental Support and Relationships	H4WP
Section 3: Relationships with Siblings	H4WS
Section 4: General Health and Diet	H4GH
Section 5: Access to Health Services, Health Insurance	H4HS
Section 6: Illness, Medications, and Physical Disabilities	H4ID
Section 7: Sleep Patterns	H4SP
Section 8: Household Roster and Residence History	H4HR
Section 9: Education	H4ED
Section 10: Military	H4MI
Section 11: Labor Market	H4LM
Section 12: Economics	H4EC
Section 13: Religion and Spirituality	H4RE
Section 14: Social Psychology and Mental Health	H4MH
Section 15: Sexual Experiences and Sexually Transmitted Diseases*	H4SE
Section 16: Relationships	H4TR
Section 17: Relationships in Detail*	H4RD
Section 18: Pregnancy Table**	H4PG
Section 19: Live Births*	H4LB
Section 20: Children and Parenting*	H4KK
Section 21: Criminal Offending and Victimization*	H4DS
Section 22: Involvement with Criminal Justice System*	H4CJ
Section 23: Tobacco, Alcohol, Drugs*	H4TO
Section 24: Mistreatment by Adults*	H4MA
Section 25: Daily Activities	H4DA
Section 26: Personality	H4PE
Section 27: Biospecimen Participation	H4 (varies)
Section 28: Field Interviewer's Report	H4IR
Section 29: Field Interviewer's Environmental Assessment	H4EO

*Self administered section

**Self administered with some interviewer administered questions

III. Data Cleaning

General Recodes

Respondents were allowed to give a response of don't know or refused to any question. The following reserve codes are used throughout the Wave IV data to represent these responses.

6, 96, 996, 9996 = refused

8, 98, 998, 9998 = don't know

In addition, the following consistency codes are used.

5, 95, 995, 9995 = question not asked at pretest

7, 97, 997, 9997 = legitimate skip

Data inconsistencies in the questionnaire have not been recoded but are noted at the end of the codebook.

Soft checks and hard checks were used when seemingly implausible responses were given to open ended questions. A soft check would display the potentially out of range answer with an accompanying message and ask the respondent or interviewer to verify that it was correct. If verified, the answer was accepted and the interview continued, but if not verified, the question was asked again before continuing with the interview. For example, if the answer to the question "How many brothers and sisters do you have, both living and deceased?" was greater than 15, the soft check "Please confirm the number of siblings reported" was used to confirm the response. Hard checks were used when an open-ended response could not be correct. A hard check required that the response be changed before allowing the interview to continue. The hard check for the year of death of a respondent's mother could not exceed the current year, therefore the message "Year biological mother died cannot be later than current year" was displayed to identify the problem with the response. In addition to soft and hard checks, a valid range of responses was programmed for all questions.

Break Off Interviews

If an interview terminated before Section 27: Biospecimen Participation was completed and was resumed more than 24 hours later, questions already asked that could potentially impact the interpretation of the biospecimen results were asked again. A flag variable (BREAK_Q) identifies these cases. For the cases where BREAK_Q = 1, the initial responses to the pertinent questions have been replaced with the responses that are within 24 hours. There are five cases where some of the questions should have been repeated but due to a programming error were not. Questions for these respondents that were asked within this 24 hour time period are indicated by the value of the variable BREAK_Q. The variables that were recoded based on responses to the repeated questions in Section 27 are listed below.

H4TR7	Are you pregnant now?
H4GH3M	What is the date (month) when your last menstrual period began?
H4GH3D	What is the date (day) when your last menstrual period began?
H4GH3Y	What is the date (year) when your last menstrual period began?
H4GH4A	What is your best guess about how long ago your last menstrual period began? (enter the number of days, weeks, or months)

- H4GH4B What is your best guess about how long ago your last menstrual period began? (select days, weeks, or months as indicated by respondent)
- H4DA11 In the past 24 hours, have you participated in vigorous physical activity long enough to work up a sweat, get your heart thumping, or get out of breath?
- H4DA12H At what time (hour) in the past 24 hours did you last finish participating in vigorous physical activity?
- H4DA12M At what time (minute) in the past 24 hours did you last finish participating in vigorous physical activity?
- H4DA12T At what time (am/pm) in the past 24 hours did you last finish participating in vigorous physical activity?
- H4GH12H At what time (hour) did you last eat or drink anything other than water including sugar-containing candy or gum ?
- H4GH12M At what time (minute) did you last eat or drink anything other than water including sugar-containing candy or gum ?
- H4GH12T At what time (am/pm) did you last eat or drink anything other than water including sugar-containing candy or gum ?
- H4GH13 Did you drink a caffeinated beverage (e.g., coffee, tea or soda) in the past 24 hours?
- H4GH14H At what time (hour) did you last drink a caffeinated beverage?
- H4GH14M At what time (minute) did you last drink a caffeinated beverage?
- H4GH14T At what time (am/pm) did you last drink a caffeinated beverage?

Have you had any of the following conditions in the last four weeks? Mark all that apply.
 ["Since our last visit..." is the break off time frame]

- H4ID9A Gum disease (gingivitis; periodontal disease) or tooth loss because of cavities
- H4ID9B Active infection
- H4ID9C Injury
- H4ID9D Acute illness
- H4ID9E Surgery
- H4ID9F Active seasonal allergies (hay fever)
- H4ID9G NONE

Have you had any of the following conditions in the last two weeks? Mark all that apply.
 ["Since our last visit..." is the break off time frame]

- H4ID10A cold or Flu-like symptoms such as sore throat, runny nose, or cough
- H4ID10B Fever
- H4ID10C Night sweats
- H4ID10D Nausea or vomiting or diarrhea
- H4ID10E Blood in stool (feces) or in urine
- H4ID10F Frequent urination

H4ID10G Skin rash or abscess
H4ID10H None of the above

Has a doctor, nurse or other health care provider ever told you that you have or had:
[“Since our last visit...” is the break off time frame]

H4ID5A cancer or lymphoma or leukemia
H4ID5B high blood cholesterol or triglycerides or lipids
H4ID5C high blood pressure or hypertension
H4ID5D high blood sugar or diabetes
H4ID5E heart disease
H4ID5F asthma, chronic bronchitis or emphysema
H4ID5G migraine headaches
H4ID5H depression
H4ID5I post-traumatic stress disorder or PTS
H4ID5J anxiety or panic disorder
H4ID5K epilepsy or another seizure disorder
H4ID5L attention problems or ADD or ADHD
H4ID5M HIV/AIDS
H4ID5N Hepatitis C

H4ID11 In the past 24 hours, have you taken aspirin or aspirin-containing medications including cold and allergy medications or headache powders? Do not include acetaminophen for example, Tylenol or ibuprofen for example, Advil, Motrin or Nuprin. Some examples of aspirin-containing medications include: Anacin, Aspirin, B.C.Backache Relief Extra Strength, Bayer, Excedrin, Goody’s Pain Relief, Pain Reliever Added Strength, Vanquish

H4ID12 In the past 24 hours, have you taken other anti-inflammatory medications? Do not include acetaminophen for example, Tylenol or aspirin-containing medications. Some examples of those include: Advil, Aleve, Ibuprofen, Motrin, Naproxen, Nuprin

H4TO31 Did you smoke cigarettes, cigars, a pipe or use chewing tobacco within the past 24 hours?

H4TO32H At what time (hour) did you last smoke cigarettes, cigars, a pipe or use chewing tobacco?

H4TO32M At what time (minute) did you last smoke cigarettes, cigars, a pipe or use chewing tobacco?

H4TO32T At what time (am/pm) did you last smoke cigarettes, cigars, a pipe or use chewing tobacco?

H4TO41 Did you have an alcoholic drink (beer, wine, or liquor) within the past 24 hours?

H4TO42H At what time (hour) did you last have an alcoholic drink?

H4TO42M At what time (minute) did you last have an alcoholic drink?

H4TO42T At what time (am/pm) did you last have an alcoholic drink?

- H4TO72 Have you used marijuana within the past 24 hours?
- H4TO73H At what time (hour) did you last use marijuana?
- H4TO73M At what time (minute) did you last use marijuana?
- H4TO73T At what time (am/pm) did you last use marijuana?

Prison Cases

At Wave IV, 73 interviews were conducted in a prison or jail. The variable PRISON4 identifies these interviews. Not all questions were asked of prisoners, either due to IRB protocol or applicability of the question to the respondent. These questions are coded as legitimate skips for prison respondents. No interviews were conducted in prison during the pretest, but three pretest interviews were incorrectly marked as prison cases. Three main study interviews completed in a prison were not flagged as prison cases before the interview began. As with the pretest cases, the questions controlled by the PRISON4 variable have been recoded to follow the correct (prison) path and to assign these respondents the correct prison flag.

Pretest – Main Study Questionnaire Differences

After a review of the pretest data, some questions and/or response categories were revised for the main study. Below are the *pretest* versions of the questions that were revised for the main study.

Section 2, Questions 25 (H4WP25) and 39 (H4WP39)

25/39. Has your (mother figure/father figure) given you any money or bought you something or helped pay living expenses for you that cost more than \$50 during the past 12 months?

Section 2, Questions 26 (H4WP26) and 40(H4WP40)

26/40. Have you given your (mother figure/father figure) any money or paid for something for her that cost more than \$50 during the past 12 months?

Section 6, Question 23 (H4ID23), additional response category added for the main study

23. In the past 12 months, have you had any problem with your voice? By any problem, we mean was there any time when your voice was hoarse, raspy, breathy, weak, or, generally, did not work, perform, or sound as you feel it normally would?

1=Yes

2=No

Section 6, Questions 24 (H4ID24), 25(H4ID25), and 26(H4ID26), response categories changed for the main study

24. In the past 12 months, how often has your voice been hoarse, raspy, or breathy?

25. In the past 12 months, how often have you had difficulty being heard or trouble projecting your voice?

26. How often does a problem with your voice affect your personal, social, or working (professional) life?

1=always

2=usually

3=about half the time

4=seldom

5=never

Section 11, Question 22 (H4LM22), 4 pretest questions combined

24A. On average, how many hours a week at your (current/most recent) primary job (do/did) you spend standing, doing hard physical work, for example, doing construction work?

24B. On average, how many hours a week at this job (do/did) you spend standing, doing moderate physical

24C. On average, how many hours a week at this job (do/did) you spend standing, doing light physical work, for example, standing at a counter, teaching, working at a conveyer belt?

24D. On average, how many hours a week at this job (do/did) you spend seated, for example, using a computer or driving?

IV. Occupational Coding

The 2000 Standard Occupational Classification (SOC) system was used to classify Add Health respondents' first full-time job and their current/most recent paying job that was at least 10 hours per week, excluding military service. The SOC version used at Wave IV was created on December 4, 2001 by the Bureau of Labor Statistics', downloaded from their web site in 2007.

