

National Health and Nutrition Examination Survey

2017-March 2020 Data Documentation, Codebook, and Frequencies

Immunization (P_IMQ)

Data File: P_IMQ.xpt

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Component Description

The NHANES program suspended field operations in March 2020 due to the coronavirus disease 2019 (COVID-19) pandemic. As a result, data collection for the NHANES 2019-2020 cycle was not completed and the collected data are not nationally representative. Therefore, data collected from 2019 to March 2020 were combined with data from the NHANES 2017-2018 cycle to form a nationally representative sample of NHANES 2017-March 2020 pre-pandemic data. These data are available to the public. Please refer to the Analytic Notes section for more details on the use of the data.

The Immunization section (variable name prefix IMQ) provides respondent-level data on immunizations, including the hepatitis A vaccine, the hepatitis B vaccine, and the human papillomavirus (HPV) vaccine. The number of doses received is also obtained since all vaccines are multi-dose.

Eligible Sample

Participants aged 2 years and older were asked about the hepatitis A vaccination; all participants were asked about the hepatitis B vaccination; and participants 9 to 59 years of age were asked about the HPV vaccination in the NHANES 2017-March 2020 pre-pandemic sample and are included in this dataset.

Interview Setting and Mode of Administration

The questionnaire was asked, in the home, by trained interviewers using Computer-Assisted Personal Interview (CAPI) system. A proxy provided information for survey participants who were under 16 years of age and for individuals who could not answer the questions themselves. The respondent selected the language of interview (English or Spanish) or requested that an interpreter be used. Hand cards, showing response choices or information that survey participants needed to answer the questions, were used for some questions. The hand cards were printed in English, Spanish, Mandarin Chinese (both traditional and simplified), Korean, and Vietnamese. The interviewer directed the respondent to the appropriate hand card during the interview. When necessary, the interviewer further assisted the respondent by reading the response choices listed on the hand cards.

The NHANES [2017-2018](#) and [2019-2020](#) questionnaires are available on the NHANES website.

Quality Assurance & Quality Control

The CAPI system is programmed with built-in consistency checks to reduce data entry errors. CAPI also uses online help screens to assist interviewers in defining key terms used in the questionnaire.

After collection, interview data were reviewed by the NHANES field office staff for accuracy and completeness of selected items. The interviewers were required to audio-record interviews and the recorded interviews were reviewed by NCHS staff and interviewer supervisors.

Data Processing and Editing

Frequency counts were checked, “skip” patterns were verified, and the reasonableness of question responses was reviewed. Edits were made to some variables to ensure the completeness, consistency, and analytic usefulness of the data. Edits were also made, when necessary, to address data disclosure concerns.

Analytic Notes

The COVID-19 pandemic required suspension of NHANES 2019-2020 field operations in March 2020 after data were collected in 18 of the 30 survey locations in the 2019-2020 sample. Because the collected data were not nationally representative, these data were combined with data from the previous cycle (2017-2018) to create a 2017-March 2020 pre-pandemic data file. A special weighting process was applied to the 2017-March 2020 pre-pandemic data file. The resulting sample weights in the demographic data file should be used to calculate estimates from the combined cycles. These sample weights are not appropriate for independent analyses of the 2019-2020 data and will not yield nationally representative results for either the 2017-2018 data alone or the 2019-March 2020 data alone. Please refer to the NHANES website for additional information for the NHANES 2017-March 2020 pre-pandemic data, and for the previous 2017-2018 public use data file with specific weights for that 2-year cycle.

Since the questionnaire was asked during the household interview, the interview sample weights should be used in the analysis. However, if the data is joined with data from the Mobile Exam Center (MEC), the MEC sample weights should be used.

In 2017, the second sentence of both IMQ060 and IMQ070 was changed slightly from “It is given in 3 separate doses over a 6 month period.” to “It is given in 2 or 3 separate doses over a 6 month period.” Please see the questionnaire instruments available on our website [NHANES 2017-March 2020 Pre-Pandemic Questionnaire Instruments \(cdc.gov\)](#) for more details.

Codebook and Frequencies

SEQN - Respondent sequence number

Variable Name:	SEQN
SAS Label:	Respondent sequence number
English Text:	Respondent sequence number.
Target:	Both males and females 0 YEARS - 150 YEARS

IMQ011 - Received Hepatitis A vaccine

Variable Name: IMQ011**SAS Label:** Received Hepatitis A vaccine

English Text: Hepatitis (Hep-a-ti-tis) A vaccine is given as a two dose series to some children older than 2 years and also to some adults, especially people who travel outside the United States. It has only been available since 1995. {Have you/Has SP} ever received hepatitis A vaccine?

English Instructions: INTERVIEWER INSTRUCTION: A COMBINATION HEPATITIS A AND HEPATITIS B VACCINE SHOULD BE COUNTED AS THE A VACCINE FOR THE PURPOSE OF THIS QUESTION. CODE 'YES AT LEAST 2 DOSES' IF RESPONDENT ANSWERS 3 OR 4 DOSES WERE RECEIVED. CODE 'LESS THAN 2 DOSES' ONLY IF MENTIONED BY RESPONDENT.

Target: Both males and females 2 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes, at least 2 doses	5199	5199	
2	Less than 2 doses	488	5687	
3	No doses	6440	12127	
7	Refused	14	12141	
9	Don't know	2439	14580	
.	Missing	980	15560	

IMQ020 - Received Hepatitis B 3 dose series

Variable Name: IMQ020**SAS Label:** Received Hepatitis B 3 dose series

English Text: Hepatitis (Hep-a-ti-tis) B vaccine is given in three separate doses and has been recommended for all newborn infants since 1991. In 1995, it was recommended that adolescents be given the vaccine. Persons who may be exposed to other people's blood, such as health care workers, also may have received the vaccine. {Have you/Has SP} ever received the 3-dose series of the hepatitis B vaccine?