Pretest respondents were asked the questions "What kind of work did you do at your first full time job?" and "What kind of work (do/did) you do in this job?" Using the recorded open-ended responses to these questions, the occupations for pretest respondents were coded following the SOC classification scheme at the end of data collection. During the main study interview, respondents were guided through the four SOC levels - major group, minor group, broad occupation, and detailed occupation - by the interviewer until the appropriate job title was identified. For both groups, the resulting job code is represented by a six digit character variable in the SOC format XX-XXXX. The first two digits represent the major group, the third digit represents the minor group, digits four and five represent the broad occupation, while the sixth digit represents the detailed occupation. Appendix B contains the SOC codes and text descriptions as published by the Bureau of Labor Statistics on their web site at <http://www.bls.gov/soc/socstruc.pdf>.

APPENDIX A

**Consent for Participation in:
IRB Study #: 05-1164
National Longitudinal Study of Adolescent Health (Add Health), Wave IV
Principal Investigator: Kathleen Mullan Harris**

Because of your past participation in the National Longitudinal Study of Adolescent Health, or *Add Health*, you are being asked to take part in the study's fourth wave of interviews. This wave is being conducted by the Research Triangle Institute (RTI) for the Carolina Population Center at the University of North Carolina at Chapel Hill (UNC-CH). This research study is funded by the National Institutes of Health in Washington, DC. Participating in Wave IV of Add Health is voluntary. Deciding not to be in Wave IV or stopping your participation before it is completed will not affect your relationships with the researchers or the University of North Carolina at Chapel Hill.

Details about Wave IV of Add Health are described below. It is important that you understand this information so that you can make an informed choice about being in Wave IV. You will be given a copy of this consent form, which includes telephone numbers in case you think of questions later. You should ask the researchers or staff members from RTI any questions you have about the study at any time.

What is the purpose of Wave IV?

As you may remember, Add Health was originally designed to help researchers understand the causes of adolescent health, and how they are affected by contexts such as schools, friends, and neighborhoods. Researchers have returned to you and other participants to learn more about how adolescent experiences and health may affect your experiences and health as an adult. The goal of Wave IV is to study the causes of health across the life course from the teenage years to young adulthood, and to understand how biological, social, and environmental factors contribute to health over this long time span. If you decide to take part in Wave IV, you will be one of almost 20,000 people who participate.

How long will your part in Wave IV last?

If you consent to all parts of Wave IV, the interview and other activities will take about two hours. The interview itself will take about an hour and a half. Collection of biological measurements and samples (a saliva sample and blood drops, as described below) will take approximately 30 minutes.

A small percentage of participants will be recontacted to confirm that the information collected is accurate and/or to participate in a brief follow-up study. You will be asked separately about your willingness to participate in the follow-up. It is also possible that you will be contacted again in a few years to participate in a future wave of the Add Health study.

What will happen if you take part in Wave IV of Add Health?

If you agree, you will work with a professional interviewer to complete a questionnaire about your school and work experience, relationships with family, spouses/partners and children, and

your general emotional and physical health. Many of these questions are similar to questions you have been asked before in Add Health interviews. You will also be asked about your daily activities, health-related behaviors, and health care access. Some of the questions are sensitive in nature, such as questions about romantic relationships and drug use. For the questions that are sensitive, the interviewer will ask you to read the questions to yourself and record your responses directly into the computer without the interviewer seeing your answers.

The interviewer will also measure your height, weight, waist circumference, blood pressure and pulse, and use a global positioning device to record the latitude and longitude of your home. You will also be asked to provide a saliva sample and blood drops from a finger-stick, as described below.

If you have served in the military, we will ask you to provide your Social Security number so we can obtain information from your military service record. We may also request your Social Security number for use in contacting you again at future waves of the Add Health study. You are not required to disclose your Social Security number. It is requested only for the purpose of obtaining your military service record and/or contacting you again in the future.

You may skip any questions you do not want to answer, you may decline to participate in any activity or to provide biological samples (saliva or blood drops), and you may stop the interview at any time.

Biological Samples and their Collection

Saliva for DNA: If you agree, you will collect a saliva sample by spitting into a small funnel connected to a storage tube. The DNA obtained from this sample will be used to examine multiple normally occurring variations in 10 candidate genes thought to be related to health and behavior. The results of these tests will be used to understand how variations in genetic make-up, in combination with environment and life experiences, may contribute to long term health. An ID number will be on the storage tube, but the ID number associated with the storage tube is different from the one associated with your interview responses.

Blood Sample: If you agree, 7 blood drops will be collected from a finger-stick and saved on special filter paper. To obtain the blood drops, your trained interviewer will first clean your middle or ring finger with alcohol, then apply a rubber strap around your upper arm and prick your finger with a sterile, disposable micro-lancet. He or she will then place 7 drops of blood onto special filter paper for drying. These drops will be tested for several compounds (cholesterol, C-reactive protein, and Epstein-Barr virus antibodies) that are related to metabolic and cardiovascular health. The results of these tests will be used to understand how health related behaviors and life experiences may contribute to long term health. Only an ID number will identify the blood drops. The ID number associated with the filter paper is different from the one associated with your interview responses.

If the prick does not yield enough blood for the tests described above, you will be asked to consent to a second prick. You may decline the second prick. Declining the second prick does not affect your monetary incentive.

The tests described above are not diagnostic tests to detect disease. They are intended only to understand long term causes of health.

Option of Long Term Storage of Samples

The tests described above will not use up all of the **DNA or blood drops**. Therefore, in addition to the procedures and tests named above, you are being asked to give permission for the remaining DNA and blood drops to be stored and analyzed for future research studies. These future studies would also be related to long term health, but would not be diagnostic tests to detect disease. Future studies would be reviewed and approved by a human subjects protection committee. No information will be released to other researchers that would allow them to connect your name or other identifying information to the DNA or blood drops.

If you agree to storage, the **DNA** would be stored indefinitely at the Institute for Behavioral Genetics at the University of Colorado at Boulder. Because the researchers there do not have access to the names of study participants, it will NOT be possible for researchers to destroy the DNA later at your request.

If you agree to storage, the **blood drops** would be stored indefinitely at the University of North Carolina at Chapel Hill (UNC-CH). Because the researchers at UNC-CH who will store the samples do not have access to the names of study participants, it will NOT be possible for researchers to destroy the blood drops later at your request.

You have the option to consent to the collection of samples for the tests named above, but to refuse to allow storage of the samples after those tests have been completed. If you do not agree to store the samples, it will not affect your participation in the rest of Wave IV, your monetary incentive for providing the DNA or the blood drops, your relationship with the researchers, or your relationship with the University of North Carolina at Chapel Hill.

What are the possible benefits from being in this study?

This research is designed to benefit society by gaining new knowledge. Information from previous Add Health interviews has made significant contributions to our understanding of the health and life experiences of young people. For example we have discovered the important roles that parents, siblings, friends, classmates, and neighborhoods play in the health and development of young people. Other than the monetary incentive, you will not benefit personally from being part of this study.

Because the information collected in Add Health is not relevant for individual diagnosis or treatment, we will not share any results of analyses of your answers or biological tests with you. However, you will receive some general health information and recommended follow-up instructions based on the results of your blood pressure reading.

What are the possible risks or discomforts involved with being in Wave IV?

The interview questions and measurements should cause little risk or discomfort. There is no physical discomfort from saliva collection. There may be a small amount of discomfort from the finger prick and the rubber strap that will be used to collect blood drops. If the strap feels too tight, we will loosen it or remove it. There is a small risk of fainting or bruising, and a very rare risk of infection from the blood collection. We do not anticipate any risks from longer term storage and analysis of your specimens, except the very unlikely risk of breaching privacy of the information collected from you and other respondents. Add Health's strict privacy protections are described below.

Will it cost you anything to give the samples?

There is no cost to you for the analysis of any of the samples or for the storage of the DNA or blood drops.

Will you receive anything for being in Wave IV of Add Health?

If you complete the **questionnaire** you will receive a monetary incentive of \$40.

If you provide the **saliva sample for DNA** analysis you will receive a monetary incentive of \$30.

If you provide the **blood drops** you will receive a monetary incentive of \$30.

How will your privacy be protected?

Add Health has always attempted to protect privacy to the greatest extent possible. Your answers, measurements, and test results will be held in strict privacy by the Add Health and RTI project staff and not given to unauthorized persons. Extensive security procedures are in place to make sure that participants' answers are not linked to their names. Your name will not be reported with your responses or test results; these data are labeled only with an ID number. Similarly, no names or other identifying information will be stored with the DNA or blood drops. Only an ID number will identify the samples. This ID number is different from the one associated with your interview responses. Researchers and technicians at the laboratories that will conduct the tests do not have access to your identifying information.

If you consent to long term storage, the DNA will be stored at a secure building at the Institute for Behavioral Genetics in Boulder and the blood drops will be stored at a secure building leased by UNC-CH.

After data collection and cleaning are completed, your identifying information will be electronically transmitted to the Add Health Security Manager in Canada, and your interview answers without identifying information will be sent to the Add Health project staff at the University of North Carolina at Chapel Hill. Storing different types of information in different places helps keep your identity confidential.

All analyses concern groups of persons, not specific individuals. No individuals will be identified in any report or publication that uses any data from Add Health.

Occasionally, information from research projects such as Add Health is audited by representatives of UNC-CH, research sponsors, or government agencies for purposes such as quality control or safety.

Although every effort will be made to keep research records private, it is not possible to guarantee that personal information will never be disclosed. However, the Add Health researchers and UNC-CH have taken all possible precautions to protect the privacy of personal information. Add Health has obtained a federal Certificate of Confidentiality from the National Institutes of Health. It allows Add Health researchers to refuse to disclose identifying information in any proceeding, if the information could have adverse consequences for research participants or damage their financial standing, employability, insurability, or reputation.

Who owns the biological samples?

The DNA and blood drops obtained in this study are the property of the National Longitudinal Study of Adolescent Health (Add Health), of the University of North Carolina at Chapel Hill. You are giving the DNA and blood drops for research purposes. It is extremely unlikely that any

commercial products would be developed from these samples as part of this research. Giving the samples does not give you the right to benefit from any commercial products that may be developed in the future, but you do not give up any of your rights by signing this form.

What if you have questions about Add Health?

You have the right to ask, and have answered, any questions you may have about this research. If you have questions later, you should contact the Principal Investigator of this research study: Kathleen Mullan Harris, Carolina Population Center, CB #8120, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599-8120. Phone: 1-877-377-9607 (a toll-free number).

What if you have questions about your rights as a study participant?

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights you may contact the Institutional Review Board at UNC-CH at (919) 966-3113 or by email at IRB_subjects@unc.edu. If you wish, you may call the Institutional Review Board collect. You may also contact RTI's Office of Research Protection in Durham, NC at (919) 316-3358 or 1-866-214-2043 (a toll-free number). You may contact either committee anonymously if you wish.

**Consent for Participation in:
IRB Study #: 05-1164
National Longitudinal Study of Adolescent Health (Add Health), Wave IV
Principal Investigator: Kathleen Mullan Harris**

Please write your initials next to your choice for each of the samples below. You may make different decisions for each sample if you desire.

Saliva for DNA

- a. _____ I agree to provide saliva for the DNA tests described above AND agree for my DNA to be stored and used for as-yet-unspecified tests in the future. These tests would involve additional genes or genetic markers that may be related to behavior and long term health.
- b. _____ I agree to provide saliva for the DNA tests described above, but do NOT agree for my DNA to be stored for future use. I request that my DNA be disposed of after the tests described above have been completed and confirmed.
- c. _____ I do NOT agree provide a saliva sample for DNA.

Blood Drops

- a. _____ I agree to provide blood drops for the tests described above AND agree for my blood drops to be stored and used for as-yet-unspecified tests in the future. These tests would relate to cardiovascular fitness and other aspects of health, and may include DNA analysis.
- b. _____ I agree to provide blood drops for the tests described above, but do NOT agree for these drops to be stored for future use after the tests described above have been completed. I request that my blood drops be disposed of after the tests described above have been completed and confirmed.
- c. _____ I do NOT agree to provide blood drops.

Participant's Agreement:

I have read the above information and have been given the opportunity to ask questions. I voluntarily agree to participate in Add Health Wave IV. I have indicated above my decisions concerning the collection, analysis, and long term storage of biological samples. I have been given a copy of this consent form.

Signature of Research Participant

Printed Name of Research Participant

Date

Signature of Interviewer Obtaining Consent

Interviewer ID

Date

Appendix B

SOC Structure

- 11-0000 Management Occupations
- 11-1000 Top Executives
- 11-1010 Chief Executives
- 11-1011 Chief Executives
- 11-1020 General and Operations Managers
- 11-1021 General and Operations Managers
- 11-1030 Legislators
- 11-1031 Legislators
- 11-2000 Advertising, Marketing, Promotions, Public Relations, and Sales Managers
- 11-2010 Advertising and Promotions Managers
- 11-2011 Advertising and Promotions Managers
- 11-2020 Marketing and Sales Managers
- 11-2021 Marketing Managers
- 11-2022 Sales Managers
- 11-2030 Public Relations Managers
- 11-2031 Public Relations Managers
- 11-3000 Operations Specialties Managers
- 11-3010 Administrative Services Managers
- 11-3011 Administrative Services Managers
- 11-3020 Computer and Information Systems Managers
- 11-3021 Computer and Information Systems Managers
- 11-3030 Financial Managers
- 11-3031 Financial Managers
- 11-3040 Human Resources Managers
- 11-3041 Compensation and Benefits Managers
- 11-3042 Training and Development Managers
- 11-3049 Human Resources Managers, All Other
- 11-3050 Industrial Production Managers
- 11-3051 Industrial Production Managers
- 11-3060 Purchasing Managers
- 11-3061 Purchasing Managers
- 11-3070 Transportation, Storage, and Distribution Managers
- 11-3071 Transportation, Storage, and Distribution Managers
- 11-9000 Other Management Occupations
- 11-9010 Agricultural Managers
- 11-9011 Farm, Ranch, and Other Agricultural Managers
- 11-9012 Farmers and Ranchers
- 11-9020 Construction Managers
- 11-9021 Construction Managers
- 11-9030 Education Administrators
- 11-9031 Education Administrators, Preschool and Child Care Center/Program
- 11-9032 Education Administrators, Elementary and Secondary School
- 11-9033 Education Administrators, Postsecondary
- 11-9039 Education Administrators, All Other
- 11-9040 Engineering Managers
- 11-9041 Engineering Managers
- 11-9050 Food Service Managers

11-9051 Food Service Managers
11-9060 Funeral Directors
11-9061 Funeral Directors
11-9070 Gaming Managers
11-9071 Gaming Managers
11-9080 Lodging Managers
11-9081 Lodging Managers
11-9110 Medical and Health Services Managers
11-9111 Medical and Health Services Managers
11-9120 Natural Sciences Managers
11-9121 Natural Sciences Managers
11-9130 Postmasters and Mail Superintendents
11-9131 Postmasters and Mail Superintendents
11-9140 Property, Real Estate, and Community Association Managers
11-9141 Property, Real Estate, and Community Association Managers
11-9150 Social and Community Service Managers
11-9151 Social and Community Service Managers
11-9190 Miscellaneous Managers
11-9199 Managers, All Other
13-0000 Business and Financial Operations Occupations
13-1000 Business Operations Specialists
13-1010 Agents and Business Managers of Artists, Performers, and Athletes
13-1011 Agents and Business Managers of Artists, Performers, and Athletes
13-1020 Buyers and Purchasing Agents
13-1021 Purchasing Agents and Buyers, Farm Products
13-1022 Wholesale and Retail Buyers, Except Farm Products
13-1023 Purchasing Agents, Except Wholesale, Retail, and Farm Products
13-1030 Claims Adjusters, Appraisers, Examiners, and Investigators
13-1031 Claims Adjusters, Examiners, and Investigators
13-1032 Insurance Appraisers, Auto Damage
13-1040 Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation
13-1041 Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation
13-1050 Cost Estimators
13-1051 Cost Estimators
13-1060 Emergency Management Specialists
13-1061 Emergency Management Specialists
13-1070 Human Resources, Training, and Labor Relations Specialists
13-1071 Employment, Recruitment, and Placement Specialists
13-1072 Compensation, Benefits, and Job Analysis Specialists
13-1073 Training and Development Specialists
13-1079 Human Resources, Training, and Labor Relations Specialists, All Other
13-1080 Logisticians
13-1081 Logisticians
13-1110 Management Analysts
13-1111 Management Analysts
13-1120 Meeting and Convention Planners
13-1121 Meeting and Convention Planners
13-1190 Miscellaneous Business Operations Specialists
13-1199 Business Operations Specialists, All Other

13-2000 Financial Specialists
13-2010 Accountants and Auditors
13-2011 Accountants and Auditors
13-2020 Appraisers and Assessors of Real Estate
13-2021 Appraisers and Assessors of Real Estate
13-2030 Budget Analysts
13-2031 Budget Analysts
13-2040 Credit Analysts
13-2041 Credit Analysts
13-2050 Financial Analysts and Advisors
13-2051 Financial Analysts
13-2052 Personal Financial Advisors
13-2053 Insurance Underwriters
13-2060 Financial Examiners
13-2061 Financial Examiners
13-2070 Loan Counselors and Officers
13-2071 Loan Counselors
13-2072 Loan Officers
13-2080 Tax Examiners, Collectors, Preparers, and Revenue Agents
13-2081 Tax Examiners, Collectors, and Revenue Agents
13-2082 Tax Preparers
13-2090 Miscellaneous Financial Specialists
13-2099 Financial Specialists, All Other
15-0000 Computer and Mathematical Occupations
15-1000 Computer Specialists
15-1010 Computer and Information Scientists, Research
15-1011 Computer and Information Scientists, Research
15-1020 Computer Programmers
15-1021 Computer Programmers
15-1030 Computer Software Engineers
15-1031 Computer Software Engineers, Applications
15-1032 Computer Software Engineers, Systems Software
15-1040 Computer Support Specialists
15-1041 Computer Support Specialists
15-1050 Computer Systems Analysts
15-1051 Computer Systems Analysts
15-1060 Database Administrators
15-1061 Database Administrators
15-1070 Network and Computer Systems Administrators
15-1071 Network and Computer Systems Administrators
15-1080 Network Systems and Data Communications Analysts
15-1081 Network Systems and Data Communications Analysts
15-1090 Miscellaneous Computer Specialists
15-1099 Computer Specialists, All Other
15-2000 Mathematical Science Occupations
15-2010 Actuaries
15-2011 Actuaries
15-2020 Mathematicians
15-2021 Mathematicians
15-2030 Operations Research Analysts
15-2031 Operations Research Analysts

15-2040 Statisticians
15-2041 Statisticians
15-2090 Miscellaneous Mathematical Science Occupations
15-2091 Mathematical Technicians
15-2099 Mathematical Science Occupations, All Other
17-0000 Architecture and Engineering Occupations
17-1000 Architects, Surveyors, and Cartographers
17-1010 Architects, Except Naval
17-1011 Architects, Except Landscape and Naval
17-1012 Landscape Architects
17-1020 Surveyors, Cartographers, and Photogrammetrists
17-1021 Cartographers and Photogrammetrists
17-1022 Surveyors
17-2000 Engineers
17-2010 Aerospace Engineers
17-2011 Aerospace Engineers
17-2020 Agricultural Engineers
17-2021 Agricultural Engineers
17-2030 Biomedical Engineers
17-2031 Biomedical Engineers
17-2040 Chemical Engineers
17-2041 Chemical Engineers
17-2050 Civil Engineers
17-2051 Civil Engineers
17-2060 Computer Hardware Engineers
17-2061 Computer Hardware Engineers
17-2070 Electrical and Electronics Engineers
17-2071 Electrical Engineers
17-2072 Electronics Engineers, Except Computer
17-2080 Environmental Engineers
17-2081 Environmental Engineers
17-2110 Industrial Engineers, Including Health and Safety
17-2111 Health and Safety Engineers, Except Mining Safety Engineers and Inspectors
17-2112 Industrial Engineers
17-2120 Marine Engineers and Naval Architects
17-2121 Marine Engineers and Naval Architects
17-2130 Materials Engineers
17-2131 Materials Engineers
17-2140 Mechanical Engineers
17-2141 Mechanical Engineers
17-2150 Mining and Geological Engineers, Including Mining Safety Engineers
17-2151 Mining and Geological Engineers, Including Mining Safety Engineers
17-2160 Nuclear Engineers
17-2161 Nuclear Engineers
17-2170 Petroleum Engineers
17-2171 Petroleum Engineers
17-2190 Miscellaneous Engineers
17-2199 Engineers, All Other
17-3000 Drafters, Engineering, and Mapping Technicians
17-3010 Drafters
17-3011 Architectural and Civil Drafters

17-3012 Electrical and Electronics Drafters
17-3013 Mechanical Drafters
17-3019 Drafters, All Other
17-3020 Engineering Technicians, Except Drafters
17-3021 Aerospace Engineering and Operations Technicians
17-3022 Civil Engineering Technicians
17-3023 Electrical and Electronic Engineering Technicians
17-3024 Electro-Mechanical Technicians
17-3025 Environmental Engineering Technicians
17-3026 Industrial Engineering Technicians
17-3027 Mechanical Engineering Technicians
17-3029 Engineering Technicians, Except Drafters, All Other
17-3030 Surveying and Mapping Technicians
17-3031 Surveying and Mapping Technicians
19-0000 Life, Physical, and Social Science Occupations
19-1000 Life Scientists
19-1010 Agricultural and Food Scientists
19-1011 Animal Scientists
19-1012 Food Scientists and Technologists
19-1013 Soil and Plant Scientists
19-1020 Biological Scientists
19-1021 Biochemists and Biophysicists
19-1022 Microbiologists
19-1023 Zoologists and Wildlife Biologists
19-1029 Biological Scientists, All Other
19-1030 Conservation Scientists and Foresters
19-1031 Conservation Scientists
19-1032 Foresters
19-1040 Medical Scientists
19-1041 Epidemiologists
19-1042 Medical Scientists, Except Epidemiologists
19-1090 Miscellaneous Life Scientists
19-1099 Life Scientists, All Other
19-2000 Physical Scientists
19-2010 Astronomers and Physicists
19-2011 Astronomers
19-2012 Physicists
19-2020 Atmospheric and Space Scientists
19-2021 Atmospheric and Space Scientists
19-2030 Chemists and Materials Scientists
19-2031 Chemists
19-2032 Materials Scientists
19-2040 Environmental Scientists and Geoscientists
19-2041 Environmental Scientists and Specialists, Including Health
19-2042 Geoscientists, Except Hydrologists and Geographers
19-2043 Hydrologists
19-2090 Miscellaneous Physical Scientists
19-2099 Physical Scientists, All Other
19-3000 Social Scientists and Related Workers
19-3010 Economists
19-3011 Economists