English Instructions: INTERVIEWER INSTRUCTION: A COMBINATION HEPATITIS A AND HEPATITIS B VACCINE SHOULD BE COUNTED AS THE B VACCINE FOR THE PURPOSE OF THIS QUESTION. CODE 'YES AT LEAST 3 DOSES' IF RESPONDENT ANSWERS 4 DOSES WERE RECEIVED. CODE 'LESS THAN 3 DOSES' ONLY IF MENTIONED BY RESPONDENT.

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes at least 3 doses	6677	6677	
2	Less than 3 doses	871	7548	
3	No doses	6066	13614	
7	Refused	8	13622	
9	Don't know	1938	15560	
.	Missing	0	15560	

IMQ050 - CHECK ITEM

Variable Name:	IMQ050
English Instructions:	CHECK ITEM. IF SP = FEMALE AND AGE IS ≥ 9 AND ≤ 59 , CONTINUE. IF SP = MALE AND AGE IS ≥ 9 AND ≤ 59 , GO TO IMQ070. OTHERWISE, GO TO END OF SECTION.
Target:	Both males and females 0 YEARS - 150 YEARS

IMQ060 - Received HPV vaccine (Females)

Variable Name: IMQ060**SAS Label:** Received HPV vaccine (Females)

English Text: Human Papillomavirus (HPV) vaccine is given to prevent cervical cancer in girls and women. The HPV vaccines available are called Cervarix, Gardasil or Gardasil 9. It is given in 2 or 3 separate doses over a 6 month period. {Have you/Has SP} ever received one or more doses of the HPV vaccine?

Target: Females only 9 YEARS - 59 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	1059	1059	IMQ081A
2	No	3194	4253	End of Section
7	Refused	1	4254	End of Section
9	Don't know	313	4567	End of Section
.	Missing	10993	15560	

IMQ070 - Received HPV vaccine (Males)

Variable Name: IMQ070**SAS Label:** Received HPV vaccine (Males)

English Text: Human Papillomavirus (HPV) vaccine is given to prevent HPV infection and genital warts in boys and men. It is given in 2 or 3 separate doses over a 6 month period. {Have you/Has SP} ever received one or more doses of the HPV vaccine? (The brand name for the vaccine is Gardasil.)

Target: Males only 9 YEARS - 59 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	695	695	IMQ090
2	No	3121	3816	End of Section
7	Refused	1	3817	End of Section
9	Don't know	467	4284	End of Section
.	Missing	11276	15560	

IMQ081A - Received Cervarix (Females)?

Variable Name: IMQ081A

SAS Label: Received Cervarix (Females)?

English Text: Which of the HPV vaccines did {you/SP} receive, Cervarix, Gardasil or Gardasil 9?

English Instructions: INTERVIEWER: CODE ALL THAT APPLY.

Target: Females only 9 YEARS - 59 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	CERVARIX	96	96	
7	Refused	3	99	
9	Don't know	371	470	
.	Missing	15090	15560	

IMQ081B - Received Gardasil (Females)?

Variable Name: IMQ081B

SAS Label: Received Gardasil (Females)?

English Text: Which of the HPV vaccines did {you/SP} receive, Cervarix, Gardasil or Gardasil 9?

English Instructions: INTERVIEWER: CODE ALL THAT APPLY.

Target: Females only 9 YEARS - 59 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
2	GARDASIL	350	350	
.	Missing	15210	15560	

IMQ081C - Received Gardasil 9 (Females)?

Variable Name: IMQ081C

SAS Label: Received Gardasil 9 (Females)?

English Text: Which of the HPV vaccines did {you/SP} receive, Cervarix, Gardasil or Gardasil 9?

English Instructions: INTERVIEWER: CODE ALL THAT APPLY.

Target: Females only 9 YEARS - 59 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
3	GARDASIL 9	35	35	
.	Missing	15525	15560	

IMQ081D - Received Unknown Gardasil (Females)?

Variable Name: IMQ081D

SAS Label: Received Unknown Gardasil (Females)?

English Text: Which of the HPV vaccines did {you/SP} receive, Cervarix, Gardasil or Gardasil 9?

English Instructions: INTERVIEWER: CODE ALL THAT APPLY.

Target: Females only 9 YEARS - 59 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
4	GARDASIL (not sure which one)	214	214	
.	Missing	15346	15560	

IMQ090 - Age first dose HPV

Variable Name: IMQ090**SAS Label:** Age first dose HPV**English Text:** How old {were you/was SP} when {you/SP} received your first dose of {Cervarix/Gardasil/Gardasil 9/Gardasil or Gardasil 9/the vaccine}?**Target:** Both males and females 9 YEARS - 59 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1 to 57	Range of Values	1407	1407	
777	Refused	3	1410	
999	Don't know	344	1754	
.	Missing	13806	15560	

IMQ100 - Received HPV, # of doses

Variable Name: IMQ100

SAS Label: Received HPV, # of doses

English Text: How many doses of {Cervarix/Gardasil/Gardasil or Gardasil 9/the vaccine}
{have you/has SP} received?

Target: Both males and females 9 YEARS - 59 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	1 Dose	437	437	
2	2 Doses	461	898	
3	3 Doses	637	1535	
7	Refused	1	1536	
9	Don't know	218	1754	
.	Missing	13806	15560	