19-3020 Market and Survey Researchers
19-3021 Market Research Analysts
19-3022 Survey Researchers
19-3030 Psychologists
19-3031 Clinical, Counseling, and School Psychologists
19-3032 Industrial-Organizational Psychologists
19-3039 Psychologists, All Other
19-3040 Sociologists
19-3041 Sociologists
19-3050 Urban and Regional Planners
19-3051 Urban and Regional Planners
19-3090 Miscellaneous Social Scientists and Related Workers
19-3091 Anthropologists and Archeologists
19-3092 Geographers
19-3093 Historians
19-3094 Political Scientists
19-3099 Social Scientists and Related Workers, All Other
19-4000 Life, Physical, and Social Science Technicians
19-4010 Agricultural and Food Science Technicians
19-4011 Agricultural and Food Science Technicians
19-4020 Biological Technicians
19-4021 Biological Technicians
19-4030 Chemical Technicians
19-4031 Chemical Technicians
19-4040 Geological and Petroleum Technicians
19-4041 Geological and Petroleum Technicians
19-4050 Nuclear Technicians
19-4051 Nuclear Technicians
19-4060 Social Science Research Assistants
19-4061 Social Science Research Assistants
19-4090 Miscellaneous Life, Physical, and Social Science Technicians
19-4091 Environmental Science and Protection Technicians, Including Health
19-4092 Forensic Science Technicians
19-4093 Forest and Conservation Technicians
19-4099 Life, Physical, and Social Science Technicians, All Other
21-0000 Community and Social Services Occupations
21-1000 Counselors, Social Workers, and Other Community and Social Service Specialists
21-1010 Counselors
21-1011 Substance Abuse and Behavioral Disorder Counselors
21-1012 Educational, Vocational, and School Counselors
21-1013 Marriage and Family Therapists
21-1014 Mental Health Counselors
21-1015 Rehabilitation Counselors
21-1019 Counselors, All Other
21-1020 Social Workers
21-1021 Child, Family, and School Social Workers
21-1022 Medical and Public Health Social Workers
21-1023 Mental Health and Substance Abuse Social Workers
21-1029 Social Workers, All Other
21-1090 Miscellaneous Community and Social Service Specialists
21-1091 Health Educators

21-1092 Probation Officers and Correctional Treatment Specialists
21-1093 Social and Human Service Assistants
21-1099 Community and Social Service Specialists, All Other
21-2000 Religious Workers
21-2010 Clergy
21-2011 Clergy
21-2020 Directors, Religious Activities and Education
21-2021 Directors, Religious Activities and Education
21-2090 Miscellaneous Religious Workers
21-2099 Religious Workers, All Other
23-0000 Legal Occupations
23-1000 Lawyers, Judges, and Related Workers
23-1010 Lawyers
23-1011 Lawyers
23-1020 Judges, Magistrates, and Other Judicial Workers
23-1021 Administrative Law Judges, Adjudicators, and Hearing Officers
23-1022 Arbitrators, Mediators, and Conciliators
23-1023 Judges, Magistrate Judges, and Magistrates
23-2000 Legal Support Workers
23-2010 Paralegals and Legal Assistants
23-2011 Paralegals and Legal Assistants
23-2090 Miscellaneous Legal Support Workers
23-2091 Court Reporters
23-2092 Law Clerks
23-2093 Title Examiners, Abstractors, and Searchers
23-2099 Legal Support Workers, All Other
25-0000 Education, Training, and Library Occupations
25-1000 Postsecondary Teachers
25-1010 Business Teachers, Postsecondary
25-1011 Business Teachers, Postsecondary
25-1020 Math and Computer Teachers, Postsecondary
25-1021 Computer Science Teachers, Postsecondary
25-1022 Mathematical Science Teachers, Postsecondary
25-1030 Engineering and Architecture Teachers, Postsecondary
25-1031 Architecture Teachers, Postsecondary
25-1032 Engineering Teachers, Postsecondary
25-1040 Life Sciences Teachers, Postsecondary
25-1041 Agricultural Sciences Teachers, Postsecondary
25-1042 Biological Science Teachers, Postsecondary
25-1043 Forestry and Conservation Science Teachers, Postsecondary
25-1050 Physical Sciences Teachers, Postsecondary
25-1051 Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary
25-1052 Chemistry Teachers, Postsecondary
25-1053 Environmental Science Teachers, Postsecondary
25-1054 Physics Teachers, Postsecondary
25-1060 Social Sciences Teachers, Postsecondary
25-1061 Anthropology and Archeology Teachers, Postsecondary
25-1062 Area, Ethnic, and Cultural Studies Teachers, Postsecondary
25-1063 Economics Teachers, Postsecondary
25-1064 Geography Teachers, Postsecondary
25-1065 Political Science Teachers, Postsecondary

25-1066 Psychology Teachers, Postsecondary
25-1067 Sociology Teachers, Postsecondary
25-1069 Social Sciences Teachers, Postsecondary, All Other
25-1070 Health Teachers, Postsecondary
25-1071 Health Specialties Teachers, Postsecondary
25-1072 Nursing Instructors and Teachers, Postsecondary
25-1080 Education and Library Science Teachers, Postsecondary
25-1081 Education Teachers, Postsecondary
25-1082 Library Science Teachers, Postsecondary
25-1110 Law, Criminal Justice, and Social Work Teachers, Postsecondary
25-1111 Criminal Justice and Law Enforcement Teachers, Postsecondary
25-1112 Law Teachers, Postsecondary
25-1113 Social Work Teachers, Postsecondary
25-1120 Arts, Communications, and Humanities Teachers, Postsecondary
25-1121 Art, Drama, and Music Teachers, Postsecondary
25-1122 Communications Teachers, Postsecondary
25-1123 English Language and Literature Teachers, Postsecondary
25-1124 Foreign Language and Literature Teachers, Postsecondary
25-1125 History Teachers, Postsecondary
25-1126 Philosophy and Religion Teachers, Postsecondary
25-1190 Miscellaneous Postsecondary Teachers
25-1191 Graduate Teaching Assistants
25-1192 Home Economics Teachers, Postsecondary
25-1193 Recreation and Fitness Studies Teachers, Postsecondary
25-1194 Vocational Education Teachers, Postsecondary
25-1199 Postsecondary Teachers, All Other
25-2000 Primary, Secondary, and Special Education School Teachers
25-2010 Preschool and Kindergarten Teachers
25-2011 Preschool Teachers, Except Special Education
25-2012 Kindergarten Teachers, Except Special Education
25-2020 Elementary and Middle School Teachers
25-2021 Elementary School Teachers, Except Special Education
25-2022 Middle School Teachers, Except Special and Vocational Education
25-2023 Vocational Education Teachers, Middle School
25-2030 Secondary School Teachers
25-2031 Secondary School Teachers, Except Special and Vocational Education
25-2032 Vocational Education Teachers, Secondary School
25-2040 Special Education Teachers
25-2041 Special Education Teachers, Preschool, Kindergarten, and Elementary School
25-2042 Special Education Teachers, Middle School
25-2043 Special Education Teachers, Secondary School
25-3000 Other Teachers and Instructors
25-3010 Adult Literacy, Remedial Education, and GED Teachers and Instructors
25-3011 Adult Literacy, Remedial Education, and GED Teachers and Instructors
25-3020 Self-Enrichment Education Teachers
25-3021 Self-Enrichment Education Teachers
25-3090 Miscellaneous Teachers and Instructors
25-3099 Teachers and Instructors, All Other
25-4000 Librarians, Curators, and Archivists
25-4010 Archivists, Curators, and Museum Technicians
25-4011 Archivists

25-4012 Curators
25-4013 Museum Technicians and Conservators
25-4020 Librarians
25-4021 Librarians
25-4030 Library Technicians
25-4031 Library Technicians
25-9000 Other Education, Training, and Library Occupations
25-9010 Audio-Visual Collections Specialists
25-9011 Audio-Visual Collections Specialists
25-9020 Farm and Home Management Advisors
25-9021 Farm and Home Management Advisors
25-9030 Instructional Coordinators
25-9031 Instructional Coordinators
25-9040 Teacher Assistants
25-9041 Teacher Assistants
25-9090 Miscellaneous Education, Training, and Library Workers
25-9099 Education, Training, and Library Workers, All Other
27-0000 Arts, Design, Entertainment, Sports, and Media Occupations
27-1000 Art and Design Workers
27-1010 Artists and Related Workers
27-1011 Art Directors
27-1012 Craft Artists
27-1013 Fine Artists, Including Painters, Sculptors, and Illustrators
27-1014 Multi-Media Artists and Animators
27-1019 Artists and Related Workers, All Other
27-1020 Designers
27-1021 Commercial and Industrial Designers
27-1022 Fashion Designers
27-1023 Floral Designers
27-1024 Graphic Designers
27-1025 Interior Designers
27-1026 Merchandise Displayers and Window Trimmers
27-1027 Set and Exhibit Designers
27-1029 Designers, All Other
27-2000 Entertainers and Performers, Sports and Related Workers
27-2010 Actors, Producers, and Directors
27-2011 Actors
27-2012 Producers and Directors
27-2020 Athletes, Coaches, Umpires, and Related Workers
27-2021 Athletes and Sports Competitors
27-2022 Coaches and Scouts
27-2023 Umpires, Referees, and Other Sports Officials
27-2030 Dancers and Choreographers
27-2031 Dancers
27-2032 Choreographers
27-2040 Musicians, Singers, and Related Workers
27-2041 Music Directors and Composers
27-2042 Musicians and Singers
27-2090 Miscellaneous Entertainers and Performers, Sports and Related Workers
27-2099 Entertainers and Performers, Sports and Related Workers, All Other
27-3000 Media and Communication Workers

27-3010 Announcers
27-3011 Radio and Television Announcers
27-3012 Public Address System and Other Announcers
27-3020 News Analysts, Reporters and Correspondents
27-3021 Broadcast News Analysts
27-3022 Reporters and Correspondents
27-3030 Public Relations Specialists
27-3031 Public Relations Specialists
27-3040 Writers and Editors
27-3041 Editors
27-3042 Technical Writers
27-3043 Writers and Authors
27-3090 Miscellaneous Media and Communication Workers
27-3091 Interpreters and Translators
27-3099 Media and Communication Workers, All Other
27-4000 Media and Communication Equipment Workers
27-4010 Broadcast and Sound Engineering Technicians and Radio Operators
27-4011 Audio and Video Equipment Technicians
27-4012 Broadcast Technicians
27-4013 Radio Operators
27-4014 Sound Engineering Technicians
27-4020 Photographers
27-4021 Photographers
27-4030 Television, Video, and Motion Picture Camera Operators and Editors
27-4031 Camera Operators, Television, Video, and Motion Picture
27-4032 Film and Video Editors
27-4090 Miscellaneous Media and Communication Equipment Workers
27-4099 Media and Communication Equipment Workers, All Other
29-0000 Healthcare Practitioners and Technical Occupations
29-1000 Health Diagnosing and Treating Practitioners
29-1010 Chiropractors
29-1011 Chiropractors
29-1020 Dentists
29-1021 Dentists, General
29-1022 Oral and Maxillofacial Surgeons
29-1023 Orthodontists
29-1024 Prosthodontists
29-1029 Dentists, All Other Specialists
29-1030 Dietitians and Nutritionists
29-1031 Dietitians and Nutritionists
29-1040 Optometrists
29-1041 Optometrists
29-1050 Pharmacists
29-1051 Pharmacists
29-1060 Physicians and Surgeons
29-1061 Anesthesiologists
29-1062 Family and General Practitioners
29-1063 Internists, General
29-1064 Obstetricians and Gynecologists
29-1065 Pediatricians, General
29-1066 Psychiatrists

29-1067 Surgeons
29-1069 Physicians and Surgeons, All Other
29-1070 Physician Assistants
29-1071 Physician Assistants
29-1080 Podiatrists
29-1081 Podiatrists
29-1110 Registered Nurses
29-1111 Registered Nurses
29-1120 Therapists
29-1121 Audiologists
29-1122 Occupational Therapists
29-1123 Physical Therapists
29-1124 Radiation Therapists
29-1125 Recreational Therapists
29-1126 Respiratory Therapists
29-1127 Speech-Language Pathologists
29-1129 Therapists, All Other
29-1130 Veterinarians
29-1131 Veterinarians
29-1190 Miscellaneous Health Diagnosing and Treating Practitioners
29-1199 Health Diagnosing and Treating Practitioners, All Other
29-2000 Health Technologists and Technicians
29-2010 Clinical Laboratory Technologists and Technicians
29-2011 Medical and Clinical Laboratory Technologists
29-2012 Medical and Clinical Laboratory Technicians
29-2020 Dental Hygienists
29-2021 Dental Hygienists
29-2030 Diagnostic Related Technologists and Technicians
29-2031 Cardiovascular Technologists and Technicians
29-2032 Diagnostic Medical Sonographers
29-2033 Nuclear Medicine Technologists
29-2034 Radiologic Technologists and Technicians
29-2040 Emergency Medical Technicians and Paramedics
29-2041 Emergency Medical Technicians and Paramedics
29-2050 Health Diagnosing and Treating Practitioner Support Technicians
29-2051 Dietetic Technicians
29-2052 Pharmacy Technicians
29-2053 Psychiatric Technicians
29-2054 Respiratory Therapy Technicians
29-2055 Surgical Technologists
29-2056 Veterinary Technologists and Technicians
29-2060 Licensed Practical and Licensed Vocational Nurses
29-2061 Licensed Practical and Licensed Vocational Nurses
29-2070 Medical Records and Health Information Technicians
29-2071 Medical Records and Health Information Technicians
29-2080 Opticians, Dispensing
29-2081 Opticians, Dispensing
29-2090 Miscellaneous Health Technologists and Technicians
29-2091 Orthotists and Prosthetists
29-2099 Health Technologists and Technicians, All Other
29-9000 Other Healthcare Practitioners and Technical Occupations

29-9010 Occupational Health and Safety Specialists and Technicians
29-9011 Occupational Health and Safety Specialists
29-9012 Occupational Health and Safety Technicians
29-9090 Miscellaneous Health Practitioners and Technical Workers
29-9091 Athletic Trainers
29-9099 Healthcare Practitioners and Technical Workers, All Other
31-0000 Healthcare Support Occupations
31-1000 Nursing, Psychiatric, and Home Health Aides
31-1010 Nursing, Psychiatric, and Home Health Aides
31-1011 Home Health Aides
31-1012 Nursing Aides, Orderlies, and Attendants
31-1013 Psychiatric Aides
31-2000 Occupational and Physical Therapist Assistants and Aides
31-2010 Occupational Therapist Assistants and Aides
31-2011 Occupational Therapist Assistants
31-2012 Occupational Therapist Aides
31-2020 Physical Therapist Assistants and Aides
31-2021 Physical Therapist Assistants
31-2022 Physical Therapist Aides
31-9000 Other Healthcare Support Occupations
31-9010 Massage Therapists
31-9011 Massage Therapists
31-9090 Miscellaneous Healthcare Support Occupations
31-9091 Dental Assistants
31-9092 Medical Assistants
31-9093 Medical Equipment Preparers
31-9094 Medical Transcriptionists
31-9095 Pharmacy Aides
31-9096 Veterinary Assistants and Laboratory Animal Caretakers
31-9099 Healthcare Support Workers, All Other
33-0000 Protective Service Occupations
33-1000 First-Line Supervisors/Managers, Protective Service Workers
33-1010 First-Line Supervisors/Managers, Law Enforcement Workers
33-1011 First-Line Supervisors/Managers of Correctional Officers
33-1012 First-Line Supervisors/Managers of Police and Detectives
33-1020 First-Line Supervisors/Managers, Fire Fighting and Prevention Workers
33-1021 First-Line Supervisors/Managers of Fire Fighting and Prevention Workers
33-1090 Miscellaneous First-Line Supervisors/Managers, Protective Service Workers
33-1099 First-Line Supervisors/Managers, Protective Service Workers, All Other
33-2000 Fire Fighting and Prevention Workers
33-2010 Fire Fighters
33-2011 Fire Fighters
33-2020 Fire Inspectors
33-2021 Fire Inspectors and Investigators
33-2022 Forest Fire Inspectors and Prevention Specialists
33-3000 Law Enforcement Workers
33-3010 Bailiffs, Correctional Officers, and Jailers
33-3011 Bailiffs
33-3012 Correctional Officers and Jailers
33-3020 Detectives and Criminal Investigators
33-3021 Detectives and Criminal Investigators

33-3030 Fish and Game Wardens
33-3031 Fish and Game Wardens
33-3040 Parking Enforcement Workers
33-3041 Parking Enforcement Workers
33-3050 Police Officers
33-3051 Police and Sheriff's Patrol Officers
33-3052 Transit and Railroad Police
33-9000 Other Protective Service Workers
33-9010 Animal Control Workers
33-9011 Animal Control Workers
33-9020 Private Detectives and Investigators
33-9021 Private Detectives and Investigators
33-9030 Security Guards and Gaming Surveillance Officers
33-9031 Gaming Surveillance Officers and Gaming Investigators
33-9032 Security Guards
33-9090 Miscellaneous Protective Service Workers
33-9091 Crossing Guards
33-9092 Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers
33-9099 Protective Service Workers, All Other
35-0000 Food Preparation and Serving Related Occupations
35-1000 Supervisors, Food Preparation and Serving Workers
35-1010 First-Line Supervisors/Managers, Food Preparation and Serving Workers
35-1011 Chefs and Head Cooks
35-1012 First-Line Supervisors/Managers of Food Preparation and Serving Workers
35-2000 Cooks and Food Preparation Workers
35-2010 Cooks
35-2011 Cooks, Fast Food
35-2012 Cooks, Institution and Cafeteria
35-2013 Cooks, Private Household
35-2014 Cooks, Restaurant
35-2015 Cooks, Short Order
35-2019 Cooks, All Other
35-2020 Food Preparation Workers
35-2021 Food Preparation Workers
35-3000 Food and Beverage Serving Workers
35-3010 Bartenders
35-3011 Bartenders
35-3020 Fast Food and Counter Workers
35-3021 Combined Food Preparation and Serving Workers, Including Fast Food
35-3022 Counter Attendants, Cafeteria, Food Concession, and Coffee Shop
35-3030 Waiters and Waitresses
35-3031 Waiters and Waitresses
35-3040 Food Servers, Nonrestaurant
35-3041 Food Servers, Nonrestaurant
35-9000 Other Food Preparation and Serving Related Workers
35-9010 Dining Room and Cafeteria Attendants and Bartender Helpers
35-9011 Dining Room and Cafeteria Attendants and Bartender Helpers
35-9020 Dishwashers
35-9021 Dishwashers
35-9030 Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop
35-9031 Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop

35-9090 Miscellaneous Food Preparation and Serving Related Workers
35-9099 Food Preparation and Serving Related Workers, All Other
37-0000 Building and Grounds Cleaning and Maintenance Occupations
37-1000 Supervisors, Building and Grounds Cleaning and Maintenance Workers
37-1010 First-Line Supervisors/Managers, Building and Grounds Cleaning and Maintenance Workers
37-1011 First-Line Supervisors/Managers of Housekeeping and Janitorial Workers
37-1012 First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers
37-2000 Building Cleaning and Pest Control Workers
37-2010 Building Cleaning Workers
37-2011 Janitors and Cleaners, Except Maids and Housekeeping Cleaners
37-2012 Maids and Housekeeping Cleaners
37-2019 Building Cleaning Workers, All Other
37-2020 Pest Control Workers
37-2021 Pest Control Workers
37-3000 Grounds Maintenance Workers
37-3010 Grounds Maintenance Workers
37-3011 Landscaping and Groundskeeping Workers
37-3012 Pesticide Handlers, Sprayers, and Applicators, Vegetation
37-3013 Tree Trimmers and Pruners
37-3019 Grounds Maintenance Workers, All Other
39-0000 Personal Care and Service Occupations
39-1000 Supervisors, Personal Care and Service Workers
39-1010 First-Line Supervisors/Managers of Gaming Workers
39-1011 Gaming Supervisors
39-1012 Slot Key Persons
39-1020 First-Line Supervisors/Managers of Personal Service Workers
39-1021 First-Line Supervisors/Managers of Personal Service Workers
39-2000 Animal Care and Service Workers
39-2010 Animal Trainers
39-2011 Animal Trainers
39-2020 Nonfarm Animal Caretakers
39-2021 Nonfarm Animal Caretakers
39-3000 Entertainment Attendants and Related Workers
39-3010 Gaming Services Workers
39-3011 Gaming Dealers
39-3012 Gaming and Sports Book Writers and Runners
39-3019 Gaming Service Workers, All Other
39-3020 Motion Picture Projectionists
39-3021 Motion Picture Projectionists
39-3030 Ushers, Lobby Attendants, and Ticket Takers
39-3031 Ushers, Lobby Attendants, and Ticket Takers
39-3090 Miscellaneous Entertainment Attendants and Related Workers
39-3091 Amusement and Recreation Attendants
39-3092 Costume Attendants
39-3093 Locker Room, Coatroom, and Dressing Room Attendants
39-3099 Entertainment Attendants and Related Workers, All Other
39-4000 Funeral Service Workers
39-4010 Embalmers
39-4011 Embalmers

39-4020 Funeral Attendants
39-4021 Funeral Attendants
39-5000 Personal Appearance Workers
39-5010 Barbers and Cosmetologists
39-5011 Barbers
39-5012 Hairdressers, Hairstylists, and Cosmetologists
39-5090 Miscellaneous Personal Appearance Workers
39-5091 Makeup Artists, Theatrical and Performance
39-5092 Manicurists and Pedicurists
39-5093 Shampooers
39-5094 Skin Care Specialists
39-6000 Transportation, Tourism, and Lodging Attendants
39-6010 Baggage Porters, Bellhops, and Concierges
39-6011 Baggage Porters and Bellhops
39-6012 Concierges
39-6020 Tour and Travel Guides
39-6021 Tour Guides and Escorts
39-6022 Travel Guides
39-6030 Transportation Attendants
39-6031 Flight Attendants
39-6032 Transportation Attendants, Except Flight Attendants and Baggage Porters
39-9000 Other Personal Care and Service Workers
39-9010 Child Care Workers
39-9011 Child Care Workers
39-9020 Personal and Home Care Aides
39-9021 Personal and Home Care Aides
39-9030 Recreation and Fitness Workers
39-9031 Fitness Trainers and Aerobics Instructors
39-9032 Recreation Workers
39-9040 Residential Advisors
39-9041 Residential Advisors
39-9090 Miscellaneous Personal Care and Service Workers
39-9099 Personal Care and Service Workers, All Other
41-0000 Sales and Related Occupations
41-1000 Supervisors, Sales Workers
41-1010 First-Line Supervisors/Managers, Sales Workers
41-1011 First-Line Supervisors/Managers of Retail Sales Workers
41-1012 First-Line Supervisors/Managers of Non-Retail Sales Workers
41-2000 Retail Sales Workers
41-2010 Cashiers
41-2011 Cashiers
41-2012 Gaming Change Persons and Booth Cashiers
41-2020 Counter and Rental Clerks and Parts Salespersons
41-2021 Counter and Rental Clerks
41-2022 Parts Salespersons
41-2030 Retail Salespersons
41-2031 Retail Salespersons
41-3000 Sales Representatives, Services
41-3010 Advertising Sales Agents
41-3011 Advertising Sales Agents
41-3020 Insurance Sales Agents

41-3021 Insurance Sales Agents
41-3030 Securities, Commodities, and Financial Services Sales Agents
41-3031 Securities, Commodities, and Financial Services Sales Agents
41-3040 Travel Agents
41-3041 Travel Agents
41-3090 Miscellaneous Sales Representatives, Services
41-3099 Sales Representatives, Services, All Other
41-4000 Sales Representatives, Wholesale and Manufacturing
41-4010 Sales Representatives, Wholesale and Manufacturing
41-4011 Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products
41-4012 Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
41-9000 Other Sales and Related Workers
41-9010 Models, Demonstrators, and Product Promoters
41-9011 Demonstrators and Product Promoters
41-9012 Models
41-9020 Real Estate Brokers and Sales Agents
41-9021 Real Estate Brokers
41-9022 Real Estate Sales Agents
41-9030 Sales Engineers
41-9031 Sales Engineers
41-9040 Telemarketers
41-9041 Telemarketers
41-9090 Miscellaneous Sales and Related Workers
41-9091 Door-To-Door Sales Workers, News and Street Vendors, and Related Workers
41-9099 Sales and Related Workers, All Other
43-0000 Office and Administrative Support Occupations
43-1000 Supervisors, Office and Administrative Support Workers
43-1010 First-Line Supervisors/Managers of Office and Administrative Support Workers
43-1011 First-Line Supervisors/Managers of Office and Administrative Support Workers
43-2000 Communications Equipment Operators
43-2010 Switchboard Operators, Including Answering Service
43-2011 Switchboard Operators, Including Answering Service
43-2020 Telephone Operators
43-2021 Telephone Operators
43-2090 Miscellaneous Communications Equipment Operators
43-2099 Communications Equipment Operators, All Other
43-3000 Financial Clerks
43-3010 Bill and Account Collectors
43-3011 Bill and Account Collectors
43-3020 Billing and Posting Clerks and Machine Operators
43-3021 Billing and Posting Clerks and Machine Operators
43-3030 Bookkeeping, Accounting, and Auditing Clerks
43-3031 Bookkeeping, Accounting, and Auditing Clerks
43-3040 Gaming Cage Workers
43-3041 Gaming Cage Workers
43-3050 Payroll and Timekeeping Clerks
43-3051 Payroll and Timekeeping Clerks
43-3060 Procurement Clerks
43-3061 Procurement Clerks

43-3070 Tellers
43-3071 Tellers
43-4000 Information and Record Clerks
43-4010 Brokerage Clerks
43-4011 Brokerage Clerks
43-4020 Correspondence Clerks
43-4021 Correspondence Clerks
43-4030 Court, Municipal, and License Clerks
43-4031 Court, Municipal, and License Clerks
43-4040 Credit Authorizers, Checkers, and Clerks
43-4041 Credit Authorizers, Checkers, and Clerks
43-4050 Customer Service Representatives
43-4051 Customer Service Representatives
43-4060 Eligibility Interviewers, Government Programs
43-4061 Eligibility Interviewers, Government Programs
43-4070 File Clerks
43-4071 File Clerks
43-4080 Hotel, Motel, and Resort Desk Clerks
43-4081 Hotel, Motel, and Resort Desk Clerks
43-4110 Interviewers, Except Eligibility and Loan
43-4111 Interviewers, Except Eligibility and Loan
43-4120 Library Assistants, Clerical
43-4121 Library Assistants, Clerical
43-4130 Loan Interviewers and Clerks
43-4131 Loan Interviewers and Clerks
43-4140 New Accounts Clerks
43-4141 New Accounts Clerks
43-4150 Order Clerks
43-4151 Order Clerks
43-4160 Human Resources Assistants, Except Payroll and Timekeeping
43-4161 Human Resources Assistants, Except Payroll and Timekeeping
43-4170 Receptionists and Information Clerks
43-4171 Receptionists and Information Clerks
43-4180 Reservation and Transportation Ticket Agents and Travel Clerks
43-4181 Reservation and Transportation Ticket Agents and Travel Clerks
43-4190 Miscellaneous Information and Record Clerks
43-4199 Information and Record Clerks, All Other
43-5000 Material Recording, Scheduling, Dispatching, and Distributing Workers
43-5010 Cargo and Freight Agents
43-5011 Cargo and Freight Agents
43-5020 Couriers and Messengers
43-5021 Couriers and Messengers
43-5030 Dispatchers
43-5031 Police, Fire, and Ambulance Dispatchers
43-5032 Dispatchers, Except Police, Fire, and Ambulance
43-5040 Meter Readers, Utilities
43-5041 Meter Readers, Utilities
43-5050 Postal Service Workers
43-5051 Postal Service Clerks
43-5052 Postal Service Mail Carriers
43-5053 Postal Service Mail Sorters, Processors, and Processing Machine Operators

43-5060 Production, Planning, and Expediting Clerks
43-5061 Production, Planning, and Expediting Clerks
43-5070 Shipping, Receiving, and Traffic Clerks
43-5071 Shipping, Receiving, and Traffic Clerks
43-5080 Stock Clerks and Order Fillers
43-5081 Stock Clerks and Order Fillers
43-5110 Weighers, Measurers, Checkers, and Samplers, Recordkeeping
43-5111 Weighers, Measurers, Checkers, and Samplers, Recordkeeping
43-6000 Secretaries and Administrative Assistants
43-6010 Secretaries and Administrative Assistants
43-6011 Executive Secretaries and Administrative Assistants
43-6012 Legal Secretaries
43-6013 Medical Secretaries
43-6014 Secretaries, Except Legal, Medical, and Executive
43-9000 Other Office and Administrative Support Workers
43-9010 Computer Operators
43-9011 Computer Operators
43-9020 Data Entry and Information Processing Workers
43-9021 Data Entry Keyers
43-9022 Word Processors and Typists
43-9030 Desktop Publishers
43-9031 Desktop Publishers
43-9040 Insurance Claims and Policy Processing Clerks
43-9041 Insurance Claims and Policy Processing Clerks
43-9050 Mail Clerks and Mail Machine Operators, Except Postal Service
43-9051 Mail Clerks and Mail Machine Operators, Except Postal Service
43-9060 Office Clerks, General
43-9061 Office Clerks, General
43-9070 Office Machine Operators, Except Computer
43-9071 Office Machine Operators, Except Computer
43-9080 Proofreaders and Copy Markers
43-9081 Proofreaders and Copy Markers
43-9110 Statistical Assistants
43-9111 Statistical Assistants
43-9190 Miscellaneous Office and Administrative Support Workers
43-9199 Office and Administrative Support Workers, All Other
45-0000 Farming, Fishing, and Forestry Occupations
45-1000 Supervisors, Farming, Fishing, and Forestry Workers
45-1010 First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers
45-1011 First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers
45-1012 Farm Labor Contractors
45-2000 Agricultural Workers
45-2010 Agricultural Inspectors
45-2011 Agricultural Inspectors
45-2020 Animal Breeders
45-2021 Animal Breeders
45-2040 Graders and Sorters, Agricultural Products
45-2041 Graders and Sorters, Agricultural Products
45-2090 Miscellaneous Agricultural Workers
45-2091 Agricultural Equipment Operators
45-2092 Farmworkers and Laborers, Crop, Nursery, and Greenhouse

45-2093 Farmworkers, Farm and Ranch Animals
45-2099 Agricultural Workers, All Other
45-3000 Fishing and Hunting Workers
45-3010 Fishers and Related Fishing Workers
45-3011 Fishers and Related Fishing Workers
45-3020 Hunters and Trappers
45-3021 Hunters and Trappers
45-4000 Forest, Conservation, and Logging Workers
45-4010 Forest and Conservation Workers
45-4011 Forest and Conservation Workers
45-4020 Logging Workers
45-4021 Fallers
45-4022 Logging Equipment Operators
45-4023 Log Graders and Scalers
45-4029 Logging Workers, All Other
47-0000 Construction and Extraction Occupations
47-1000 Supervisors, Construction and Extraction Workers
47-1010 First-Line Supervisors/Managers of Construction Trades and Extraction Workers
47-1011 First-Line Supervisors/Managers of Construction Trades and Extraction Workers
47-2000 Construction Trades Workers
47-2010 Boilermakers
47-2011 Boilermakers
47-2020 Brickmasons, Blockmasons, and Stonemasons
47-2021 Brickmasons and Blockmasons
47-2022 Stonemasons
47-2030 Carpenters
47-2031 Carpenters
47-2040 Carpet, Floor, and Tile Installers and Finishers
47-2041 Carpet Installers
47-2042 Floor Layers, Except Carpet, Wood, and Hard Tiles
47-2043 Floor Sanders and Finishers
47-2044 Tile and Marble Setters
47-2050 Cement Masons, Concrete Finishers, and Terrazzo Workers
47-2051 Cement Masons and Concrete Finishers
47-2053 Terrazzo Workers and Finishers
47-2060 Construction Laborers
47-2061 Construction Laborers
47-2070 Construction Equipment Operators
47-2071 Paving, Surfacing, and Tamping Equipment Operators
47-2072 Pile-Driver Operators
47-2073 Operating Engineers and Other Construction Equipment Operators
47-2080 Drywall Installers, Ceiling Tile Installers, and Tapers
47-2081 Drywall and Ceiling Tile Installers
47-2082 Tapers
47-2110 Electricians
47-2111 Electricians
47-2120 Glaziers
47-2121 Glaziers
47-2130 Insulation Workers
47-2131 Insulation Workers, Floor, Ceiling, and Wall
47-2132 Insulation Workers, Mechanical

47-2140 Painters and Paperhangers
47-2141 Painters, Construction and Maintenance
47-2142 Paperhangers
47-2150 Pipelayers, Plumbers, Pipefitters, and Steamfitters
47-2151 Pipelayers
47-2152 Plumbers, Pipefitters, and Steamfitters
47-2160 Plasterers and Stucco Masons
47-2161 Plasterers and Stucco Masons
47-2170 Reinforcing Iron and Rebar Workers
47-2171 Reinforcing Iron and Rebar Workers
47-2180 Roofers
47-2181 Roofers
47-2210 Sheet Metal Workers
47-2211 Sheet Metal Workers
47-2220 Structural Iron and Steel Workers
47-2221 Structural Iron and Steel Workers
47-3000 Helpers, Construction Trades
47-3010 Helpers, Construction Trades
47-3011 Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
47-3012 Helpers--Carpenters
47-3013 Helpers--Electricians
47-3014 Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons
47-3015 Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters
47-3016 Helpers--Roofers
47-3019 Helpers, Construction Trades, All Other
47-4000 Other Construction and Related Workers
47-4010 Construction and Building Inspectors
47-4011 Construction and Building Inspectors
47-4020 Elevator Installers and Repairers
47-4021 Elevator Installers and Repairers
47-4030 Fence Erectors
47-4031 Fence Erectors
47-4040 Hazardous Materials Removal Workers
47-4041 Hazardous Materials Removal Workers
47-4050 Highway Maintenance Workers
47-4051 Highway Maintenance Workers
47-4060 Rail-Track Laying and Maintenance Equipment Operators
47-4061 Rail-Track Laying and Maintenance Equipment Operators
47-4070 Septic Tank Servicers and Sewer Pipe Cleaners
47-4071 Septic Tank Servicers and Sewer Pipe Cleaners
47-4090 Miscellaneous Construction and Related Workers
47-4091 Segmental Pavers
47-4099 Construction and Related Workers, All Other
47-5000 Extraction Workers
47-5010 Derrick, Rotary Drill, and Service Unit Operators, Oil, Gas, and Mining
47-5011 Derrick Operators, Oil and Gas
47-5012 Rotary Drill Operators, Oil and Gas
47-5013 Service Unit Operators, Oil, Gas, and Mining
47-5020 Earth Drillers, Except Oil and Gas
47-5021 Earth Drillers, Except Oil and Gas
47-5030 Explosives Workers, Ordnance Handling Experts, and Blasters

47-5031 Explosives Workers, Ordnance Handling Experts, and Blasters
47-5040 Mining Machine Operators
47-5041 Continuous Mining Machine Operators
47-5042 Mine Cutting and Channeling Machine Operators
47-5049 Mining Machine Operators, All Other
47-5050 Rock Splitters, Quarry
47-5051 Rock Splitters, Quarry
47-5060 Roof Bolters, Mining
47-5061 Roof Bolters, Mining
47-5070 Roustabouts, Oil and Gas
47-5071 Roustabouts, Oil and Gas
47-5080 Helpers--Extraction Workers
47-5081 Helpers--Extraction Workers
47-5090 Miscellaneous Extraction Workers
47-5099 Extraction Workers, All Other
49-0000 Installation, Maintenance, and Repair Occupations
49-1000 Supervisors of Installation, Maintenance, and Repair Workers
49-1010 First-Line Supervisors/Managers of Mechanics, Installers, and Repairers
49-1011 First-Line Supervisors/Managers of Mechanics, Installers, and Repairers
49-2000 Electrical and Electronic Equipment Mechanics, Installers, and Repairers
49-2010 Computer, Automated Teller, and Office Machine Repairers
49-2011 Computer, Automated Teller, and Office Machine Repairers
49-2020 Radio and Telecommunications Equipment Installers and Repairers
49-2021 Radio Mechanics
49-2022 Telecommunications Equipment Installers and Repairers, Except Line Installers
49-2090 Miscellaneous Electrical and Electronic Equipment Mechanics, Installers, and Repairers
49-2091 Avionics Technicians
49-2092 Electric Motor, Power Tool, and Related Repairers
49-2093 Electrical and Electronics Installers and Repairers, Transportation Equipment
49-2094 Electrical and Electronics Repairers, Commercial and Industrial Equipment
49-2095 Electrical and Electronics Repairers, Powerhouse, Substation, and Relay
49-2096 Electronic Equipment Installers and Repairers, Motor Vehicles
49-2097 Electronic Home Entertainment Equipment Installers and Repairers
49-2098 Security and Fire Alarm Systems Installers
49-3000 Vehicle and Mobile Equipment Mechanics, Installers, and Repairers
49-3010 Aircraft Mechanics and Service Technicians
49-3011 Aircraft Mechanics and Service Technicians
49-3020 Automotive Technicians and Repairers
49-3021 Automotive Body and Related Repairers
49-3022 Automotive Glass Installers and Repairers
49-3023 Automotive Service Technicians and Mechanics
49-3030 Bus and Truck Mechanics and Diesel Engine Specialists
49-3031 Bus and Truck Mechanics and Diesel Engine Specialists
49-3040 Heavy Vehicle and Mobile Equipment Service Technicians and Mechanics
49-3041 Farm Equipment Mechanics
49-3042 Mobile Heavy Equipment Mechanics, Except Engines
49-3043 Rail Car Repairers
49-3050 Small Engine Mechanics
49-3051 Motorboat Mechanics
49-3052 Motorcycle Mechanics

49-3053 Outdoor Power Equipment and Other Small Engine Mechanics
49-3090 Miscellaneous Vehicle and Mobile Equipment Mechanics, Installers, and Repairers
49-3091 Bicycle Repairers
49-3092 Recreational Vehicle Service Technicians
49-3093 Tire Repairers and Changers
49-9000 Other Installation, Maintenance, and Repair Occupations
49-9010 Control and Valve Installers and Repairers
49-9011 Mechanical Door Repairers
49-9012 Control and Valve Installers and Repairers, Except Mechanical Door
49-9020 Heating, Air Conditioning, and Refrigeration Mechanics and Installers
49-9021 Heating, Air Conditioning, and Refrigeration Mechanics and Installers
49-9030 Home Appliance Repairers
49-9031 Home Appliance Repairers
49-9040 Industrial Machinery Installation, Repair, and Maintenance Workers
49-9041 Industrial Machinery Mechanics
49-9042 Maintenance and Repair Workers, General
49-9043 Maintenance Workers, Machinery
49-9044 Millwrights
49-9045 Refractory Materials Repairers, Except Brickmasons
49-9050 Line Installers and Repairers
49-9051 Electrical Power-Line Installers and Repairers
49-9052 Telecommunications Line Installers and Repairers
49-9060 Precision Instrument and Equipment Repairers
49-9061 Camera and Photographic Equipment Repairers
49-9062 Medical Equipment Repairers
49-9063 Musical Instrument Repairers and Tuners
49-9064 Watch Repairers
49-9069 Precision Instrument and Equipment Repairers, All Other
49-9090 Miscellaneous Installation, Maintenance, and Repair Workers
49-9091 Coin, Vending, and Amusement Machine Servicers and Repairers
49-9092 Commercial Divers
49-9093 Fabric Menders, Except Garment
49-9094 Locksmiths and Safe Repairers
49-9095 Manufactured Building and Mobile Home Installers
49-9096 Riggers
49-9097 Signal and Track Switch Repairers
49-9098 Helpers--Installation, Maintenance, and Repair Workers
49-9099 Installation, Maintenance, and Repair Workers, All Other
51-0000 Production Occupations
51-1000 Supervisors, Production Workers
51-1010 First-Line Supervisors/Managers of Production and Operating Workers
51-1011 First-Line Supervisors/Managers of Production and Operating Workers
51-2000 Assemblers and Fabricators
51-2010 Aircraft Structure, Surfaces, Rigging, and Systems Assemblers
51-2011 Aircraft Structure, Surfaces, Rigging, and Systems Assemblers
51-2020 Electrical, Electronics, and Electromechanical Assemblers
51-2021 Coil Winders, Tapers, and Finishers
51-2022 Electrical and Electronic Equipment Assemblers
51-2023 Electromechanical Equipment Assemblers
51-2030 Engine and Other Machine Assemblers
51-2031 Engine and Other Machine Assemblers

51-2040 Structural Metal Fabricators and Fitters
51-2041 Structural Metal Fabricators and Fitters
51-2090 Miscellaneous Assemblers and Fabricators
51-2091 Fiberglass Laminators and Fabricators
51-2092 Team Assemblers
51-2093 Timing Device Assemblers, Adjusters, and Calibrators
51-2099 Assemblers and Fabricators, All Other
51-3000 Food Processing Workers
51-3010 Bakers
51-3011 Bakers
51-3020 Butchers and Other Meat, Poultry, and Fish Processing Workers
51-3021 Butchers and Meat Cutters
51-3022 Meat, Poultry, and Fish Cutters and Trimmers
51-3023 Slaughterers and Meat Packers
51-3090 Miscellaneous Food Processing Workers
51-3091 Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders
51-3092 Food Batchmakers
51-3093 Food Cooking Machine Operators and Tenders
51-4000 Metal Workers and Plastic Workers
51-4010 Computer Control Programmers and Operators
51-4011 Computer-Controlled Machine Tool Operators, Metal and Plastic
51-4012 Numerical Tool and Process Control Programmers
51-4020 Forming Machine Setters, Operators, and Tenders, Metal and Plastic
51-4021 Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic
51-4022 Forging Machine Setters, Operators, and Tenders, Metal and Plastic
51-4023 Rolling Machine Setters, Operators, and Tenders, Metal and Plastic
51-4030 Machine Tool Cutting Setters, Operators, and Tenders, Metal and Plastic
51-4031 Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic
51-4032 Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
51-4033 Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic
51-4034 Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic
51-4035 Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic
51-4040 Machinists
51-4041 Machinists
51-4050 Metal Furnace and Kiln Operators and Tenders
51-4051 Metal-Refining Furnace Operators and Tenders
51-4052 Pourers and Casters, Metal
51-4060 Model Makers and Patternmakers, Metal and Plastic
51-4061 Model Makers, Metal and Plastic
51-4062 Patternmakers, Metal and Plastic
51-4070 Molders and Molding Machine Setters, Operators, and Tenders, Metal and Plastic
51-4071 Foundry Mold and Coremakers
51-4072 Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic
51-4080 Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic
51-4081 Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic
51-4110 Tool and Die Makers
51-4111 Tool and Die Makers
51-4120 Welding, Soldering, and Brazing Workers

51-4121 Welders, Cutters, Solderers, and Brazers
51-4122 Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders
51-4190 Miscellaneous Metalworkers and Plastic Workers
51-4191 Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic
51-4192 Lay-Out Workers, Metal and Plastic
51-4193 Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic
51-4194 Tool Grinders, Filers, and Sharpeners
51-4199 Metal Workers and Plastic Workers, All Other
51-5000 Printing Workers
51-5010 Bookbinders and Bindery Workers
51-5011 Bindery Workers
51-5012 Bookbinders
51-5020 Printers
51-5021 Job Printers
51-5022 Prepress Technicians and Workers
51-5023 Printing Machine Operators
51-6000 Textile, Apparel, and Furnishings Workers
51-6010 Laundry and Dry-Cleaning Workers
51-6011 Laundry and Dry-Cleaning Workers
51-6020 Pressers, Textile, Garment, and Related Materials
51-6021 Pressers, Textile, Garment, and Related Materials
51-6030 Sewing Machine Operators
51-6031 Sewing Machine Operators
51-6040 Shoe and Leather Workers
51-6041 Shoe and Leather Workers and Repairers
51-6042 Shoe Machine Operators and Tenders
51-6050 Tailors, Dressmakers, and Sewers
51-6051 Sewers, Hand
51-6052 Tailors, Dressmakers, and Custom Sewers
51-6060 Textile Machine Setters, Operators, and Tenders
51-6061 Textile Bleaching and Dyeing Machine Operators and Tenders
51-6062 Textile Cutting Machine Setters, Operators, and Tenders
51-6063 Textile Knitting and Weaving Machine Setters, Operators, and Tenders
51-6064 Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders
51-6090 Miscellaneous Textile, Apparel, and Furnishings Workers
51-6091 Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers
51-6092 Fabric and Apparel Patternmakers
51-6093 Upholsterers
51-6099 Textile, Apparel, and Furnishings Workers, All Other
51-7000 Woodworkers
51-7010 Cabinetmakers and Bench Carpenters
51-7011 Cabinetmakers and Bench Carpenters
51-7020 Furniture Finishers
51-7021 Furniture Finishers
51-7030 Model Makers and Patternmakers, Wood
51-7031 Model Makers, Wood
51-7032 Patternmakers, Wood
51-7040 Woodworking Machine Setters, Operators, and Tenders
51-7041 Sawing Machine Setters, Operators, and Tenders, Wood
51-7042 Woodworking Machine Setters, Operators, and Tenders, Except Sawing

51-7090 Miscellaneous Woodworkers
51-7099 Woodworkers, All Other
51-8000 Plant and System Operators
51-8010 Power Plant Operators, Distributors, and Dispatchers
51-8011 Nuclear Power Reactor Operators
51-8012 Power Distributors and Dispatchers
51-8013 Power Plant Operators
51-8020 Stationary Engineers and Boiler Operators
51-8021 Stationary Engineers and Boiler Operators
51-8030 Water and Liquid Waste Treatment Plant and System Operators
51-8031 Water and Liquid Waste Treatment Plant and System Operators
51-8090 Miscellaneous Plant and System Operators
51-8091 Chemical Plant and System Operators
51-8092 Gas Plant Operators
51-8093 Petroleum Pump System Operators, Refinery Operators, and Gaugers
51-8099 Plant and System Operators, All Other
51-9000 Other Production Occupations
51-9010 Chemical Processing Machine Setters, Operators, and Tenders
51-9011 Chemical Equipment Operators and Tenders
51-9012 Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders
51-9020 Crushing, Grinding, Polishing, Mixing, and Blending Workers
51-9021 Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders
51-9022 Grinding and Polishing Workers, Hand
51-9023 Mixing and Blending Machine Setters, Operators, and Tenders
51-9030 Cutting Workers
51-9031 Cutters and Trimmers, Hand
51-9032 Cutting and Slicing Machine Setters, Operators, and Tenders
51-9040 Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders
51-9041 Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders
51-9050 Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders
51-9051 Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders
51-9060 Inspectors, Testers, Sorters, Samplers, and Weighers
51-9061 Inspectors, Testers, Sorters, Samplers, and Weighers
51-9070 Jewelers and Precious Stone and Metal Workers
51-9071 Jewelers and Precious Stone and Metal Workers
51-9080 Medical, Dental, and Ophthalmic Laboratory Technicians
51-9081 Dental Laboratory Technicians
51-9082 Medical Appliance Technicians
51-9083 Ophthalmic Laboratory Technicians
51-9110 Packaging and Filling Machine Operators and Tenders
51-9111 Packaging and Filling Machine Operators and Tenders
51-9120 Painting Workers
51-9121 Coating, Painting, and Spraying Machine Setters, Operators, and Tenders
51-9122 Painters, Transportation Equipment
51-9123 Painting, Coating, and Decorating Workers
51-9130 Photographic Process Workers and Processing Machine Operators
51-9131 Photographic Process Workers
51-9132 Photographic Processing Machine Operators

51-9140 Semiconductor Processors
51-9141 Semiconductor Processors
51-9190 Miscellaneous Production Workers
51-9191 Cementing and Gluing Machine Operators and Tenders
51-9192 Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders
51-9193 Cooling and Freezing Equipment Operators and Tenders
51-9194 Etchers and Engravers
51-9195 Molders, Shapers, and Casters, Except Metal and Plastic
51-9196 Paper Goods Machine Setters, Operators, and Tenders
51-9197 Tire Builders
51-9198 Helpers--Production Workers
51-9199 Production Workers, All Other
53-0000 Transportation and Material Moving Occupations
53-1000 Supervisors, Transportation and Material Moving Workers
53-1010 Aircraft Cargo Handling Supervisors
53-1011 Aircraft Cargo Handling Supervisors
53-1020 First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand
53-1021 First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand
53-1030 First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators
53-1031 First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators
53-2000 Air Transportation Workers
53-2010 Aircraft Pilots and Flight Engineers
53-2011 Airline Pilots, Copilots, and Flight Engineers
53-2012 Commercial Pilots
53-2020 Air Traffic Controllers and Airfield Operations Specialists
53-2021 Air Traffic Controllers
53-2022 Airfield Operations Specialists
53-3000 Motor Vehicle Operators
53-3010 Ambulance Drivers and Attendants, Except Emergency Medical Technicians
53-3011 Ambulance Drivers and Attendants, Except Emergency Medical Technicians
53-3020 Bus Drivers
53-3021 Bus Drivers, Transit and Intercity
53-3022 Bus Drivers, School
53-3030 Driver/Sales Workers and Truck Drivers
53-3031 Driver/Sales Workers
53-3032 Truck Drivers, Heavy and Tractor-Trailer
53-3033 Truck Drivers, Light or Delivery Services
53-3040 Taxi Drivers and Chauffeurs
53-3041 Taxi Drivers and Chauffeurs
53-3090 Miscellaneous Motor Vehicle Operators
53-3099 Motor Vehicle Operators, All Other
53-4000 Rail Transportation Workers
53-4010 Locomotive Engineers and Operators
53-4011 Locomotive Engineers
53-4012 Locomotive Firers
53-4013 Rail Yard Engineers, Dinkey Operators, and Hostlers
53-4020 Railroad Brake, Signal, and Switch Operators
53-4021 Railroad Brake, Signal, and Switch Operators
53-4030 Railroad Conductors and Yardmasters

53-4031 Railroad Conductors and Yardmasters
53-4040 Subway and Streetcar Operators
53-4041 Subway and Streetcar Operators
53-4090 Miscellaneous Rail Transportation Workers
53-4099 Rail Transportation Workers, All Other
53-5000 Water Transportation Workers
53-5010 Sailors and Marine Oilers
53-5011 Sailors and Marine Oilers
53-5020 Ship and Boat Captains and Operators
53-5021 Captains, Mates, and Pilots of Water Vessels
53-5022 Motorboat Operators
53-5030 Ship Engineers
53-5031 Ship Engineers
53-6000 Other Transportation Workers
53-6010 Bridge and Lock Tenders
53-6011 Bridge and Lock Tenders
53-6020 Parking Lot Attendants
53-6021 Parking Lot Attendants
53-6030 Service Station Attendants
53-6031 Service Station Attendants
53-6040 Traffic Technicians
53-6041 Traffic Technicians
53-6050 Transportation Inspectors
53-6051 Transportation Inspectors
53-6090 Miscellaneous Transportation Workers
53-6099 Transportation Workers, All Other
53-7000 Material Moving Workers
53-7010 Conveyor Operators and Tenders
53-7011 Conveyor Operators and Tenders
53-7020 Crane and Tower Operators
53-7021 Crane and Tower Operators
53-7030 Dredge, Excavating, and Loading Machine Operators
53-7031 Dredge Operators
53-7032 Excavating and Loading Machine and Dragline Operators
53-7033 Loading Machine Operators, Underground Mining
53-7040 Hoist and Winch Operators
53-7041 Hoist and Winch Operators
53-7050 Industrial Truck and Tractor Operators
53-7051 Industrial Truck and Tractor Operators
53-7060 Laborers and Material Movers, Hand
53-7061 Cleaners of Vehicles and Equipment
53-7062 Laborers and Freight, Stock, and Material Movers, Hand
53-7063 Machine Feeders and Offbearers
53-7064 Packers and Packagers, Hand
53-7070 Pumping Station Operators
53-7071 Gas Compressor and Gas Pumping Station Operators
53-7072 Pump Operators, Except Wellhead Pumpers
53-7073 Wellhead Pumpers
53-7080 Refuse and Recyclable Material Collectors
53-7081 Refuse and Recyclable Material Collectors
53-7110 Shuttle Car Operators

53-7111 Shuttle Car Operators
53-7120 Tank Car, Truck, and Ship Loaders
53-7121 Tank Car, Truck, and Ship Loaders
53-7190 Miscellaneous Material Moving Workers
53-7199 Material Moving Workers, All Other
55-0000 Military Specific Occupations
55-1000 Military Officer Special and Tactical Operations Leaders/Managers
55-1010 Military Officer Special and Tactical Operations Leaders/Managers
55-1011 Air Crew Officers
55-1012 Aircraft Launch and Recovery Officers
55-1013 Armored Assault Vehicle Officers
55-1014 Artillery and Missile Officers
55-1015 Command and Control Center Officers
55-1016 Infantry Officers
55-1017 Special Forces Officers
55-1019 Military Officer Special and Tactical Operations Leaders/Managers, All Other
55-2000 First-Line Enlisted Military Supervisor/Managers
55-2010 First-Line Enlisted Military Supervisors/Managers
55-2011 First-Line Supervisors/Managers of Air Crew Members
55-2012 First-Line Supervisors/Managers of Weapons Specialists/Crew Members
55-2013 First-Line Supervisors/Managers of All Other Tactical Operations Specialists
55-3000 Military Enlisted Tactical Operations and Air/Weapons Specialists and Crew Members
55-3010 Military Enlisted Tactical Operations and Air/Weapons Specialists and Crew Members
55-3011 Air Crew Members
55-3012 Aircraft Launch and Recovery Specialists
55-3013 Armored Assault Vehicle Crew Members
55-3014 Artillery and Missile Crew Members
55-3015 Command and Control Center Specialists
55-3016 Infantry
55-3017 Radar and Sonar Technicians
55-3018 Special Forces
55-3019 Military Enlisted Tactical Operations and Air/Weapons Specialists and Crew Members,
All Other